

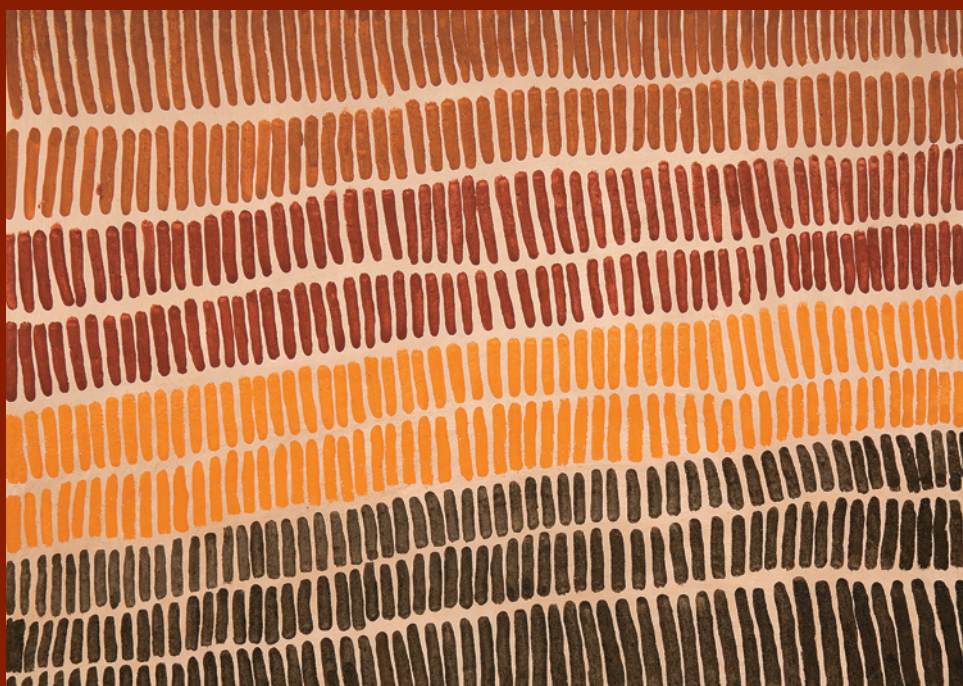


Special Commission of Inquiry

Acute Care Services in NSW Public Hospitals

Final Report of the Special Commission of Inquiry Acute Care Services in NSW Public Hospitals

Volume 2



Peter Garling SC
27 November 2008

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Acute Care Services in New South Wales Public Hospitals

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Special Commission of Inquiry

Acute Care Services in NSW Public Hospitals

Part C

Communication

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- 13.1 Under Term 2 of my Terms of Reference, I am specifically required to identify existing models of patient care used in the delivery of acute care services in NSW public hospitals with particular regard to case management including supervision of junior clinical staff..
- 13.2 I have interpreted junior clinical staff to mean junior medical officers, including registrars, and junior nurses.

Supervision of junior doctors

- 13.3 I have separately addressed the formal postgraduate training of junior doctors in Chapter 10. Here, I am focussing on the day-to-day supervision of junior doctors performing their clinical duties.
- 13.4 In this section, where I refer to junior doctors, I am referring to pre-vocational doctors (that is, doctors in PGY1, PGY2 and, in some cases, PGY3) unless I specifically refer to registrars. Although registrars have a central role in the supervision of pre-vocational doctors, registrars have additional specific educational and supervision requirements. I discuss the supervision of registrars in the next section in this chapter.
- 13.5 The bulk of acute care services in NSW provided by doctors are performed by junior doctors including interns, residents, registrars, Career Medical Officers and locums¹. It was highlighted to me during the course of the Inquiry that medical training and specialisation is a process which unfolds over many years and that one of the most important components of training is supervised practical involvement in direct patient care. As one senior doctor gave evidence²:

"I will point out what is a teaching hospital, particularly for people who are not familiar with it. It is a place of necessary compromises. My training has taken 15 years and that is a third of my working life. So for the next generation to be trained, they also need to go through that process. To be trained in any discipline, whether medicine or anything else, means that you have to actually practise it during the course of that training. Much of the work in a teaching hospital is done by junior doctors. Much of that work, therefore, is done by people who are relatively inexperienced who are then being checked or supervised by more experienced people."

- 13.6 It needs to be recognised, therefore, that in their early years junior doctors are still in a process of training which is both integrated with and independent of their daily work. I was told that in past times, the balance between daily work and training was better. This was partly because in their day to day work, junior doctors were routinely assisted by more senior doctors and nursing staff in acquiring practical skills³. I heard that in more recent times, however, it is not unusual for junior doctors to spend most of their time in a service role without coordinated supervision. I return to this issue below.
- 13.7 The first 2 postgraduate years are a particularly important period for supervision and training of new doctors. It is a requirement of the 12 month internship (PGY1) that it be a closely supervised period of training before registration of the graduate as a medical practitioner. Supervising doctors must have 3 or more years of medical experience and be on-site and awake when an intern is on duty⁴. In PGY2, doctors continue to work under supervision with increasing levels of responsibility. The supervising doctor may be asleep when a PGY2 trainee is on duty on the condition that he or she is readily accessible if required.

13.8 One of the 3 key standards against which the Institute of Medical Education and Training (IMET) accredits hospitals for prevocational medical training in PGY1 and 2 relates to whether the hospital ensures appropriate supervision of medical trainees. Notwithstanding IMET's accreditation standards, IMET's instrument of establishment does not specifically empower it to ensure hospitals' accountability for junior medical officer supervision⁵. The role of IMET's predecessor, the Postgraduate Medical Council, in relation to standards and accreditation was formalised in NSW Health policy *Role and Responsibility of the Postgraduate Medical Council of NSW*⁶:

Failure to meet the Postgraduate Medical Council's accreditation standards will result in the withdrawal and re-allocation of...junior medical officers.

13.9 This policy remains current, although the Postgraduate Medical Council of NSW no longer exists. NSW Health needs to rescind that policy and issue a similar policy directive in relation to the roles and responsibilities of the NSW Institute for Clinical Education and Training (the successor to IMET, whose establishment I have recommended). IMET put forward a draft policy to NSW Health in July 2007 which also sets out the roles and responsibilities of area health services in the delivery of postgraduate medical education. I discuss this policy and make recommendations in Chapter 10.

13.10 Although IMET currently lacks specific powers for enforcing its supervision requirements, where an IMET accreditation survey team believes that standards are not being met by a hospital, IMET's Accreditation Committee can make specific recommendations, called provisos, which IMET communicates in writing to the hospital. I was told that in the last 3 years, 39 of the 53 accredited hospitals in New South Wales have had provisos attached to their accreditation by IMET⁷. I was told that 11 of those provisos related to inadequate supervision of junior doctors.⁸

13.11 Provisos take various forms. An example of provisos issued to named hospitals over the last 12 months are a requirement that no PGY1 doctor be rostered on an evening or night shift due to inadequate clinical supervision, and a requirement that supervisors have more than a specified number of years of medical experience⁹. In my view, the system for ensuring compliance with supervision requirements needs to be improved and I make recommendations about this, which are set out below.

13.12 NSW Health provided the Inquiry with data which indicates that the ratio of senior doctors to junior doctors has remained fairly constant over the last 5 years.

Table 13.1 Staff specialist and junior medical staff full time equivalent (FTE) and ratio

	June 02	June 03	June 04	June 05	June 06	June 07	% Change 02-07
Staff specialists	1873.33	1989.3	2128.9	2222.3	2283.2	2370.4	26.5 %
Interns, residents & registrars	3520.43	3388.3	3651.4	3832.0	4118.5	4278.5	21.5 %
S/Specialist : Junior Ratio	1: 1.87	1: 1.7	1:1.71	1: 1.72	1:1.77	1:1.80	

- 13.13 The supervisor to junior staff ratio has been lower and more variable in regional and outer metropolitan areas:

Table 13.2 Staff specialist and junior medical staff full time equivalent (FTE) and ratio, regional and outer metropolitan areas

	Jun 02	Jun03	Jun04	Jun05	Jun06	Jun07
Coffs Harbour Base Hospital						
Staff specialists (FTE)	4.6	7.6	11.7	14.5	13.2	12.2
Junior Medical Staff (FTE)	28.9	32.5	33.8	39.3	33.5	36.8
Ratio of S/S to JMOs (FTE)	1: 6.2	1: 4.3	1: 2.9	1: 2.7	1: 2.5	1: 3.0
Royal Prince Alfred						
Staff specialists (FTE)	99.4	103.3	107.8	116.8	143.6	148.0
Junior Medical Staff (FTE)	229.2	253.4	259.0	281.7	270.4	291.2
Ratio of S/S to JMOs (FTE)	1: 2.3	1: 2.5	1: 2.4	1: 2.4	1: 1.9	1: 1.9
Liverpool Hospital						
Staff specialists (FTE)	102.0	101.6	127.3	109.9	100.2	109.9
Junior Medical Staff (FTE)	202.4	187.9	198.5	198.7	213.3	246.2
Ratio of S/S to JMOs (FTE)	1: 2.0	1: 1.8	1: 1.6	1: 1.8	1: 2.2	1: 2.2

- 13.14 The data provided by NSW Health did not break down supervisor to junior doctor ratios according to specialty, department or hospital (except for those tables provided above).
- 13.15 Although the figures suggest that senior to junior medical staff ratios have remained fairly constant overall, there are no policies, agreed benchmarks or quantifiable measures in the public hospital system setting out required or recommended ratios of supervisor to trainee. A frequent complaint to my Inquiry was the lack of supervision of junior medical staff, due to insufficient numbers of senior doctors available on any given shift, with sufficient time available, to undertake this important task. It is clear that supervision in busy hospitals poses problems given that the hospitals are also under pressure to meet their patient care requirements.
- 13.16 The implications of this are obviously serious:
- There are implications for patient safety;
 - Junior doctors' skills are not adequately developed, which has long term implications for their training and competence in caring for patients;
 - Lack of supervision can, and does, increase a patient's length of stay in hospital.

Patient safety

- 13.17 Supervision of junior doctors has a positive effect on patient outcomes. The corollary, unfortunately, is that lack of supervision is harmful to patients. The Inquiry received evidence about a number of specific instances where supervision of junior doctors was lacking, resulting in adverse events and death¹⁰. One of those instances, the tragic death of Vanessa Anderson at Royal North Shore Hospital, directly led to this Inquiry being established.
- 13.18 One case in particular highlighted to me that supervision involves more than the mere presence of senior medical staff on the same roster as junior doctors. It also highlighted that supervision entails more than simply communicating with a junior doctor about a patient's diagnosis and treatment plan. It requires something more, being direct

involvement in the patient's care and oversight. In that instance¹¹, an intern was rostered on with an emergency physician during a rotation in the Emergency Department. The intern took an appropriate history, identified omitted cardiac medication and correctly identified congestive cardiac failure. The intern consulted the emergency physician regarding the patient's management and treatment plan but failed to communicate the seriousness of the condition to the emergency specialist who, in turn, failed to confirm for herself. The patient was then discharged home and died several days later.

13.19 A complaint was referred to the Health Care Complaints Commission which conducted an investigation. The HCCC found that the intern had failed to assess the severity of the patient's renal and cardiac failure and therefore did not undertake appropriate investigations. Communication between the intern and specialist was inadequate because the patient's clinical condition was more serious than the intern had realised. Instead of seeking the opinion of a cardiologist, renal physician and possibly urologist, the patient was discharged home, without any discharge letter or instruction about his follow-up care. A discharge letter had nonetheless been prepared by the intern and, it would seem, inadvertently placed on the medical file.

13.20 The emergency physician reported during the investigation that she would have admitted the patient if she'd known of the patient's condition and his carer's concerns. The HCCC's expert reviewer said that as an intern, the doctor would not be expected to make a sufficient assessment of the patient or a management plan without direct senior involvement, either at registrar or consultant level. The expert reviewer stated:

"This illustrates the problem with interns assessing complex and undifferentiated patients in an Emergency Department without appropriate senior supervision. Interns should not be in a position in an Emergency Department where they may be the only medical officer to assess and treat a patient without registrar or consultant direct supervision."

"...any patient seen by an intern in the ED should be reviewed by a senior medical staff member prior to discharge"

13.21 This Inquiry received evidence about other similar cases not only involving the Emergency Department but also involving a lack of supervision on the ward.

13.22 Supervision would obviously obviate such adverse effects on patient care and outcomes. One senior doctor made the point as follows:¹²

"there are examples where junior staff have missed important clinical signs or failed to order appropriate investigations that could have been identified by a senior clinician. In cancer treatment, there is very little room for error, and such failings can be life-threatening."

Development of skills

13.23 The Inquiry received a large number of submissions to the effect that poor supervision impedes the development of clinical skills in junior clinicians. Indeed, medical literature states that supervision has been shown to be crucial for workplace learning¹³.

13.24 Senior clinicians recognise that supervision contributes to ongoing training and that an important component in this is the opportunity to provide feedback to junior doctors about their performance so that they can learn. What impedes effective supervision most often, however, is the day to day pressure to meet service requirements. For

example, one senior doctor told me about a policy he introduced some years ago that every medical record for inpatients under the care of his team would be reviewed during twice weekly ward rounds, with the intention of giving feedback to junior staff¹⁴:

"We started our ward rounds, we had about six doctors and nurses attend, the allied health staff attend. We get into a room, ... I instructed the nursing unit manager, "Bring the notes in on a trolley when we present these patients," and for the notes to be handed to the consultants and I would then, while the patient is being presented, look through the notes. My idea was that I would scrutinise the records the residents or the registrar had written in and I would then have an opportunity to say, "That's not correct," or, "You need to do this," and they would know that I was watching over them. For reasons I guess I don't understand, ...the notes didn't come in, we were trying to get through the ward round and it didn't happen. ...It's a human failing, it's difficult to sustain these things."

13.25 The sort of training and supervision which that witness had in mind, by way of case based discussion and feedback with junior staff, is invaluable, in any profession. I regard it as particularly valuable in the acute care services environment. In my view, junior doctors should attend regular meetings with senior clinicians where clinical cases can be discussed.

13.26 This already happens in some hospitals. The Inquiry received evidence for example at St George Hospital that junior doctors who work 13-hour shifts in the paediatric unit attend a handover in the morning during which night doctors hand over to the day doctors. I was told that¹⁵:

"a staff specialist sits in on the handover, so that all of the patients are vetted and screened and their assessment of patients is supervised by a doctor, followed by an interactive teaching session, usually based on those cases for half an hour which the hospital has kindly in its wisdom paid for.

I think that allows the junior doctors to debrief for critical events and improve their skills when there is a staff specialist who talks to them about cases, but it sends a message about the value of hard work that they have put in on the long shifts. Plus, I think they realise they are being taught on the job which is more work experience for them."

13.27 The direct involvement of senior doctors in the supervision and on-the-job training of junior doctors in this way is to be applauded and should be emulated elsewhere in the public hospital system.

Length of stay

13.28 I was also told that lack of supervision can have the effect of increasing the length of time patients spend in hospital¹⁶. This is because decision-making is not as efficient or accurate as it would be were a more experienced person to be involved. This seems to me to be an obvious consequence of junior doctors acting without appropriate supervision.

What does supervision entail?

- 13.29 Traditionally, an apprenticeship model of training is used in NSW hospitals for the development of the skills of junior doctors. Junior doctors are supervised and trained by senior doctors through formal didactic training programs of lectures and tutorials and by the bedside in learning on the job, which is a rather idiosyncratic fashion. Clinical teachers and supervisors are, in general, not separately paid for these tasks, which form part and parcel of their ordinary duties.
- 13.30 The apprenticeship model relies on senior doctors to monitor junior doctors' work and competencies. In reality, junior doctors work not with one but with many consultants and interact with multiple clinicians on a daily basis¹⁷. Most of the supervision by senior doctors is ostensibly provided by sessional visiting medical officers, the great majority of whom also work in the private sector. In practice, however, it is not consultants, but registrars, who undertake the bulk of day-to-day supervision of junior doctors.
- 13.31 It is clear, today, that the longstanding practice of senior doctors being available to teach and supervise medical students and junior doctors is under significant pressure. Increased patient throughput and workforce shortages in particular are threatening the ability of the apprenticeship model to address all the learning needs of junior doctors. I include registrars in this equation because it is clear that the lack of presence of and input from senior doctors is also adversely affecting the quality of the supervision and training provided to registrars¹⁸.
- 13.32 It was submitted to the Inquiry that because visiting medical officers have no formally defined responsibility for supervision, their participation in supervision can be "patchy", particularly in rural areas.¹⁹ I agree. I might also say that I think that speaking generally visiting medical officers seem less dedicated to teaching than previous generations seem to have been. This needs to be rectified and I make some recommendations about this below.
- 13.33 The model contracts for visiting medical officers who practise under a fee-for-services arrangement and for sessional visiting medical officers both contain a requirement for the visiting medical officer to participate in teaching and training of postgraduate medical officers as reasonably required²⁰.

Supervision by registrars

- 13.34 In practice, the consultants delegate the task of supervision of interns and resident medical officers to their registrars. This means that the registrars have a central role in facilitating the teaching and learning experiences of junior staff in hospitals as they are the team member with whom the junior doctor interacts most frequently.
- 13.35 The *National Training and Assessment Guidelines for Junior Medical Officers PGY 1 and 2* revised in 2003 by the Australian Confederation of Postgraduate Medical Education Councils outlines the role of registrars in the supervision of junior doctors, as including:²¹
- providing a comprehensive orientation at the beginning of the term;
 - giving informal teaching on ward rounds and during acute admitting days;
 - providing appropriate verbal feedback throughout the term;
 - understanding their responsibilities for supervision of junior medical officers clinical work, procedural skills development, test ordering and interpretation, reports and discharge summaries;
 - identifying aspects of poor performance early to the appropriate supervisor;

- encouraging and actively assisting junior doctors to attend education sessions regardless of other commitments;
 - encouraging active participation of junior medical officers in ward rounds, continuing medical education activities, departmental meetings, X-ray sessions and the like;
 - encouraging junior medical officers to attend outpatient clinics, laboratories and theatres; and
 - encouraging junior medical officers to share duties so that they can leave the ward at designated times for educational experience.
- 13.36 This list of duties is consistent with the evidence and submissions received by the Inquiry about the extent of supervision that is, and should be, provided by registrars.
- 13.37 However, it must be recognised that at the present time, the registrar's duties in relation to supervision are not described in the industrial award applying to their employment, their contract of employment, nor any formal policy applying to the role.²² The supervision component of the registrar's duties is an add-on to the registrar's clinical load.
- 13.38 Whilst it is clear that supervision of prevocational doctors by registrars is uniformly considered to be both important and effective, practice is highly variable. I received submissions from junior medical officers that supervision by registrars is often sub-optimal because:²³
- (a) registrars vary widely in their level of experience of clinical practice and supervision;
 - (b) registrars do not always have any skill in teaching or imparting their knowledge effectively;
 - (c) the majority of registrars are themselves acting without close supervision by specialists; and
 - (d) registrars are intensely busy with the day to day coordination of patient care and so often not available to supervise.
- 13.39 I was told that surgical registrars traditionally require more independence from junior doctors because there is pressure on them to be in operating theatres.²⁴ This means that there is a crucial need for provision of appropriate levels of supervision to be built into the system, particularly for those junior doctors, who are supervised largely by surgical registrars rather than by consultants.
- 13.40 It was submitted that there is a need to formally recognise a set proportion of a registrar's work duties for supervision of interns.²⁵ The prevocational doctors from whom the Inquiry received evidence were generally of the view that this would assist in ensuring that interns receive adequate supervision time. I was told that Queensland and the Australian Capital Territory have mandated that 2 hours per week of registrars' time will be spent teaching undergraduate medical students and in the ACT this may soon be extended to interns.²⁶ This is obviously a different scenario to mandating teaching of interns and PGY2 doctors by registrars, however it recognises the contribution registrars make to teaching, and that they will continue to make as the future specialist medical workforce in those States.
- 13.41 Some express concern about the notion of registrars teaching PGY1 and PGY2 doctors, as registrars are still in a period of training themselves.²⁷ They say that what is needed is recognition of the importance of senior clinicians in supervision, not necessarily

requiring them to do all the training, but to ensure that PGY1 and PGY2 doctors are appropriately supervised and taught by the 'right' people.

- 13.42 It is clear that in reality registrars provide a lot of day to day supervision for prevocational doctors. Provided that registrars are themselves appropriately supervised, it is in my view necessary and timely to recognise their role in the supervision of junior doctors by articulating their roles and responsibilities in that regard and where appropriate, by recognising the time they need to carry out those tasks. I make recommendations to this effect below.

Protected time

- 13.43 This Inquiry received a large amount of evidence about the lack of protected time for supervision for both junior doctors and the clinicians who supervise and teach them. The patient care demands of the hospital intrude upon the time that would otherwise be spent monitoring or teaching junior doctors, in the various ways in which supervision and teaching can occur. I do not propose to set that evidence out in the present chapter as it is contained in Chapter 10.
- 13.44 It ought be highlighted however that it is a uniform complaint across the entire medical workforce that there is not enough time for adequate supervision of junior doctors (including registrars). Whilst the main burden of supervising junior doctors and providing them with on-the-job training falls on registrars, they in turn need supervision and training as they prepare to become fully qualified specialists. I discuss this aspect of their education below. It is clear that any mechanisms to improve the quality of supervision of junior doctors (including registrars) need to address this issue.

Clarification of supervisory obligations

- 13.45 There seems to me to be a lack of clarity about a senior doctor's obligation to supervise a junior doctor, including what supervision entails. This has led to uncoordinated and fragmented supervision.
- 13.46 Under the apprenticeship model, supervisors have to determine:
- The skills and knowledge that junior doctors have and should have;
 - How those things should be learnt;
 - What level and kind of supervision should be provided; and
 - How to assess competency.
- 13.47 Junior doctors are also relied upon to know when they require supervision and to request it. I was told by many clinicians, junior and senior, that there is a reluctance by junior doctors to seek assistance from senior doctors. I deal with this issue in Chapter 15.
- 13.48 In practice, this means that the experience of junior doctors, and what they learn and how closely they are supervised, is often left to chance and goodwill.²⁸ The fact that junior doctors may work under more than one senior person at any one time also creates the conditions for diluting and fragmenting the responsibility of senior doctors for supervision and training.
- 13.49 A set of national guidelines requires hospitals to provide adequate and appropriate supervision.²⁹ The *National Training and Assessment Guidelines for Junior Medical Officers* to which I referred above require each hospital to have a director or supervisor of clinical training. The guidelines state that:³⁰

- supervision for PGY1 doctors requires direct supervision by a registrar or other suitably experienced medical practitioner at all times;
- for PGY2, direct supervision may not be required, but supervisors must be readily available;
- position descriptions for all supervising staff should clarify their role and responsibilities for supervision;
- contact with the junior doctors should be sufficient to permit a valid assessment of the junior doctor's performance by direct observation.

13.50 However, the guidelines do not clearly set out what constitutes adequate and appropriate supervision to ensure that junior doctors learn the requisite skills and that patient care is not compromised. Nor do they set out the supervision duties of the consultant. NSW Health was unable to confirm whether it received those guidelines from the Confederation of Postgraduate Medical Education Councils for consideration or endorsement.³¹ However it said that the substance of the guidelines is addressed in IMET's *Standards for Junior Medical Officer Education and Supervision – 2002* which set out the standards against which hospitals are accredited for prevocational medical training. This is not strictly correct as the national guidelines set out a number of principles not required by IMET's standards, such as clarification of responsibilities in relevant job descriptions and a description of a registrar's role in supervision (as noted earlier).

13.51 NSW Health has some policies and guidelines dealing with clinical supervision of medical staff, including for:

- staff working in drug and alcohol services;³²
- interns working in the Emergency Department,³³
- 'Area of Need' doctors;³⁴

13.52 In my view, none of them set down in sufficiently clear terms what supervision entails, how and when it should occur and how and to whom responsibilities are allocated when it comes to junior medical officers generally.

13.53 I was nevertheless directed to some helpful definitions of supervision.³⁵

13.54 The Permanent Working Group of European Junior Hospital Doctors in their policy statement on Postgraduate Medical Training define passive and active supervision.³⁶ These definitions assist in understanding that the required degree of supervision varies depending on the level of experience of the junior doctor.

13.55 "Passive supervision" entails:

"the constant availability - on request and with ease of access - of a senior more competent member of staff to deal with matters beyond the particular trainee's competence"

13.56 "Active supervision" involves:

"the regular and consistent attendance of a named specialist to review or examine the work of the trainee in all aspects of his or her job, i.e. admissions and emergency assessment; in-patient care, including procedures and therapies, correspondence and note keeping; discharges; out-patient care; consultation, liaison and community work; working relations with other staff; organisation of clinical activity"

13.57 The policy requires a named specialist to organise the process of passive supervision.

- 13.58 Other definitions of supervision directly link supervision to the safety of patients:
- "The provision of guidance and feedback on matters of personal professional and educational development in the context of the trainee's experience of providing safe and appropriate care."³⁷
- 13.59 In the New South Wales context, what is expected and ought happen, is that interns and residents receive active supervision. Active supervision should apply to registrars as well, not necessarily at all times as quite clearly this is not feasible or necessary. However, registrars should be actively supervised in appropriate circumstances which should be defined by the relevant specialist College. This needs to be coupled with regular and effective performance appraisal and assessment of all doctors. I discuss performance assessment elsewhere in my report.
- 13.60 Given the increased number of junior doctors entering the public hospital system in the near future (as described in Chapter 7) and the shortage of full time senior medical staff in New South Wales, there is great doubt at the present time as to whether the supervision needs of the current, let alone, future junior doctors can be met. In my view, it is not sustainable to rely on the voluntary apprenticeship model which presently applies. The roles of educator and supervisor, and the essential contribution that quality education and supervision make to the provision of quality acute care services, need formal recognition. Part of that recognition is to acknowledge the time that supervision takes and to allocate appropriate funding. Based on what I have observed during the course of the Inquiry, it is clear to me that both these aspects are lacking at the present time.
- 13.61 In my view, supervision needs to be defined and described by consensus between junior and senior clinicians in order to build a model of supervision that suits everyone: the patient, the junior doctor, the registrar and consultant.
- 13.62 This includes defining and recognising the roles and responsibilities of the registrar and consultant when it comes to supervision. I was told that the use of multiple consultants often leads to fragmented supervision, fewer instructions and more frequent sub-standard performances.³⁸ I was also told that the lack of standardisation of roles and duties makes junior doctors prone to errors.³⁹ There is therefore a need to clarify roles and responsibilities.
- 13.63 There is a need for explicit guidelines on supervision and the establishment of appropriate mechanisms to resolve difficulties relating to inadequate supervision.
- 13.64 Kilminster and others in the United Kingdom have done considerable work on effective educational and clinical supervision.⁴⁰ I have drawn from their work in this section of the present chapter.
- 13.65 In my view, effective supervision involves:
- (a) recognising the importance of the supervisor's role;
 - (b) defining supervision, its objectives, content and the supervisory relationship, including any requirements;
 - (c) defining the skills that the junior doctor must learn;
 - (d) direct supervision where the junior doctor and supervisor work together and observe each other. This involves the supervisor monitoring and at the same time assessing clinical procedures carried out by the junior doctor. It also involves demonstration. Importantly, direct supervision involves active or passive supervision, meaning direct input into a patient's management (that is, oversight

of the junior doctor's decisions) or constant availability to provide such input, depending on the level of experience of the junior doctor;

- (e) frequent feedback from a senior qualified person who can provide insights into the junior doctor's professional practice; and
- (f) structured supervision with regular timetabled meetings that include case-based discussion.

13.66 It should also involve training in supervision for supervisors.

13.67 NSW Health needs to provide senior clinicians who take on supervisory roles with support, time and facilities for the role and ensure that they have protected time for their supervision and teaching work, including providing 'back-filling' for that time. That means ensuring that a system is in place for senior clinicians to be replaced while they are engaged in a supervisory duties.

13.68 I also consider that there needs to be a forum for trainees to give feedback to the hospital and area health service where they have concerns that supervision arrangements are inadequate. One proposal made to the Inquiry which merits consideration is that junior doctors be represented on any training governance committees operating at hospital and area level and that appropriate mechanisms be designed and implemented to resolve difficulties relating to inadequate supervision. I will leave these matters of detail to be worked out when the new policies are designed.

Recommendation 45: *NSW Health should ensure within 12 months there is developed and implemented State wide policies setting out a best practice model for the supervision of junior clinicians which:*

- (a) *defines supervision,*
- (b) *defines the objectives and content of supervision,*
- (c) *defines the supervisory relationship, including the roles and responsibilities of clinical supervisors (including consultants, registrars and nurse educators) and trainees,*
- (d) *sets out mechanisms for resolving difficulties relating to inadequate supervision,*
- (e) *recognises the importance of the supervisor's role;*
- (f) *requires area health services to stipulate the roles and responsibilities of supervisors (including consultants, registrars and nurse educators) in their job descriptions (whether as employee or independent contractor), including the time required to be allocated to supervision duties;*
- (g) *requires that supervisors (consultants, registrars and nurse educators) be allocated protected time each week for carrying out active supervision of junior medical officers and nurses.*

Looking after supervisors and improving access to senior doctors

13.69 It is clear from the evidence the Inquiry received that the two major impediments to effective supervision of junior doctors including registrars are:

- the lack of senior medical staff;

- the non-clinical and clinical workloads of senior and junior medical staff which reduce the time available for effective supervision of junior doctors; and
 - the attitude of supervisors to supervision and training.
- 13.70 One of the main problems is how to engage senior clinicians in the training and supervision of junior medical officers and registrars. There is also a need for stronger engagement between hospital management and individual senior clinicians to ensure that every junior doctor is truly supervised at all times. It was submitted to the Inquiry that this could be achieved through meaningful performance agreements and assessments.⁴¹ Current agreements should in theory address this but I was told that in practice they do not achieve their objective. As discussed above, an important step in ensuring that adequate supervision occurs is to recognise the need for time and funding to support supervisors. I regard these issues as important and have set out my comments and recommendations to improve the current system with regard to both supervision and education in this chapter and Chapter 10 on Education & Training.
- 13.71 Without a system for enforcement of supervision requirements, any system of supervision will be ineffective. In my view, the Institute of Clinical Education and Training should report promptly to the chief executive of the area health service any circumstances, together with its recommendations for action, which it considers gives rise to a significant risk to patient safety and the quality of patient care which arises from inadequacy in the supervision or training being provided at any NSW public hospital for junior clinicians.
- 13.72 Senior medical workforce shortages impact on the adequacy of supervision arrangements. In my view, the system must better utilise the current specialists. As I discussed in Chapter 7, this should involve reducing the non-clinical workload of senior doctors (or providing support) where this impedes their ability to provide direction and supervision to junior medical officers in patient care. Underlying the need for direction is the need for clinical accountability, which is achieved by designating one doctor as 'in charge' of a case.
- 13.73 I also make recommendations in Chapter 10 aimed at better utilising the valuable experience and knowledge of senior doctors who are scaling down their clinical practice in teaching and training.

Recommendation 46: *The Institute of Clinical Education and Training, if it becomes aware of any circumstances which it considers give rise to a significant risk to patient safety or a significant risk to the provision of good quality patient care arising from any inadequacy in the supervision and training being provided at any NSW public hospital for junior clinicians, must forthwith:*

- (a) *Notify the chief executive of the area health service or statutory health corporation together with its recommendations for the appropriate remedial actions to be taken; and*
- (b) *If it considers that the remedial actions, if any, which have been taken are inappropriate or inadequate to remedy the identified significant risks within an appropriate timeframe, deliver a report to the Director General of NSW Health together with recommendations for action by the Director General.*

Supervision of registrars

- 13.74 Although registrars have a central role in the education and supervision of prevocational doctors, registrars have their own specific educational and supervision requirements. I heard evidence and received submissions to the effect that the problems besetting junior medical officers in respect of supervision are also experienced by registrars.⁴²

Lack of supervision by consultants

- 13.75 The accreditation of hospitals by Colleges requires both Fellows and trainees (that is, registrars) to meet educational objectives. One of the key purposes of the accreditation process, for all of the Colleges, is to determine the appropriateness of supervision at the training site (that is, the hospital) for specialist training. Colleges set accreditation criteria which require that hospitals ensure adequate senior staffing for appropriate supervision of registrars. Other requirements relating to supervision may include that the hospital appoint a supervisor of training, whose role is to ensure that appropriate mentoring and supervision occurs and that supervisors meet regularly with trainees.⁴³ Supervisors provide supervision and training of registrars on a pro bono basis.
- 13.76 NSW Health also requires that work be supervised where appropriate:⁴⁴
- "A clinician should not be permitted to work unsupervised in a clinical area unless there is demonstrated evidence of his/her ability to do so. Health care managers must establish mechanisms for ensuring that appropriate staff selection and supervision occurs for every shift."
- 13.77 I received numerous submissions that there is frequently conflict between the needs for teaching and supervision of registrars and the service requirements in busy hospitals. I was told that senior doctors are so busy meeting the clinical workload of the hospital that they frequently have little time to devote to supervision of registrars.⁴⁵
- 13.78 I was also told that where there is a lack of specialist input and supervision, registrars may feel pressured to perform in areas beyond their competence.⁴⁶ It seems that pressure is also sometimes applied by local administrative staff who, I was told, can often erroneously view registrars as having equivalent clinical skills to specialist staff. Particularly in rural areas where there are medical workforce shortages, there is a tendency for hospitals to view registrars as substitute specialist workforce. One of the specific examples provided to the Inquiry was that anaesthetic registrars are at times asked to commence anaesthesia before adequate help and supervision is present.⁴⁷
- 13.79 I was referred to studies showing that surgical errors are caused primarily by lack of supervision and are linked to level of experience.⁴⁸ I was told that the supervision rate of surgical registrars in New South Wales is significantly below international standards.⁴⁹ The surgical supervision rate is not controlled or measured, except where reviews are conducted at individual hospitals on an ad hoc basis.
- 13.80 Another study drawn to the Inquiry's attention was the Douglas Inquiry into obstetrics and gynaecology at King Edward Memorial Hospital, a public hospital in Western Australia. Clinical errors occurred in 47% of the obstetric and gynaecology cases reviewed by that Inquiry (more than half of which were rated as "very serious"), one of the main causes being lack of supervision of junior doctors.⁵⁰
- 13.81 This Inquiry received numerous submissions which show that supervision of registrars is considered to be important, indeed mandatory in most areas, but that the extent to which it is practised varies between hospitals and specialty areas.⁵¹ The submissions to

the Inquiry indicate that there is a particular concern about lack of supervision of registrars' emergency and 'out of hours' clinical work.

Unsupervised after-hours work

13.82 The Inquiry received evidence that much after-hours service work, particularly surgical work, is not life threatening.⁵² It is, however, acute or semi-acute work which is not able to be scheduled in daylight hours due to:

- (a) Elective surgery blocking operating theatre access;
- (b) The lack of, or inadequate number of, dedicated and available emergency operating theatres; or
- (c) The lack of surgeons to operate on patients.

13.83 The fact that clinical activity is taking place after hours means that frequently registrars performing the surgery are not supervised due to the absence of the consultant.⁵³ I was told that this impacts directly on the quality of patient care and does not meet the standard of care expected by the public. I was told that there is a perception on the part of many consultant surgeons that public patients who require surgery are the responsibility of surgical registrar. Supervision is therefore not measured or controlled.

13.84 By way of illustration, I was referred to a model of care introduced at Liverpool Hospital in April 2007 which required all orthopaedic trauma cases to be carried out in-hours on scheduled orthopaedic lists, rather than on emergency lists.⁵⁴ I was told that scheduling cases on emergency lists invariably leads to surgery being cancelled or taking place after hours so that elective cases can be carried out during the day. The result of scheduling those cases during working hours resulted in the supervision rate increasing from 22% to 45%. The cancellation rate for operations decreased from 5.8 cases per week to 1 per week and the 30 day post-operative mortality decreased from 7.3% to 1.8%. I received several submissions to the effect that there is a need for emergency operating theatres during working hours.⁵⁵

13.85 It was submitted to the Inquiry that there is a particular need for increasing the provision of operating lists for acute orthopaedic and emergency surgery for the simple reason that predictability of surgery increases the supervision rate, and lowers the complication rate and the surgery cancellation rate.⁵⁶ It also provides certainty and confidence in the system for patients and their relatives. When surgery takes place unsupervised after hours, registrars learn from other registrars. I was told that they learn errors, they learn badly and make mistakes. I was referred to a number of studies, including the Douglas Inquiry referred to above, showing that surgical errors are caused primarily by lack of supervision (including because they occur after hours) and are linked to level of experience.⁵⁷

13.86 One witness gave evidence as follows:⁵⁸

"We do have an issue which is not just this hospital, it is most of the major teaching hospitals, whereby out of hours, out of business hours, we roster our most junior surgical people, junior staff looking after the most seriously injured patients who are the most vulnerable in the middle of the night. This is where we have an increasing error rate and an increasing complication rate and it increases a delay to appropriate care.

This has been inherent in the system for so many years, and I don't know how many times senior surgeons have complained, but it seems to be related to a resourcing issue, safe working practice hours for doctors, all those

sorts of things. I do believe that if we have a system whereby particular hospitals are responsible for the highest level trauma care, which we have in this particular state, then those hospitals need to be resourced appropriately so the appropriate level of care is available for the sickest patients, especially in the middle of the night. Any of the data that is presented from the NSW Institute of Trauma and Injury Management, and even local reports from this area health service, will demonstrate that the most seriously injured patients come out of hours. They don't come Monday to Friday from 9 to 5."

- 13.87 Rostering practices for 'after-hours' shifts also affects the supervision of medical registrars. On my visit to Liverpool Hospital for example, I was told that of the 50 medical registrars working at the hospital, only 2 work outside 'business' hours.⁵⁹
- 13.88 Another example of inadequate supervision after hours provided to me relates to the services provided by Medical Emergency Teams (**MET**). These teams are made up of ICU registrars who attend emergencies in the hospital outside of ICU. MET are considered particularly important after hours and to provide care to the deteriorating patient. It was submitted to the Inquiry that there is a lack of supervision of MET teams and results of a survey provided to the Inquiry indicating a need for supervision of registrars making up Medical Emergency Teams by senior ICU consultants.⁶⁰
- 13.89 I have little doubt that out-of-hours clinical activity is under-supervised. This is because supervision seems clearly to be intimately linked with service provision. Where non-essential surgery takes place during extended hours, registrars are under-supervised. There is, however, no structure for setting or monitoring supervision levels appropriate to training. In my view, a system should be introduced, in consultation with the relevant College, which sets the supervision requirements of registrars according to their level of experience. Supervision rates should then be monitored.
- 13.90 In my view, it is timely to investigate operating theatre processes to identify any service improvements that will result in better supervision of junior clinical staff (registrars in particular), higher quality care and therefore better patient outcomes. In my view planned and emergency surgery ought be separated in location, such as currently happens between St George Hospital and Sutherland Hospital in orthopaedics, or by operating theatre within one location or perhaps even by time. This will have benefits for running planned surgery without interruption and increase the supervision rate for emergency cases. I make recommendations about this below and in Chapter 23.

Recommendation 47: *Within 24 months, NSW Health should undertake a review of, and examine the improvement options for the supervision of registrars undertaking surgery, including but not limited to:*

- (a) *Whether it is appropriate, and if so how, to separate by facility or operating list or otherwise planned surgery from emergency and urgent unplanned surgery;*
- (b) *Whether any change in workplace rostering or practices is necessary to maximise supervision of surgeons in training and minimise risk to patient care from surgery being conducted after hours without supervisors present;*
- (c) *Developing systems for monitoring the extent of and adequacy of supervision of surgery being undertaken by registrars.*

Supervision in the Emergency Department

- 13.91 The Australasian College for Emergency Medicine (**ACEM**) submitted to the Inquiry that the supervisor-trainee ratios in emergency medicine are well below those applying in other specialties.⁶¹ In its view, NSW Health explicitly supports, through special employment arrangements, the recruitment and retention of specialists in other areas of specialty practice, and senior medical to junior staff ratios, that enhance patient safety in those specialties. Inexplicably, it submitted, NSW emergency department patients are treated differently.
- 13.92 The College submitted that while there was a 31.9% increase in the number of full time equivalent clinical nurses working in Emergency Departments from 1995-2001, the increase in the medical specialist workforce numbers as 13.9% over the same period, but with a reduction in their clinical hours worked in emergency over the same period (a 9.1% reduction). Other data provided by the College was that from 1997 to 2004, there was a reduction of 21.8% of emergency medicine trainee positions. The most recent report of the Medical Training and Review Panel⁶² (published in 2008) shows that since 1997, there has been a decrease of 23.3% in the total number of advanced training placements in emergency medicine (a decrease of 140 trainees nationally).⁶³ The College submitted that this Inquiry ought recommend that supervisory and training resources be additional to service requirements for Emergency Departments so that emergency specialist to junior doctor ratio is at least the same as applies to inpatient units, for example, 1 specialist: 1 intern on a shift. I do not have any doubt that interns carrying out their mandatory emergency term need to be rostered on with an appropriate senior doctor so that they are appropriately supervised.
- 13.93 I have made recommendations in Chapter 20 about the Emergency Department staffing profile and the emergency medicine workforce.

Demands on consultants

- 13.94 It was also drawn to my attention that registrars are inadequately supervised because of the demands on staff specialists. The time pressures placed on senior doctors mean that there is no capacity for face-to-face teaching. I heard that registrars may also miss out on exposure to the full range of training because of the excessive workload of senior doctors⁶⁴. By way of example, because Prince of Wales Hospital medical imaging department has only 6.5 FTE registrars when, in a department of its size, I was told it should have 14 FTE registrars, much of the routine work has to be carried out by the staff specialists. This has meant that registrars cannot be trained in the full range of diagnostic and interventional modalities in medical imaging training. I have discussed the specialist workforce shortage and ways of alleviating the demands on senior doctors elsewhere in my report.
- 13.95 Patients and their families also lamented the fact registrars seemed to be working without supervision from a specialist.⁶⁵ The Inquiry received evidence from a number of registrars in a broad range of specialties. It is clear that registrars need competencies in addition to clinical and medical expertise, in particular communication and managerial skills. If there is a clinical problem, interns and residents contact registrars, who act as a filter between nurses, junior doctors on the one hand and consultants on the other, so that consultants are only contacted when required. Registrars are also generally the main point of contact for patients' carers. Where an opinion is requested from another inpatient team, it is the registrar who makes this referral. Although there is, and should be, consultant involvement in both medical teams, the registrars streamline the process.

- 13.96 I was told that there would be resistance to greater involvement by consultants because supervision and training are unremunerated.⁶⁶ In my view, there is a need to recognise the role of the registrar and the importance of ward coverage by registrars at all times, where appropriate. However, there is also a need to increase the supervision of registrars. It is unacceptable to permit registrars to practice without adequate clinical supervision. One way to improve the supervision of registrars is to provide support to supervisors at consultant level, in the ways I have addressed above in relation to junior doctors, namely by providing, to senior clinicians who take on supervisory roles, support, time and facilities for the role and by protecting the time for their supervision and teaching work.
- 13.97 Many of the Colleges require a dedicated supervisor of training to be appointed in hospitals accredited by them for specialist training. Supervisors of training manage training issues and supervision requirements. They, set objectives for the trainee's rotation, are accessible to trainees throughout the rotation and undertake assessments of trainees' performance according to College criteria. They report deficiencies in performance to trainees and are said to have "a crucial role in the continuing formative assessment of trainees".⁶⁷ I was told that support for supervisors is inadequate and increased resources are needed to fulfil these responsibilities which include attendance at training workshops and continuing education initiatives.
- 13.98 Although it is inevitable that there be a gradual reduction in the requirement for close supervision of registrars as they move through their training programs, appropriate supervision of registrars is just as important as the supervision of junior medical officers. Registrars should be properly supervised in their clinical practice. Inadequate provision for this undermines the quality of patient care. A system of clinical supervision should be introduced in all hospitals which engage registrars.
- 13.99 In my view there is a need to re-engage senior doctors in the training of registrars. The Institute of Medical Education and Training put forward 4 solutions:
- (a) Meaningful performance appraisal of senior doctors with acknowledgment of role models for junior medical officers and registrars;
 - (b) A change in the work practice of staff specialists in emergency departments;
 - (c) Specific funding for hospital directors of medical training programs and recognition of the importance of these roles by NSW Health and universities;
 - (d) Specific training agreements that trainees and hospitals enter into so that each party knows how medical education and training will be delivered and their respective obligations.
- 13.100 I have addressed the proposal at (a) in Chapter 7. I also made recommendations aimed at alleviating the workload of staff specialists in Chapter 7. In Chapter 10, I address the proposal at (c). The proposal at (d) should be adequately addressed by the other recommendations I have made in this chapter.

Supervision of junior nurses

- 13.101 I have discussed in Chapter 8 the problems of understaffing amongst our nursing workforce. This present problems for supervising junior nurses, as experienced nurses are too overwhelmed with duties, to take the time to supervise junior nurses.
- 13.102 Another common complaint during the Inquiry, which impacts on the supervision of junior nurses, was that the 'skill mix' in nursing has become too junior, with inadequate

support for junior nurses, either in terms of education or supervision by more experienced nurses.

13.103 Skill mix relates to the mix of skills derived from training – for instance, as an registered nurse, enrolled nurse or assistant-in-nursing– combined with the extent of a nurse’s experience – for instance, brand new or well experienced – with that mix of skills needed for, and then deployed on, a ward or unit on a shift-by-shift basis.⁶⁸

13.104 Care will obviously be optimised when nurses with relevant qualifications and experience are appropriately matched with the acuity and needs of the patient in each unit.⁶⁹ Because nurses with lower level qualifications or less experience need to practice under the supervision and guidance of “wiser” colleagues, it is important that the number of more qualified and experienced nurses is adequate to provide the necessary supervision of more junior staff and to deliver the care that requires a more qualified nurse.⁷⁰

- The Director of Nursing at Coffs Harbour Hospital told me that the way that the lack of senior nursing staff has been addressed is to increase the number of new graduate staff.⁷¹ Nevertheless, there is not enough support for these new graduates within the hospital’s budget.⁷² Although education hours have been increased, this is insufficient.⁷³ Clearly, increasing the number of graduate registered nurses does not fully address the problem, as the staff who are recruited will be inexperienced.
- In response to questions from me in relation to the skill mix at Coffs Harbour Base Hospital, one nurse made the following observations:

“A. I noticed in the last five years of nursing the increase in drug errors, infection rates and poor patient outcomes, seeing a lot of patients rebounding.

Q. Is that an anecdotal observation of yours or has there been a study done, so far as you know, or documentation, so far as you know, at Coffs that would support that?

A. No, I don’t know of any facts. That’s just an observation of my own.

Q. That’s your anecdotal observation?

A. Yes. Often because of our junior staffing across the board, we have very junior staff relieving or watching HDU, the high dependency unit, when the RN goes to lunch or morning tea or whatever. This is quite a regular thing because of our staffing, we have such a bad ratio of senior to junior because of the basic skill mix problem across the board, everybody has these problems.”⁷⁴

- A nurse unit manager who runs a 31-bed surgical ward at Port Macquarie Base Hospital with about 50 nursing staff told me that there is no clinical nurse educator or clinical nurse consultant attached to the ward.⁷⁵ She said that she was meant to have a skill mix of 80% registered nurses and 20% endorsed enrolled nurses (who like registered nurses, are qualified to administer medication)⁷⁶ or enrolled nurses, and that a new graduate registered nurse and trainee enrolled nurse rotate through the ward at any one time.⁷⁷ She told me that it is difficult to ensure direct supervision of nursing staff at all times, as the nature of the work is so dynamic.⁷⁸
- The trainee enrolled nurse program co-ordinator at Albury Hospital said that one solution to the skill mix problem would be to increase the number of clinical nurse educators whose job it is to take on the clinical education of undergraduates and new graduates who require ongoing training and supervision.⁷⁹

- An enrolled nurse at Port Macquarie Base Hospital told me that there is also a poor staffing mix for mental health nursing at the hospital, with not enough senior nursing staff.⁸⁰ The Acting Director of Nursing and Midwifery at Royal North Shore Hospital stated that the problems posed at the ward level by the introduction of trainee enrolled nurses, and the push to take more of them, have been addressed by nurse educators.⁸¹ This was done in recognition of the fact that registered nurses have their own load to carry and it is very difficult for them to be able to supervise other nurses as well as maintain standards of patient care.⁸²
- A nurse at Bankstown Hospital informed me that the nursing staff in the Emergency Department are very junior.⁸³ She described the effect of this skill mix on more senior nurses in the following way:

"We have some problems with workload. Because of the skill mix it is quite difficult. The team leaders are very stressed because they have a very high workload. They are responsible for medical, nursing, clerical and ward people. It is a big responsibility... Some of those team leaders have only been nurses for two or three years and they are dealing with a huge volume of patients in a stressful situation, and some of them are already running around looking ragged and very burnt out.

Because of that high workload many of the team leaders get little or no meal breaks. There is a lot of unpaid overtime because you can't leave the shift. There is nobody to look after the sick patients. You can't go out and have dinner when you know there are people backed up in the ambulance bay waiting to come into the department. I think that long term we can't sustain that sort of workload."⁸⁴

- 13.105 As at June 2007, the senior to junior nursing ratio at NSW Health was about 1:2.2.⁸⁵ The NSW Nurses' Association told me that in the years 2005-2007 the ratio of registered nurses to other direct clinical nursing employees declined in accordance with a trend discernable since 2002.⁸⁶ Workforce data provided to the NSW Nurses' Association by NSW Health in December 2007 reportedly indicated that the number of enrolled nurses, trainee enrolled nurses and assistants-in-nursing had increased by 10.4%, 9.7% and 20.1% respectively from 2005-2007.⁸⁷ The following table, however, suggests that the ratio of senior nurses (including registered nurses with more than 5 years experience) to junior nurses (including registered nurses with less than 5 years experience) remained relatively unchanged from 2002 to 2007.⁸⁸

Table 13.3 Senior to junior nursing staff ratios (June 2002, June 2007)

	June 2002	June 2007	Change
Registered nurses (year 5), clinical nurses, nurse unit managers, nurse managers	20,942	26,050	24.4%
Registered nurses (year 4), enrolled nurses, assistants in nursing	9,590	11,987	25%
Senior: junior ratio	1:2.2	1:2.2	

- 13.106 Nurses of all levels of experience expressed real concern about the lack of supervision of new and junior nurses, by reason of the lack of senior nurses on the ward, and the lack of time available to senior nurses to attend to supervision given the other demands on their time. Whilst being questioned by me, one clinical nurse educator at Coffs Harbour Base Hospital pointed to the problems of junior status of the nursing workforce and skill mix:

"A. The university students that come through the hospital, we need to embrace these people. They are our future nurses. But as it stands at the moment, there's less and less experienced registered nurses to facilitate them on the floor. So you may have an example of say today, we have three university students, one is a third year undergraduate and she has been allocated to work in the high dependency unit.

Q. As a supernumerary?

A. As a supernumerary, working next to an experienced RN in the high dependency unit and gaining experience and competency in there. The other two university students that are there today, and this is just an example, are second year and because of the inexperienced mix of the staff, they are allocated to work next to second year registered nurses, and they are beginner second year registered nurses.

So it concerns me that, and not taking anything away from the skills of those second year registered nurses, but they are struggling to cope with their work environment and the work that they have to do and the level of skill they need, without trying to teach somebody else and facilitate somebody else's learning."⁸⁹

13.107 A registered nurse at Kempsey District Hospital made the following complaint about the inadequacy of the nursing skill mix:

"[A] lot of senior staff are just really fed up with it because we are supposedly responsible for 28 patients and everything and we are meant to be supervising everybody, but you cannot supervise every staff member when there is only one of you."⁹⁰

13.108 Because of the junior skill mix, new nurses find the transition from university to the ward extremely stressful, and not all survive the experience. One 4th year registered nurse recounted the problems she faced upon entering the public hospital system:

"I think the hardest thing for me, when I finished, was I didn't have the confidence, I think, coming from being a student out of university, and at university I think in the three years that I studied I had 60 hours clinical placement and that was it. When I was put in a clinical setting it was very stressful. I didn't have a preceptor at all during that time, and being a small facility it was very hard because, as I said, I didn't have the confidence....

I was given three orientation days, at which I was with another registered nurse who had absolutely no idea about what the transitional support program was about, and then I had a full patient load from then on. Prior to that, I had three days at a tertiary hospital, which were classified as education days, which was a brief over everything that we studied at university....

...

The transition support program, as its name suggests, aims to support new nurses in their transition from a student, with very few hours exposure to a hospital setting, to an active member of a multi-disciplinary team. Currently new graduate nurses are attending shifts without the support of a suitably qualified preceptor to facilitate their introduction into acute care setting. They are often with nursing staff who have little or no

knowledge of their support needs and supervision requirements, which can lead to poor staff morale and communication breakdown. It could result in the new graduate nurse not feeling confident in their decision making skills and clinical competencies.”⁹¹

- 13.109 Problems become more acute on night shifts when, due to the lack of after-hours clerical support on the ward, the most senior nurse becomes, effectively, the ward clerk.⁹² There is no time to manage junior staff.⁹³ This was confirmed by a nurse at The Tweed Hospital, who told me that out-of-hours there is a lack of a range of support services, such as clerical assistance and pharmacy.⁹⁴ She said that after-hours, generally the most senior nurse on the ward tries to complete the clerical duties, as well as attend to the most ill patients.⁹⁵ In addition, that nurse is required to oversee the junior staff.⁹⁶

Consequences of understaffing and junior skill mix

- 13.110 One of the implications of understaffing is that there is no time for education and training of nurses. During my visit to Goulburn Hospital, for instance, I was told that its nursing workforce is generally ageing and there are not many new recently-graduated, younger nurses coming through the hospital.⁹⁷ Because staffing is short, finding time for education and training is difficult.⁹⁸
- 13.111 A clinical midwifery consultant at Nepean Hospital told me that traditionally in maternity services, there would be period of high activity but then periods of downtime, during which nursing staff could re-stock, re-evaluate, undertake education, support their staff, build morale, and debrief.⁹⁹ Staff are no longer able to do those things.¹⁰⁰ One witness at Coffs Harbour Base Hospital made the following observations in this context:
- “As other people have obviously told you, the acuity of patients and the complexity has changed. I’ve been nursing for 30 years this year In all that time, things have definitely changed. We have a higher turnover of patients with CAPACS [Community Acute/Post Acute Care Services] and early discharge services coming into play and therefore our patients that used to be lying around, a cholecystectomy would be there for four to six weeks, whatever, 24 hours if that. ...[W]ith the junior staff, the acuity is so high, it’s just fast and continuous all the time. It’s very hard for people to catch their breath, let alone learn in that environment, when you have minimal senior staff and much more junior staff.”¹⁰¹
- 13.112 A nurse at Nepean Hospital informed me that there is not enough time for experienced nurses to supervise junior nursing staff.¹⁰² One nurse who gave evidence at Mudgee Hospital claimed not to have received clinical supervision for 4 years.¹⁰³
- 13.113 The consistent message I received from nurses is that there is not enough time for improvement, or implementation of change, in a way that is sustainable.
- 13.114 Lack of supervision is centrally related to the rate of clinical error. Clinical errors can lead to, in the worst case, avoidable deaths. Recent research conducted by the University of Technology, Sydney found that a skill mix with higher proportions of registered nurses produced statistically significant decreased rates of negative patient outcomes such as decubitus ulcers, gastrointestinal bleeding, sepsis, shock, physiologic/metabolic derangement and pulmonary failure, as well as “failure to rescue”.¹⁰⁴ The same study estimated that an extra registered nurse shift per patient day would reduce the instance of decubitus ulcers by 20 per 1000 patients, reduce the

incidence of pneumonia by 16 per 1000 patients, and reduce the incidence of sepsis by 8 per 1000 patients.¹⁰⁵

- 13.115 A clinical nurse educator at Liverpool Hospital confirmed that new nurses are not provided with sufficient support, and are often given a level of responsibility well over their capabilities.¹⁰⁶ She told me that this creates significant potential for errors, particularly medication errors.¹⁰⁷
- 13.116 The problems created by understaffing and junior skill mix were factors in 2 significant cases that came to my attention during the Inquiry.

Case Study 1: Belinda Griffey

Belinda Griffey was a 26 year old woman who presented to the Emergency Department at Nepean Hospital on 29 April 2004 following a motor vehicle accident with a fractured pelvis, closed head injury and scalp laceration.¹⁰⁸ She was admitted to the orthopaedic ward for bed rest and traction. A head CT, neurological observations and bloods were attended following 4 days of symptoms including headache, nausea and vomiting. A low sodium result was identified by Pathology and phoned through to an enrolled nurse, who gave the result to an agency nurse, but the result was not conveyed to the medical team. A repeat sodium level was taken 2 days later following Belinda's deterioration. She was transferred to ICU after a Medical Emergency Team ("MET") call, for treatment for the low sodium and associated symptoms. Whilst at ICU, Belinda developed seizures, required intubation and had a neurological review that identified a brain injury. Belinda was cared for at Nepean Hospital until her death on 30 April 2008.¹⁰⁹

The root cause analysis ("RCA") established that the enrolled nurse and agency nurse were unaware of the significance of the low sodium level.¹¹⁰ The RCA also found that the workload of nursing staff impacted upon the level of supervision of junior nurses.¹¹¹ The same junior nursing staff and agency staff were allocated to care for Belinda for a period of days, reducing senior staff input.¹¹² It was also noted that due to the nursing skill mix (amongst other matters), changes in Belinda's condition were less likely to be appreciated or communicated to medical staff.¹¹³

Case study 2: Rebecca Murray

Rebecca Murray was a 29 year old woman who presented to the birth suite of Bathurst Hospital on Sunday 24 June 2007 at or over full term with a history of spontaneous rupture of membranes.¹¹⁴ Her initial blood pressure ("BP") was recorded at 131/84. A VMO general practitioner reviewed Rebecca and contacted the locum obstetrician. It was determined that an emergency caesarean section was required due to breech presentation and foetal bradycardia. A caesarean section was performed by the locum obstetrician at 7am under spinal anaesthesia, and a healthy baby girl was delivered. At 8:03am, Rebecca was transferred to the recovery unit. Rebecca's initial post-operative BP was recorded at 91/53.¹¹⁵ The anaesthetic registrar was informed and she was reported to have assessed the lower BP to most likely be attributable to the spinal anaesthetic.¹¹⁶

At 8:36am, Rebecca's BP was sufficiently low to meet the hospital criteria for calling the MET, however this did not occur.¹¹⁷ The recovery nurse found that Rebecca had lost sufficient blood to soak through 3 pads and spill onto the linen. The recovery room nurse contacted the anaesthetic registrar at 8:50am when Rebecca's BP reached the critically low level of 54/22. The anaesthetic registrar gave a telephone order for intravenous resuscitation and advised that he would return to the hospital to review Rebecca. The anaesthetic registrar

subsequently ordered the administration of packed cells, and Rebecca was returned to the operating theatre for an emergency examination under general anaesthetic.¹¹⁸

Despite aggressive management, bleeding was unable to be controlled so the locum obstetrician proceeded to perform a hysterectomy.¹¹⁹ Rebecca sustained a cardiac arrest post-operatively at 11:10am.¹²⁰ The Medical Retrieval Unit transferred her to Nepean Hospital by 4:10pm. Her metabolic and neurological functions continued to decline from the time of her admission into the ICU at Nepean Hospital, as did her BP. An echo-cardiogram confirmed cardiac stand-still and Rebecca was declared deceased at 4:52pm on 25 June 2007.¹²¹

The RCA found that Rebecca's care and recovery was heavily reliant upon the expertise and experience of a single member of the nursing staff.¹²² It also found that the nursing staff lacked experience in the recognition of post-partum haemorrhage, which contributed to an underestimation of Rebecca's blood loss.¹²³ The nurse was not supervised during her time in the recovery ward.

Solutions

- 13.117 I have heard of several innovative approaches being taken across NSW to deal with the combined problems of understaffing and junior skill mix. For instance, research by Professor Rhonda Griffiths and her colleagues from the Centre for Applied Nursing Research compared a new model of nursing care called "Shared Care in Nursing" with the "Patient Allocation" model of care as a control model.¹²⁴ The study sought to determine the effect of the Shared Care model compared to the Patient Allocation model on nurses' perception of and satisfaction with ward organisational changes, their clinical documentation practices and patient outcomes.¹²⁵
- 13.118 I was told that under Shared Care nurses are not allocated patients: the ward is split into 2 nursing teams, with an experienced registered nurse directing each team.¹²⁶ The Acting Director of Nursing at Concord General Repatriation Hospital described the operation of this model of care in the following terms:
- "There are 2 RNs directing each of the teams, and the experienced RN coordinates the patient care required within their team. They have a number of staff that work with them, and there are differing skill mixes in those two components of the teams. The two RNs also liaise with each other about what's going on on the ward as well, and one of them carries the pager after hours so that if one of the doctors comes up to the ward, they can page that nurse, find where they are and ask them about what's going on with their patient."¹²⁷
- 13.119 In contrast to the Shared Care model, what is required of nurses under the Patient Allocation model is the same regardless of their experience.¹²⁸ This means that inexperienced staff are often paired with equally inexperienced staff.¹²⁹ Delivery of care is thus ad hoc at best.¹³⁰
- 13.120 The outcomes of the 2 models are obviously quite different.¹³¹ I was told that the Shared Care model enables more senior nurses to provide role models, which is an excellent method of teaching and transferring knowledge from senior to less experienced nurses.¹³² Nurses can see the clinical decision-making process of senior nurses – not just the outcomes of that process.¹³³ The benefits of this model were stated as being a lot less "near misses",¹³⁴ as senior staff came across things that could have gone terribly wrong.¹³⁵ In addition, Shared Care reportedly involves better supervision and surveillance of junior staff.¹³⁶

- 13.121 Interestingly, I was also told that under the Shared Care model, patients are much more involved in their own care, primarily because a “walk-around” handover is instigated at the beginning of each shift at each patient’s bedside.¹³⁷ Indeed, the patients are now expected to participate in their care.¹³⁸ They are introduced to the staff who will be caring for them, and they know who they can call for help.¹³⁹ A team of 3 nurses attends the patient’s bedside.¹⁴⁰ The team leader talks about priorities for the patient that day.¹⁴¹ This may include tasks such as discharge arrangements.¹⁴² This improves the co-operation received from patients, as they have greater involvement and receive more information at an earlier stage.¹⁴³
- 13.122 Professor Griffiths’ study was conducted at the Concord Repatriation General Hospital.¹⁴⁴ I was informed that in April 2007 the Shared Care model was rolled out at a couple of the wards at Concord, and then in May 2008 it was rolled out across the whole hospital.¹⁴⁵
- 13.123 I have been informed that Professor Griffiths’ research is in its final stages and will soon be evaluated.¹⁴⁶ Indeed, the Acting Director of Nursing at Concord General Repatriation Hospital told me that her prediction is that the assessment of the Shared Care will be very favourable.¹⁴⁷ She told me that the elements that are likely to drive that favourable assessment include the fact that the nursing staff like the model: it provides them with someone they can be responsible to, in the form of the senior registered nurse on each end of the ward, and so there is always someone to speak to about any issues that may arise.¹⁴⁸
- 13.124 During the Inquiry I also heard about other solutions that are being implemented to deal with skill mix problems and understaffing. A registered nurse at St George Hospital suggested that the “in-charge” nurse act as a “floating nurse”, enabling the person to be free to deal with problems as they arise on the ward.¹⁴⁹ She said that in Victoria, there are “floating in-charge” nurses on both a.m and p.m shifts.¹⁵⁰ She said that such a floating nurse could help facilitate discharge planning, help clear patient bed blockages and could act as an education resource person for the relevant ward.¹⁵¹
- 13.125 A nurse at Westmead Hospital told me that in the high dependency unit there are significant issues with skill mix and staff morale.¹⁵² One of the more difficult areas is the transition of new junior and graduate nursing staff.¹⁵³ The strategies adopted to address this include the introduction of “roster matching” to ensure continuity and the development of a trusting relationship.¹⁵⁴ Under this model, new nurses are paired with and mentored by senior nursing staff, completely matching their entire roster for weeks at a time.¹⁵⁵ In this way, a team is developed.¹⁵⁶
- 13.126 To deal with the increased number of junior and insufficiently skilled nursing staff, Nepean Hospital has implemented team nursing, whereby an enrolled nurse and a registered nurse work together.¹⁵⁷ A witness informed me that this seems to work.¹⁵⁸ I note, however, that continuity of care is not assured under team nursing, as teams may be disbanded at the end of each shift.¹⁵⁹
- 13.127 The Acting Dean of the Faculty of Nursing, Midwifery and Health at the University of Technology Sydney, recommended that in the interests of patient safety a higher proportion of registered nurses than is presently the case ought be employed in general, medical and surgical wards in NSW public hospitals, and that the number should not be allowed to drop below a threshold of at least 80% of hours worked.¹⁶⁰ She also recommended that trainee enrolled nurses be removed from the paid workforce in NSW and revert to supernumerary status.¹⁶¹ Notwithstanding the attraction of that suggestion, it appears to me to be somewhat unrealistic given present nurse shortages, and the demanding need of patient care.

- 13.128 Whilst many nurse managers saw the challenges presented by new nurses as difficult to overcome, other nurse managers saw it as an opportunity. One nurse manager was able to fully staff her hospital by actively encouraging student nurses to come to the hospital, and making sure their time there was enjoyable.¹⁶² Once the nurses came to the hospital after their studies, there was a carefully planned and graduated entry to full nursing duties, together with a mentoring program, to foster loyal, long-serving employees.¹⁶³

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 - ³ Submission on behalf of the Deans of Medical Schools in New South Wales and the Australian Capital Territory, undated, SUBM.034.0016 at 26.
 - ⁴ Letter from Professor Mark Brown, Institute of Medical Education and Training to Catherine Follent, Special Commission of Inquiry, 22 October 2008, attaching pro forma letter to hospitals from Professor Mark Brown dated 6 June 2008 regarding supervision requirements for prevocational trainees.
 - ⁵ Letter from Robyn Kruk, Director General, NSW Health to Professor Mark Brown regarding establishment of the NSW Institute of Medical Education and Training
 - ⁶ NSW Health, *Role and Responsibility of the Postgraduate Medical Council of NSW*, PD2005_143.
 - ⁷ Meeting with Institute of Medical Education and Training, 3 April 2008, transcript 58.11.
 - ⁸ Meeting with Institute of Medical Education and Training, 3 April 2008, transcript 58.11.
 - ⁹ Letter from Professor Mark Brown, Institute of Medical Education and Training to Special Commission of Inquiry, 22 October 2008.
 - ¹⁰ Including, Report of the Coroner, Inquest into the death of Vanessa Anderson; Confidential Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 22.1-29.17; Kim McCall, Nepean Hospital hearing, 8 April 2008, transcript 1370.6-27; Amy Willesee, Joanna Willesee, Wollongong hearing, 14 April 2008, transcript 1619.31-1620.34; Submission of Genevieve Walsh, received 31 March 2008, SUBM.015.0196.
 - ¹¹ Submission of Jacqueline Beckett, 15 April 2008, SUBM.021.0008.
 - ¹² Dr Christopher Arthur, Royal North Shore Hospital hearing, 2 April 2008, transcript 1239.11-15.
 - ¹³ Paltridge D, "Prevocational medical training in Australia: where does it need to go?" (2006) 184 (7) *Medical Journal of Australia* 349-352 "
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 - ¹⁷ Meeting with the Medical Deans of Australia and New Zealand, 13 August 2008.
 - ¹⁸ See the section in this chapter on the supervision of registrars.
 - ¹⁹ Meeting with Mr Alan McCarroll, 19 February 2008.
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 - ²¹ Commonwealth Department of Health and Ageing, *National Training and Assessment Guidelines for Junior Medical Officers*, July 2003, Canberra at p.13.
 - ²² NSW Health has referred to the registrar's generic responsibility for supervision and teaching of junior medical officers in position descriptions developed for a basic and advanced trainee: Letter from NSW Health to Catherine Follent, Special Commission of Inquiry, 31 October 2008, Tab 5.
 - ²³ Submission of Dr Jim Newcombe, 7 May 2008, SUBM.028.0007.
 - ²⁴ Submission of Dr Tristan Barnes, 31 March 2008, SUBM.002.0033 at 2.

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- 26 Emeritus Professor Kerry Goulston, Experts' Conference, 16 September 2008, transcript 280.47-281.15.
- 27 Professor Cliff Hughes, Experts' Conference, 16 September 2008, transcript 281.17-26.
- 28 Dr Rebecca Kozor, Hornsby Ku-ring-gai Hospital hearing, 11 March 2008, transcript 174.40-175.12.
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14.1 My terms of reference require me to:

"2. identify existing models of patient care used in the delivery of acute care services in NSW public hospitals with particular regard to case management including ... **clinical note-taking and record-keeping** ... involved in the care of a patient;"

14.2 My terms of reference also require me to:

- (a) recommend any changes which should be made to the existing models of care identified so as to improve the safety and quality of patient care in NSW public hospitals;
- (b) identify any systemic impediments to the implementation of changes recommended; and
- (c) recommend any changes which NSW Health should make to overcome any impediments identified.

14.3 In this chapter, I will examine the existing system of clinical note-taking and record-keeping in operation in NSW public hospitals, and how it ought to be improved, in part, with the use of information technology. Elsewhere in my report, I have discussed how technology should be better used, as follows:

- (a) in Chapter 6, by using tele-medicine to provide specialist medical assistance to patients in rural and remote hospitals;
- (b) in Chapter 10, to improve the continuing education of our health workforce through education provided by videolink and online learning;
- (c) in Chapter 15, to improve communication between clinicians by providing modern paging systems, PDAs and mobile phones; and
- (d) in Chapter 24, to provide for the availability of online medical images and medical imaging reports on a 24 hour a day, 7 days a week basis.

Importance of clinical records

- 14.4 The importance of clinical records may seem so obvious that it hardly needs stating.

Patient's medical history

- 14.5 Information provided by the patient (for example, what happened to them, how they are feeling, previous medical history and allergies) is an important element in the clinical decision-making process and must be recorded for the benefit of all health professionals treating the patient. This has been highlighted to me in a number of different contexts.

- 14.6 For example, I heard evidence at Gosford Hospital that 50% of all people over 75 years of age presenting to the Emergency Department do so as a direct result of major adverse drug reactions, highlighting how critical it is for clinicians to be able to immediately access a reliable record of the drugs that a patient is taking.¹

- 14.7 The Australian Institute of Radiography told me that clinicians requesting X-rays often fail to provide an appropriate and accurate clinical history. This means that it takes longer for the radiographer to turn-around the request, increases the chance of an incorrect test being done, increases the chance for errors and increases the length of stay in hospital.²

- 14.8 An extreme and sad example of adverse consequences arising from the failure to document a patient's medical history was provided to me by the relatives of Mrs Joan Medway, a 76 year old aboriginal woman who died following her admission to Bathurst Hospital with acute cholecystitis.³ Mrs Medway had a medical history of heart disease, diabetes, chronic renal impairment and osteoarthritis. The Root Cause Analysis conducted following Mrs Medway's death found that:

"Documentation of the patient's medical history was incomplete in the current admission record. This combined with inadequate verbal communication between clinicians, led to some clinicians being unaware of the patient's extensive history of chronic heart failure, aortic stenosis and ischaemic heart disease. This meant that signs and symptoms related to the patient's co-morbidities that may have indicated that the patient's condition was deteriorating were not recognised by all members of the treating team. This may have contributed to the patient further deteriorating, subsequently resulting in the patient dying."⁴

- 14.9 Without an accurate and useable patient history across all hospital departments, a patient may be asked on numerous occasions over a few hours the same questions by the ambulance officer, the Emergency Department triage nurse, the emergency registrar, the ward nurse, the ward registrar and the treating specialist.

"...the patient will be interviewed by clerical staff for preparation of the administrative record; by nursing staff who create a nursing record; and finally by medical staff who create a medical record."⁵

It hardly needs saying that patients find experiences like this frustrating and even demeaning.

Observations of the patient

14.10 Once a patient is admitted to hospital, a record of regular observations of the patient's temperature, blood pressure, appearance and the like provide a vital input into clinical decision making. Is the patient recovering or deteriorating? Is the patient developing an infection? Is the patient experiencing an adverse reaction to recently prescribed medication? These observations must be recorded.

14.11 As the NSW Deputy State Coroner noted at the inquest into the death of Bryce Keenan, this does not routinely occur:

"This leads me to yet another persistent problem, invariably detected when cases such as this go to Inquest, and that is the failure by most of the medical and clinical staff to record, clearly and contemporaneously important information and or observations. As a general rule ...Nursing Notes are of a high standard, however, no doubt due to the immense pressure and work load on Doctors, it is often at Inquiries such as this, that the shortcomings are noted."⁶

Record of treatment

14.12 During the course of a patient's treatment in hospital, numerous health professionals will attend to the patient. Each has to have the benefit of the observations and thinking of those who have gone before, so that tests are not duplicated, lines of inquiry which have already been exhausted are not re-investigated, and medication doses are not inappropriately repeated.

14.13 If the patient is transferred to another hospital for further treatment, that hospital needs a complete record of what has already been discovered and done.

14.14 A number of submissions described to me the importance of having a complete medical record available to clinical staff.

- (a) Ms Carmichael, the deputy clinical information manager at Tweed Heads Hospital, indicated that an inadequate medical record can lead to increased clinical risk to patients.⁷
- (b) Dr Arthur a specialist haematologist at Royal North Shore hospital, noted that, in cancer care, it is essential that there is a complete and available medical record in order to get a patient's medical history, pathology and radiology and a record of chemotherapy treatment.⁸
- (c) As Mr Oakley, a nurse manager at Nepean Hospital frankly said:

"If it's not documented in the notes, [nursing staff] won't know about it ... It's very hard for nursing staff to be mind-readers..."⁹

14.15 The Root Cause Analysis completed by Greater Western Area Health Service regarding the death of Mrs Rebecca Murray following a post-partum haemorrhage at Bathurst Hospital in June 2007 tragically highlights the importance of keeping a complete clinical record:

"... the rural base hospital medical records did not include an accurate record of blood loss, blood product and fluid replacement, in particular the administration times of each pack of blood products were not recorded. These factors contributed to an underestimation of the total blood loss, delay in awareness of the anaesthetic

team leader of the rate of transfusion and an inaccurate tally of the blood product and fluid administration.”¹⁰

Requirements for clinical notes

- 14.16 It is clear from this evidence, if evidence be needed of a matter which really amounts to no more than common sense, that details of a patient’s medical history, condition and treatment must be recorded. More than this, the information must be:
- (a) legible;
 - (b) comprehensive; and
 - (c) readily accessible to all who treat the patient, now or in the future (a unique feature of health information is that it becomes more valuable as time passes – health information must be stored and re-used for many years).¹¹
- 14.17 The importance of clinical medical records is reflected in legislation. Regulation 6 of the *Medical Practice Regulation 2003* (NSW) requires medical professionals to contemporaneously record (or cause to be recorded) the provision of the medical treatment or other medical service, or as soon as practicable afterwards.
- 14.18 A number of NSW Health policy directives also specify requirements for making clinical notes.¹² However, these directives, while stated to be mandatory, attach “guidelines as to a minimum standard” only. For example:
- (a) PD2005_004, which relates to medical records, recommends “minimum standards as guidelines for all hospitals and community care centres”.¹³
 - (b) PD2005_127, which relates to health care records, states that the principles in the policy “are designed to provide the basis for policies to be developed by Health Services that are relevant to each of their health care facilities or services.”¹⁴

The effect of these policy directives appears to me to encourage variation, not uniformity, as between area health services and departments within hospitals.

- 14.19 NSW Health must ensure compliance with its own policies. Legibility, name and date are all requirements of NSW Health Policy.¹⁵ It is appropriate that these policies be effectively enforced

Recommendation 48: *Within 6 months, NSW Health should design and implement a system of auditing the performance of all hospitals in the compilation of patient clinical records, for compliance with NSW Health policies regarding legibility and completeness of those records.*

Failings of current clinical notes

- 14.20 The present paper-based system of clinical notes in NSW public hospitals suffers from many problems.

Clinical notes presently in use

- 14.21 What currently exists is a largely paper-based system with significant variation from clinician to clinician, ward to ward and hospital to hospital.
- 14.22 The clinical record of each patient at a public hospital in NSW includes a number of documents, reports and images that, regrettably, are not always gathered together and kept in the same place during that patient's stay in hospital. As Ms Gibbs of St George Hospital told me:

"there is an immense amount of documentation involved with clinical notes - clinical notes, observation charts, balance charts, admissions, discharges, risk assessments such as alcohol and other drugs, pressure ulcers, falls, mobility, and numerous policy directives generate substantial documentation requirements."¹⁶

- 14.23 A patient's clinical record will include some, if not all, of the following:
- a NSW Ambulance Service Patient Health Care Record (if applicable), briefly recording the patient's personal details, main complaint, recent medical history, observations (such as temperature, breathing, pulse rate) and treatment provided;

- an Emergency Department Assessment Record;

CDA

1000

Campbelltown Hospital

**EMERGENCY DEPARTMENT
CLINICAL RECORD**

TITLE	LAST NAME	M.F.N.
FIRST NAME		V.M.O.
ADDRESS, STREET		D.O.B.
SUBURB	POSTCODE	ADMISSION DATE
		SEX M

TRIAGE DATE: 15 FEB 07 **TRIAGE TIME:** 02:59 **PRIORITY CODE:** 4 **TRIAGE NURSE:**

PRESENTING PROBLEM: BACK PAIN
*U by from 2am
discomfort 7am
levetol plus
20mg 100*

NURSING ASSESSMENT DATA:
 PT STATES INJURED BACK 2.5/52 AGO. TONIGHT PAIN INCREASED. PT STATES PAIN TO LOWER LUMBAR REGION NIL RADIATION. GIVEN METHOXY BY CDA, STATES PAIN STILL 6/10. PT AMBULANT TO TRIAGE. HX HT, DEPRESSION.

DOCTOR NAME: _____
DOCTOR CODE: _____
TIME SEEN: [][][][] **DEPARTURE READY TIME:** [][][][]
ACTUAL DEPARTURE TIME: [][][][]

Vital Signs: Date: 15 FEB 07 Time: 03:02

Temperature _____ °C	Weight _____ Kg	Allergies
Pulse 97 /min	SaO2 97 %	
Respiratory Rate _____ /min	Peak Flow _____ L/min	
Systolic BP 127 mmHg	BSL _____ mmols/l	
Diastolic BP 69 mmHg	GCS 15	

STAT MEDICATION

DATE	TIME	DRUG	DOSE	ROUTE	ORDERED BY	GIVEN BY
		levetol	100mg	P	<i>[Signature]</i>	<i>[Signature]</i>

6/10 2/3 ?
P oranges
C fruit
no alcohol
found 3 paracetamol + 2 diclofenac
or 2am
HT
HT on - dexamethasone
injured back 2/52
by
 HT - levetol plus
 degn 20mg
 at 10am

- progress notes in which each medical, nursing and allied health professional enters their daily notes, recording the date, time, name and their position;

SYDNEY SOUTH WEST AREA HEALTH SERVICE		MRN [REDACTED]							
		Campbelltown ICU/HDU							
Allergies		MR- Adm: 25-02-2007							
Hospital/Centre		Case No.	Ward/Code						
DATE TIME	SIGN AND PRINT SURNAME & RECORD DESIGNATION FOR ALL ENTRIES		PAGE NO. 103						
8-3-7 0010	[REDACTED] ICU REG C ST 105 MAP 73 NAD 8:50 @ 9 mL/H D PUPILS DILATED BUT REACT EQUALLY φ CORNEAL REFLEX φ OCCULOGYRIC (DOLLS EYE) REFLEX ISTAT Na 140 K 5.2 Hb 85 P PSV 500 mL NSA CXM - SEND NOW - RECHECK Hb MAINE AND Tx IF Hb < 80								
8-3-07 0100	Nursing - NG aspirated 5mls NG feeds Nepro recommenced at 4am/4h. - 500mls NSA given stat 0015. CUP 13. - ETT pulled back to 24cm & 14ps & retied. - ECG attended. Wearing Noradrenaline to MAP > 65mmHg - Pressure area care attended [REDACTED]								
<table border="1"> <tr> <td> Loc Number: L06270 Serial: 301828 Version: JANS1218 CLEN: A1Z Cust: 0620071NE </td> <td> Operator ID: [REDACTED] Physician: [REDACTED] </td> <td> 02:05:08MAN03 1102:50 CPH: No 02:05:08 0.22 7.5 g/L </td> <td> Hb 141 mmol/L K⁺ 4.7 mmol/L Cl⁻ 104 mmol/L Hct 0.22 Wt a. hct. 7.5 g/L </td> <td> pH 7.485 PCO2 33.1 mmHg BEAD -1 mmol/L HCO3 21.3 mmol/L SID 90 X </td> <td> STAT: 008+ Pt. Name: Campbelltown PL: 002979 </td> </tr> </table>				Loc Number: L06270 Serial: 301828 Version: JANS1218 CLEN: A1Z Cust: 0620071NE	Operator ID: [REDACTED] Physician: [REDACTED]	02:05:08MAN03 1102:50 CPH: No 02:05:08 0.22 7.5 g/L	Hb 141 mmol/L K ⁺ 4.7 mmol/L Cl ⁻ 104 mmol/L Hct 0.22 Wt a. hct. 7.5 g/L	pH 7.485 PCO2 33.1 mmHg BEAD -1 mmol/L HCO3 21.3 mmol/L SID 90 X	STAT: 008+ Pt. Name: Campbelltown PL: 002979
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HISTORY AND PROGRESS NOTES

CR 50

File in Clinical Record

ORACLE No. 9050017

- a patient's care plan recording the patient's mental status, mobility, hydration, nutrition needs, daily habits and wound care;

Date: <u> </u> Care Plan		Initial		Date: <u>2/11/06</u> Care Plan		Initial	
PATHWAY SHOULD BE REVIEWED (AND REVISED IF NECESSARY) BY RN AT THE BEGINNING OF EVERY SHIFT				PATHWAY SHOULD BE REVIEWED (AND REVISED IF NECESSARY) BY RN AT THE BEGINNING OF EVERY SHIFT			
Discharge Planning commenced Yes <input type="checkbox"/> No <input type="checkbox"/>		AM PM N		Discharge Checklist commenced Yes <input type="checkbox"/> No <input type="checkbox"/>		AM PM N	
Mental Status Agitated <input type="checkbox"/> Alert <input type="checkbox"/> Un-cooperative <input type="checkbox"/> Orientated <input type="checkbox"/> Co-operative <input checked="" type="checkbox"/> Confused <input checked="" type="checkbox"/> Anxious <input checked="" type="checkbox"/> Drowsy <input checked="" type="checkbox"/> Hostile <input type="checkbox"/> Unconscious <input type="checkbox"/> Withdrawn <input type="checkbox"/>		CA		Mental Status Agitated <input type="checkbox"/> Alert <input type="checkbox"/> Un-cooperative <input type="checkbox"/> Orientated <input type="checkbox"/> Co-operative <input checked="" type="checkbox"/> Confused <input type="checkbox"/> Anxious <input checked="" type="checkbox"/> Drowsy <input type="checkbox"/> Hostile <input type="checkbox"/> Unconscious <input type="checkbox"/> Withdrawn <input type="checkbox"/>		CA	
Observations Frequency <u>2x</u> T/P <u> </u> BP <u> </u> Resps <u> </u> PCA <u> </u> Epidural <u> </u> O ² Sats <u> </u> BSL <u> </u> Neuro <u> </u> Other <u> </u>		CA		Observations Frequency <u>2x</u> T/P <u> </u> BP <u> </u> Resps <u> </u> PCA <u> </u> Epidural <u> </u> O ² Sats <u> </u> BSL <u> </u> Neuro <u> </u> Other <u> </u>		CA	
Mobility Independent <input type="checkbox"/> Supervision <input type="checkbox"/> Assistance <input checked="" type="checkbox"/> Bedrest <input type="checkbox"/> Equipment <input type="checkbox"/> Specify <u> </u>		CA		Mobility Independent <input type="checkbox"/> Supervision <input type="checkbox"/> Assistance <input checked="" type="checkbox"/> Bedrest <input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Specify <u> </u>		CA	
Pressure Care Reassess daily <u> </u> Waterlow score <u> </u> Action required: <u> </u>		CA		Pressure Care Reassess daily <u> </u> Waterlow score <u> </u> Action required: <u> </u>		CA	
Manual Handling Record Daily <u> </u> Falls risk score <u> </u> Action Plan Implemented Yes <input type="checkbox"/> N/A <input type="checkbox"/> Mechanical lifter Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		CA		Manual Handling Record Daily <u> </u> Falls risk score <u> </u> Action Plan Implemented Yes <input type="checkbox"/> N/A <input type="checkbox"/> Mechanical lifter Yes <input type="checkbox"/> No <input type="checkbox"/>		CA	
Hygiene Patient to be monitored at all times whilst in the shower							
Independent <input type="checkbox"/> Shower chair <input checked="" type="checkbox"/> Supervision <input checked="" type="checkbox"/> Commode/T/P <input type="checkbox"/> Assistance <input checked="" type="checkbox"/> Sponge <input checked="" type="checkbox"/>		CA		Independent <input type="checkbox"/> Shower chair <input checked="" type="checkbox"/> Supervision <input checked="" type="checkbox"/> Commode/T/P <input type="checkbox"/> Assistance <input type="checkbox"/> Sponge <input type="checkbox"/>		CA	
Daily Habits P/Urine Yes <input type="checkbox"/> No <input type="checkbox"/> IDC <input type="checkbox"/> SPC <input type="checkbox"/> Uridome <input type="checkbox"/> Catheter change due <u> </u> Incontinent <u> </u> urine <input checked="" type="checkbox"/> bowel <input checked="" type="checkbox"/> Bowel activity am <u> </u> pm <u> </u> nocte <u> </u>		CA		Daily Habits P/Urine Yes <input type="checkbox"/> No <input type="checkbox"/> IDC <input type="checkbox"/> SPC <input type="checkbox"/> Uridome <input type="checkbox"/> Catheter change due <u> </u> Incontinent <u> </u> urine <input checked="" type="checkbox"/> bowel <input checked="" type="checkbox"/> Bowel activity am <u> </u> pm <u> </u> nocte <u> </u>		CA	
Nutrition As per diet code NBM <input type="checkbox"/> Entera <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Feed assist <input type="checkbox"/> To Set-up <input type="checkbox"/> Food chart <input type="checkbox"/> Diet specify <u>Full</u>		CA		Nutrition As per diet code NBM <input type="checkbox"/> Entera <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Feed assist <input type="checkbox"/> To Set-up <input type="checkbox"/> Food chart <input type="checkbox"/> Diet specify <u>Full (FFeed)</u>		CA	
Hydration Oral fluids specify <u>Free</u> Restricted <u> </u> ml/d IVT <input checked="" type="checkbox"/> IVC <input checked="" type="checkbox"/> PICC <input type="checkbox"/> FBC <input type="checkbox"/> Butterfly <input type="checkbox"/> CVC <input type="checkbox"/> Porta Cath <input type="checkbox"/> Date inserted and site <u> </u> Change / due date <u> </u> Cannula site! Yes <input type="checkbox"/> No <input type="checkbox"/> IV site! Signs of inflammation present No <input type="checkbox"/> Yes <input type="checkbox"/> If 'Yes' remove cannula immediately Time removed: <u> </u>		CA		Hydration Oral fluids specify <u>Free</u> Restricted <u> </u> ml/d IVT <input type="checkbox"/> IVC <input checked="" type="checkbox"/> PICC <input type="checkbox"/> FBC <input type="checkbox"/> Butterfly <input type="checkbox"/> CVC <input type="checkbox"/> Porta Cath <input type="checkbox"/> Date inserted and site <u> </u> Change / due date <u> </u> Cannula site! Yes <input type="checkbox"/> No <input type="checkbox"/> IV site! Signs of inflammation present No <input type="checkbox"/> Yes <input type="checkbox"/> If 'Yes' remove cannula immediately Time removed: <u> </u>		CA	
Wound Care Record in progress notes Wound present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wound Care Chart Yes <input type="checkbox"/> No <input type="checkbox"/> Describe location: <u> </u> Frequency: <u> </u>		CA		Wound Care Record in progress notes Wound present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wound Care Chart Yes <input type="checkbox"/> No <input type="checkbox"/> Describe location: <u> </u> Frequency: <u> </u>		CA	
Test / Investigations / Specimens Specify: <u> </u>				Test / Investigations / Specimens Specify: <u> </u>			
1. In response to Incident IVC 1 and 2. Cannula dated August 2003 refer Nepean Executive Critical Events.				1. In response to Incident IVC 1 and 2. Cannula dated August 2003 refer Nepean Executive Critical Events.			

- pathology reports;
- medication charts, recording the time, date and dose of medication administered;

MEDICATION RECORD
ONCE ONLY MEDICATION

DATE TIME MEDICATION DOSE ROUTE FREQUENCY TAKEN DOCTOR'S NAME M.O. SIGNATURE

22/7	1030	Morphine	10mg	SC				
22/7	1100	5ml Paracetamol	5mg	Oral				

PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

DATE: 22/7 MEDICATION NAME AND FORM BLOCK LETTERS: Morphine DOSE: 10mg ROUTE: SC FREQUENCY: PRN

DATE: 22/7 MEDICATION NAME AND FORM BLOCK LETTERS: Paracetamol DOSE: 5mg ROUTE: Oral FREQUENCY: PRN

ADMINISTRATION RECORD

Date	Time	Given By	Dose and Time	Given By	Dose and Time	Given By	Dose and Time	Given By	Dose and Time	Given By
16-7-03	7:03	AK	10mg	AK	5ml					
19/7/03		AK	10mg	AK	5ml					
20-7-3		AK	10mg	AK	5ml					
21/7/03		AK	10mg	AK	5ml					
22/7/03		AK	10mg	AK	5ml					
23/7/03		AK	10mg	AK	5ml					
24-7-03		AK	10mg	AK	5ml					

ROUTINE and P.R.N. ORDERS

1. DATE: 18/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Zofenoxil DOSE: 10mg FREQUENCY: topical to lip ROUTE: [Redacted] PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

2. DATE: 19/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Fluoromil in 50ml vial DOSE: 10mg FREQUENCY: 2 bds ROUTE: IV PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: start at 2mg/hr. M.O. SIGNATURE: [Redacted]

3. DATE: 18/7 MEDICATION NAME AND FORM BLOCK LETTERS: Morphine DOSE: 10mg FREQUENCY: 2 bds ROUTE: IV PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: 10mg for 10-15kg for dependent. M.O. SIGNATURE: [Redacted]

4. DATE: 18/7 MEDICATION NAME AND FORM BLOCK LETTERS: Propofol DOSE: 10mg FREQUENCY: 1 time for sedation ROUTE: IV PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: 10mg for 10-15kg for dependent. M.O. SIGNATURE: [Redacted]

5. DATE: 20/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Clozole Cream DOSE: top to crown DOSE: 10mg FREQUENCY: 2 bds ROUTE: Topical PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

6. DATE: 20/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Paracetamol DOSE: 5mg FREQUENCY: TDS ROUTE: Oral PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

7. DATE: 21/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Methylprednisolone DOSE: 150mg FREQUENCY: 2 bds ROUTE: Oral PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

8. DATE: 21/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Flunoxazole DOSE: 100mg FREQUENCY: 12hr ROUTE: Oral PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

9. DATE: 23/7/03 MEDICATION NAME AND FORM BLOCK LETTERS: Heparin DOSE: 5000 U DOSE: 50 ROUTE: SC PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

10. DATE: [Redacted] MEDICATION NAME AND FORM BLOCK LETTERS: [Redacted] DOSE: [Redacted] FREQUENCY: [Redacted] ROUTE: [Redacted] PHARMACY NUMBER: [Redacted] FURTHER INSTRUCTIONS: [Redacted] M.O. SIGNATURE: [Redacted]

electronic system, which involves double handling and poses the risk of transcription error.¹⁷ The Children's Hospital at Westmead has a program for scanning the paper components of its medical records within 48 hours of the discharge of the patient. In this way, the hospital seeks to avoid double entry and also the difficulty of accessing past records which are both paper and electronically based. Such a combined system is better than a wholly paper-based system, but only marginally.¹⁸

Lack of searchability

14.26 As described above, a patient's medical records are often bulky and to be found in different locations.

14.27 As Dr Goldstein of Ryde Hospital observed:

"The diagnosis [of the patient] will be based on history, physical examination, nursing observations, urine test, blood test results, x-ray results, and other test results. Regrettably, there exists in EDs no coherent system to put these disparate pieces of information together in a file, to allow the medical team to expeditiously make the diagnosis, and to assist the clinical team to share data, provide inputs, and produce the diagnosis and treatment plan in an efficient manner. In other words, the current information system fails to generate an adequate electronic medical file, with serious consequences. For example, ECG and x-rays at present cannot be viewed by consultants or registrars who are not present in the hospital, or even if they are present in the ED, time may be wasted locating the x-rays or other essential information ... on frequent occasions vital information inputs to diagnostic decision-making are missing."¹⁹

14.28 Salient entries in the notes may be missed, or notes not read at all, due to the large volume, the amount of information recorded and the complexity of the documents.²⁰ For example, the Root Cause Analysis conducted following Ms Belinda Griffey's suffering of a brain injury due to inadequately monitored sodium levels noted that the entry of the sodium results in the notes was not immediately obvious.²¹

14.29 An electronic medical record, on the other hand, is more readily searchable for information you want to know. The electronic medical records demonstrated to me included prominently labelled tabs that could be clicked, for example, to obtain that patient's clinical notes, transfer history, medication list, allergies, tests ordered and so on.

Illegible handwriting

14.30 Handwriting is idiosyncratic. One person's writing may be impossible for another to read (indeed, on several occasions in my Inquiry, doctors admitted that they couldn't read their *own* handwriting). That handwriting in clinical notes was often illegible was a submission that I regularly received:

"Handwritten requests can be difficult to read and then if you have transcriptions of transcriptions of treatment orders, that lends itself to error."²²

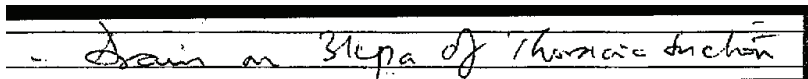
"Some of the notes are absolutely illegible."²³

"... the medication charts are still illegible at times. I know this for a fact because the junior nurses ask me, 'What does this mean?' You know, they go and clarify it

with the doctor, but you're asked on a daily basis ...
'What does this say?'"²⁴

"... ward notes ... are often illegible. You can't tell when they were entered, who entered them and what they say. There are umpteen little things in health that could be improved dramatically, saving not just lives and improving the quality of outcomes but saving an awful amount of money."²⁵

- 14.31 Illegible handwriting, not surprisingly, impacts on the standard of treatment provided and can lead to errors. Mrs Mackay's submission regarding her late husband's treatment is illustrative of this point: The suction of Mr Mackay's lungs following surgery was ordered to be at 3 KPA (Kilopascals) but because of poor quality handwriting, 3 KPA was read as 31 KPA and Mr Mackay's lungs were suctioned at 31 KPA for almost 24 hours until the next morning when a nurse in the spinal unit discovered the mistake.²⁶
- 14.32 Although the Root Cause Analysis did not find that this was a contributing factor to Mr Mackay's death, the risks involved and the distress caused hardly need emphasising.



The image shows a close-up of a handwritten note on a lined piece of paper. The text is written in cursive and reads "Drain on 31kpa of Thoracic suction". The handwriting is somewhat slanted and difficult to read, illustrating the issue of illegible handwriting mentioned in the text.

- 14.33 Typed text overcomes this problem. The electronic medical records that were demonstrated to me surmount the issue of poor handwriting. The electronic medical record is legible and findable. It is clear who signed the record and provides an audit trail.²⁷

Missing time, date and author details

- 14.34 Whilst an electronic record can automatically generate certain information, such as the date and time of the entry and the author, these important pieces of information must be handwritten in a paper system and frequently are omitted or are unclear.²⁸

Inability to check entries

- 14.35 There is no automated check of the accuracy or relevance of a handwritten note. This can be provided by an electronic medical record.
- 14.36 For example, a common error made in hospitals is prescribing the wrong dose of medication to a patient. The electronic medication management component of an electronic medical record can issue a warning if:
- the dosage exceeds the prescribing range,
 - if the drug prescribed is contrary to an allergy noted for that patient, or
 - if the drug prescribed is contrary to a drug already prescribed for the patient.²⁹
- 14.37 During my visit to the Emergency Department at Blacktown Hospital, the electronic medical record was demonstrated to me by Dr Michael Hessian, the Director of the Blacktown-Mt Druitt Emergency Department. Dr Hessian demonstrated how templates are used to ensure that patient records are properly entered and that doctors follow the department's procedures and protocols, thereby improving the quality of information in the medical record and as well the quality of the patient care.³⁰

Inability to prompt action

14.38 Unlike paper records, electronic medical records can produce alerts or alarms for prompt action by clinicians.

14.39 For example, Dr Barratt, a staff specialist at Royal North Shore Hospital, explained:

"...the use of electronic systems for gathering patient data addresses many of the issues even if it does not directly solve communication problems. For example if a haematology patient spikes a temperature to 39°C out of hours then the nurse writes it in the chart and has to make a decision to contact the [resident medical officer]. The [resident medical officer], who may not know the ward, reviews the patient. Then he or she needs to follow a protocol which ideally should be laminated in the notes. Of course this is not possible for all clinical eventualities, and protocols, whilst valuable, have proven a poor substitute for good senior medical engagement in patient care.

With electronic systems, the nurse simply has to record the high temperature into the computer and the protocols specific for that clinical specialty and [the treating] consultant can be activated. This reduces the error if a locum or junior nurse is looking after the patient. It also reduces the risk of error if a junior doctor sees the patient and doesn't know what to do.

"Another example might be a patient who has had an operation and is bleeding post operatively. The simple act of recording a low blood pressure electronically activates protocols which ensures the right people are contacted."³¹

14.40 The CERNER electronic medical record that is being implemented by NSW Health can (but does not as a matter of course) include options that, for example:

- Display observations on the Emergency Department tracking lists which highlights any observations which fall into an abnormal or critical range.³² This feature has been built into the North Coast Area Health Service FirstNet configuration. NSW Health are currently in discussions with other area health services as to whether to include this option.³³
- A "to do list" could be available to individuals and would act as a reminder as well as enabling monitoring of overdue tasks.³⁴ (NSW Health has indicated that extra licences would need to be purchased to include this option and there is not sufficient money to do so within the current electronic medical record program.)³⁵
- An alert could be constructed to flash up to the user discharging the patient to inform them a discharge summary has not yet been completed.³⁶

14.41 NSW Health does not consider these sorts of configurations to be essential components of the electronic medical record it is implementing and, thus, it is not part of the functionality of the electronic medical record currently being rolled out.³⁷

14.42 In my view, medical alerts can play an important role in ensuring that optimal patient care is delivered. Although I acknowledge that alerts should not be overused, they can ensure that busy clinicians do not overlook important tasks.

Confusing alterations

- 14.43 Alterations to handwritten notes can be confusing and, in the event of an adverse outcome, be a cause for suspicion and accusations of “cover-up”.
- 14.44 The family of Rebecca Murray remain understandably troubled by alterations made to the recorded observations of Mrs Murray’s condition during a critical period in her post-operative treatment. The Recovery Room Report has the times when observations were taken of Mrs Murray’s condition overwritten so that the initial entry is obscured. There is no explanation provided as to why those changes were made.³⁸

Time	Verbal Response	BP	P	Resp.	SpO ₂	Temp	Airway	O ₂ L/min	Head Lift	Pain	Recovery Score Total
09:20		65/45	84	16		—	C	2A			
09:25		80/60	96	16		—	C	2A			
09:30		75/45	96	18		—	C	2A			
09:40		75/45	105	16		—	HM	6L			
		returned to		OT							

- 14.45 An electronic medical record provides an auditable trail for any editing of the notes which takes place, so it can clearly be seen what the initial entry was, who changed it, when it was changed and how it was changed.

Incomplete notes

- 14.46 There is a real problem with a failure to record information in the notes at all. This issue was reported to me repeatedly by clinicians,³⁹ patients and their families alike.
- 14.47 During Vanessa Anderson’s treatment, clinical staff failed to make accurate and complete notes. These failures were remarked on by the NSW Deputy State Coroner:

“Dr Bezyan was responsible for making notes in Vanessa’s medical records. The notes she made were inadequate. They did not include the author of the notes, the results of the physical examination and ward round attendees.”⁴⁰

“There were no medical notes regarding this second ward round.”⁴¹

“Dr Ismail either forgot or overlooked the need to record a maximum dose...”⁴²

“Dr Williams accepted that the way she had charted the medication was not clear...”⁴³

“Nurse Perrin ... formed the view that the earlier event was not clinically significant, and confirmed her initial idea that Vanessa was having a bad dream. For this reason, Nurse Perrin did not record the events in Vanessa’s medical notes.”⁴⁴

The NSW Deputy State Coroner concluded that, during Vanessa’s treatment, “record taking and clinical notes were either non-existent or deficient.”⁴⁵

- 14.48 Amy and Joanna Willesee conveyed to me the distress they felt when the condition of their mother, Carol Willesee, was not being documented in her clinical notes during her treatment at Nepean Hospital:

“Because no-one was talking to us, I would read mum’s chart. I was horrified each day when I’d come in because I’d see something that frightened me. Mum would be grimacing, hallucinating, having muscle spasms. One day I

walked in and her arm was up in the air and I couldn't pull it down. All these types of things to me were frightening and none of it was in the chart. I couldn't understand why people weren't writing it down.

... Nurses occasionally would write that she was stiff or anxious or frightened - that is part of the disease - but no-one from the neurology team ever documented any of those symptoms. This is a concern for me in regards to continuity of care and communication between health professionals. More personally, it meant that mum's pain and distress were never treated until she was diagnosed with [Cruetzfeldt-Jacob Disease (CJD)], which was 23 days after her admission."⁴⁶

- 14.49 When Carol Willesee was finally diagnosed with CJD, the diagnosis was not recorded, causing additional distress to both the patient and her daughters:

"When mum was actually diagnosed, that wasn't put in her notes. I don't know for how long, but for at least a couple of days, it was not in her notes. I found myself having to tell the nurses and the physios.

... The physios would come in. They massaged her legs. They tried to get her up and walking, which caused mum huge amounts of pain. I had to tell them, and because it is such a rare disease, the physio did not know a lot about it so I had to explain what I knew. It just seemed odd that that did not happen on a different level."⁴⁷

My subsequent enquiries have confirmed that Carol Willesee's diagnosis, once confirmed by clinical staff, was not recorded in her clinical record."⁴⁸

- 14.50 In my view, there is an urgent need to impress upon all clinicians the importance of making complete notes. I have addressed this further below.

Limited ability to share records with other health professionals

- 14.51 Sharing paper clinical notes has physical limitations, whether the records are being shared between hospitals, or with clinicians working outside hospitals.

Sharing between hospitals

- 14.52 When patients are transferred to another hospital, a complete photocopy of paper notes must be made and sent with the patient. This is a time-consuming job, generally done by nurses."⁴⁹
- 14.53 The care of transferred patients can be compromised because the receiving hospital does not have access to the patient's medical record. This was highlighted to me by the evidence given by Mr and Mrs Appleby at Armidale hospital. Mrs Appleby, a resident of Inverell, underwent open heart surgery at Royal North Shore Hospital. Following her discharge from Royal North Shore Hospital to Inverell, Mrs Appleby suffered post-surgery complications. Neither the clinicians treating her at Inverell Hospital nor her GP had access to the notes made during her treatment at Royal North Shore Hospital."⁵⁰ This contributed to a delay in her receiving appropriate treatment.
- 14.54 For the receiving hospital, chasing up the clinical notes made at another hospital can be a time consuming process. This task is sometimes undertaken by medical and nursing staff, as there are no clerical staff to assist. Dr Goldstein, an emergency registrar at Ryde Hospital, conveyed to me the frustrations experienced:

"I have to phone the other hospital and ask the medical records department to fax me the record. There is no direct line to the medical records department, so I go through general switch used by the public and get a recorded message while waiting for the operator. Then they transfer me to medical records, where once again I may get the recorded message. While listening to the recorded message, I worry about the condition of my patients. Then I give the staff person the details and wait while they do a computer search to see if they can match the name, birth date and other details, and if they can, they agree to send me a fax. I then provide them with the fax number of the ED, and my phone number, and if the ED fax machine is working, within 5 or 10 minutes the records will arrive."⁵¹

- 14.55 If the receiving hospital could access an electronic medical record, then no copying would be needed and the time of busy clinicians would not be wasted chasing paper. It would reduce the unnecessary duplication of tests.⁵² I agree with the submission made to me by National E-Health Transition Authority (**NEHTA**) that:

"Traditional, paper-based clinical information reporting systems served their purpose when acute care patients generally remained within the one place or facility. However, traditional reporting systems are manifestly unable to provide safe, rapid and seamless transfer of clinical information in the current health care environment."⁵³

Sharing between health professionals

- 14.56 The information contained in a hospital's clinical notes is relevant to GPs, community health and *vice versa*.
- 14.57 While I came across some rudimentary ways of sharing records between hospitals and GPs (Dorrigo Multi-Purpose Service had a wireless link between the hospital and the nearby GP clinic),⁵⁴ the absence in practice of a uniform information technology framework generally means information cannot be readily shared between health service providers. As the Health Services Association of NSW explained:

"This means that when a person presents to an emergency department the medical professionals cannot access the persons complete medical history and records held by the person's local GP, allied health practitioner or held by another public hospital, and they also cannot access the person's medication history and records from the person's local pharmacist. This becomes a cost impost on public hospitals in terms of the time required to track down the information and the delay in delivering the most appropriate care to the patient. This problem is further exacerbated if the patients lives interstate and is visiting another State or Territory and becomes ill requiring medical attention."⁵⁵

- 14.58 The Board of Directors of the North West Slopes Division of General Practice also observed:

"There is a lack of integration of information systems. Often patients are admitted to hospital without GPs being asked to provide any of the extensive history they have obtained over years of treating the patient. Patients often do not remember all of their medical history and even less is remembered by relatives. This causes a duplication of investigations. Often GPs will note that patients have blood tests, x-rays, ultrasounds or CT

scans performed in hospital that have been recently performed prior to hospital.”⁵⁶

- 14.59 Ms Geldard, a continuing care co-ordinator at Nepean Hospital, submitted to me that community based services who work with an individual patient on a daily basis hold a great deal of information regarding that patient. However, when these patients arrive at the Emergency Department, the hospital has no access to those records, meaning that:

“[the hospital staff] sort of start from square one again, which is time consuming, and it must be frustrating for patients having to go through all this information”.⁵⁷

- 14.60 I was told that the introduction of an information technology system that would allow patients clinical records to be accessed on a system-wide basis would be of great benefit in a number of settings. It would, for example, allow:

- (a) community mental health practitioners to access hospital files in electronic form, in particular, discharge summaries and pathology results;⁵⁸
- (b) GPs to access radiology reports from NSW hospitals.⁵⁹

- 14.61 In my view, relevant electronic medical information should be accessible by all health professionals involved in a patient’s care, whether the health professional is working in a hospital, a GP clinic or a community health site. NSW Health recognises this but notes there are difficulties overcoming it:

“In an ideal world your electronic health records should reach a long way. If you go Queensland for treatment on holiday, and you come back to this state, your information should be able to follow you to Queensland and come back. In the days of emails and other things that should be an easy thing to achieve, but because of a number of reasons, of systems not being developed enough to do so, standards not being in place, the sheer nature of health care being unpredictable as to where you might end up in Queensland it becomes difficult to do. To a large extent we have to find a way to divide that problem up into do-able pieces.”⁶⁰

Lost records

- 14.62 Physical records get lost. This is unlikely to occur on a computer with good backup systems.

- 14.63 Ms Thurgate told me that when residents of the aged-care facility she works in are transferred to hospital for care, it is often the case that the transfer form and care plan get lost.⁶¹ Dr Arthur, oncologist, referred to:

“...frequent examples of not being able to find the record of the patient's treatment, and this affects treatment decisions when a patient becomes acutely ill or is admitted through emergency. I have had experiences of being on the ambulatory care ward in the evening trying to find a patient's notes to find out what chemotherapy that patient had, and it's not available ...”⁶²

- 14.64 Although ambulance officers were careful to ensure that the CT scan taken at Hornsby Hospital, diagnosing Vanessa Anderson with a depressed focal skull fracture, accompanied Vanessa to Royal North Shore Hospital, it was lost sometime shortly following her arrival.⁶³ While Royal North Shore Hospital staff could have, in fact, electronically accessed the CT scan, they were not aware they could do so.⁶⁴

Storage and retrieval burden

- 14.65 The medical records department of each hospital is responsible for filing, storing and retrieving medical records, both for clinicians and third parties. I heard evidence that some departments cannot cope with the workload and have a backlog of filing amounting to months and years.⁶⁵
- 14.66 The use of an electronic medical record must reduce the task of collecting and filing numerous documents, as data is entered directly onto the system at the outset. No doubt some filing would still need to be done, but I imagine this task would be significantly less than at present.
- 14.67 A number of hospital staff complained about the storage space required for paper medical records and that the overloading of storage space made it difficult to retrieve relevant records.⁶⁶ Paper based records may take 24 to 48 hours to retrieve from archives.⁶⁷ Locating such records after hours or on weekends, when there is usually fewer staff on duty, is even more difficult. On weekends, the clerical staff who are tasked with the retrieval of medical records may not be available and clinical staff undertake this job, taking them away from their clinical duties.⁶⁸
- 14.68 Computer records obviously need far less storage space and records can be accessed instantly, or for archived material, with relative ease.

Inability to collect data

- 14.69 A complete and accurate record of a patient's treatment in hospital is important, not only for the individual patient, but for the system as a whole. Comprehensive and accessible clinical notes enable research, education, analysis, planning, performance data collection and reporting.
- 14.70 The inadequacies of the present information available hinder the ability to obtain and share with other clinicians adequate data and statistics. As the Health Services Association of NSW told me:
- "... the absence of an information technology framework means public hospital performance across the Australia cannot be accurately measured. Each State and Territory have [sic] in place different information technology systems collecting different data based on different definitions, performance indicators, and performance targets. Furthermore, the absence of this framework means public hospitals across Australia cannot freely exchange information regarding performance."⁶⁹
- 14.71 Similarly, Professor Harris of Royal Prince Alfred Hospital said:
- "There is a need for improved IT support for surgeons to fully participate in the data collection requested of them, and in audit activity, to ensure that a high standard of work is being achieved."⁷⁰
- 14.72 I have discussed the importance of such data in Chapter 16.

A defective system

- 14.73 It is beyond my belief that, in 2008, there is no state-wide functioning system of making and keeping clinical notes that meets the basic requirements of being legible,

comprehensive and accessible. It is also unacceptable that, on the present timetable, there will be no such system for all public hospitals in NSW for at least another 10 years.

- 14.74 I am not the first Special Commissioner to make this observation. Bret Walker SC, in his Final Report into Campbelltown and Camden Hospitals, stated:

"Without exception, enormous difficulties were experienced by all concerned in deciphering the medical records [obtained and reviewed by the Inquiry]. Notwithstanding the clear statement at the top of the page of each record "SIGN AND PRINT SURNAME AND RECORD DESIGNATION FOR ALL ENTRIES", most of the entries by medical practitioners were either totally or partly indecipherable, and in many cases the name of the doctor who apparently had signed his or her name remains a mystery.

... That in 2004 an investigator must resort to speculation in deciphering medical records is appalling. I do not know whether it is an inability or a refusal on the part of practitioners to follow to a simple instruction of preparing their records legibly and clearly and making sure that they name, sign, date and time all entries.

... a great deal of public money has been and will continue to be wasted by reason of the inability or refusal of practitioners, that is mainly doctors not nurses, to prepare records in a way that those following the care of the patient and certainly those following in the scrutiny of their conduct, would find it straight forward to use.

I have great sympathy with medical practitioners who are busily engaged in emergency and other departments caring for a never-ending line of ill patients. However, with technological advances it is extraordinary that no system has been identified to overcome the obvious difficulty with handwritten records.

... It is clearly beyond the scope of this Inquiry to solve this seemingly endemic problem. I must however add my voice to a plea for, in the absence of an electronic record, clear legible records which record the time, date, title and name of the person responsible for creating them."⁷¹

- 14.75 Whilst much of the work undertaken in NSW public hospitals is "high tech", its record-keeping system is a relic of the pre-computer age. The NSW health system has not made use of the many benefits offered by information technology which are enjoyed by almost every other industry in this state. As Dr McGlynn described the situation:

"You can go down to your local restaurant and the waiter or waitress will have a hand-held portable computer that can take a complex order with variations. It is delivered to the kitchen, you get your food on time.

"You walk around the wards here and you order medications. The resident spends most of his day or her day writing them out in illegible script, often failing to adequately relate the patients weight [and] age to the dosage. The commonest reported incidents in our [Incident Information Management System] are prescription mistakes. This is problem that could be solved overnight with an adequate functioning computer system."⁷²

- 14.76 In my view, the present situation cannot be allowed to continue any longer. The time has come to urgently address and fix one of the fundamental deficiencies in the way patient care is provided in NSW public hospitals by:
- (a) improving the training of health professionals in making clinical notes; and
 - (b) improving the use of information technology, in particular, by implementing a state-wide electronic medical record.
- 14.77 A number of Australian and international studies have confirmed that information technology potentially has a positive impact on quality, efficiency and costs of health care.⁷³

Interstate and overseas experience in health information technology

- 14.78 I note that there are few international examples where health information technology has been used well across an entire system comparable to NSW. While some individual hospitals, in the US for example, have excellent health information systems, implementation of health information systems across an entire system is immature.⁷⁴ One American writer observed:

"[US] information infrastructures are woefully underdeveloped, despite decades of hand-wringing and billions of private dollars of investment ... a national program for development of health care's 21st century information technology is long overdue."⁷⁵

- 14.79 In the United Kingdom, the Health Informatics Review Implementation Programme of the National Health Service is attempting to develop the health informatics infrastructure to collect and transfer patient-related information efficiently and securely between multiple organisations; however, it is still in the early phase of its implementation.⁷⁶ The roll-out of the electronic patient record in the United Kingdom is reportedly perceived by many clinicians as having been a disaster.⁷⁷ It has cost billions of pounds and it remains unclear when it will be implemented.⁷⁸
- 14.80 It was reported to me that systems that are better than those currently available in NSW exist in Victoria,⁷⁹ Denmark,⁸⁰ and the United Arab Emirates.⁸¹ The health information system used by Veteran's Affairs in the United States was cited as a rare example of a successful system-wide implementation.⁸²
- 14.81 Certainly, what I propose is no easy thing. But it is essential that it be done and done promptly.

Training of health professionals

- 14.82 Some of the deficiencies in the current medical records system are due to inadequate training of health professionals as to the importance of making comprehensive, accurate clinical notes.
- 14.83 The training which clinicians receive on this topic varies.

Doctors

- 14.84 In a combined submission of the Deans of all the Medical Schools of New South Wales and the Australian Capital Territory, I was told of a need to enhance teaching to medical students about keeping accurate clinical records.

"There needs to be more teaching about the practicalities and the practice of maintaining accurate medical records. Such teaching should occur at the end of the final year on the wards during the PRINT (Preparation for Internship) Term and PGY 1. Writing in the records is a skill and needs to be taught in a practical way, not in lectures, with feedback given as the student /trainee practises. While this is time consuming it is vital to get right. Some tutors, after seeing a case on the ward round, ask the students to write a medical record entry - and then compare."⁸³

- 14.85 While there is some variability at each university, the emphasis at all institutions is on students learning clinical note keeping skills during clinical placements in hospitals.⁸⁴ For example, I was told by Dr Kozor, a resident medical officer completing her PGY2 at Hornsby Hospital, that she was trained in clinical note keeping during her clinical year at university, generally through observation:

"when we moved to our clinical year in university, when we were based at a hospital, that was one of our objectives, to join a team and see how it works on a ward round, clerking and writing your notes. I guess it was more from observation as well that you learn how to do that, but also every intern has a mandatory orientation in their first week, and during that there is a mandatory section on documentation, I believe, so that gives us a quick education as to what you should write, how you should write things."⁸⁵

- 14.86 Although the medical schools teach clinical note taking in varying formats in lectures during the early years of the medical degree, NSW medical schools do not devote more than a few lectures to this critically important topic.⁸⁶ The role of teaching good clinical note keeping largely falls to the clinical instructors to whom the student is assigned during their later years, during short rotations in hospitals and community medical centres.⁸⁷ This may include writing notes in their patient's medical records and having those reviewed and assessed by a supervisor.⁸⁸
- 14.87 While I have no objection to this as a method of teaching, I am concerned that it is not sufficient and my recommendations regarding increased education to PGY1 and PGY2 regarding clinical note-taking are set out below.
- 14.88 My concern regarding the current inadequacy in training doctors to take notes is, in part, based on the numerous examples cited to me of the poor state of record-keeping by junior doctors.

Junior doctors

- 14.89 NSW Health informed me that it was "uncommon" for the patient's Admitting Medical Officer to write directly into the patient's clinical record.⁸⁹ Other than in some speciality areas, such as anaesthetics and intensive care, specialists rarely write in the patient's notes.⁹⁰ NSW Health acknowledge that this approach results in most specialists' observations and plans being documented second-hand, which increases the possibility of error.⁹¹
- 14.90 The task of making notes tends to fall to the most junior clinician present.⁹² I heard a number of complaints about the difficulties of getting junior doctors to attend to this important task with the diligence it deserves. Dr Reddel from Concord Hospital told me:

"...both on telephone communications and ward rounds what is said is often not what gets transcribed. One of the problems is that the scribe on a ward round ...[it] is

often left to the most junior person. A third of our junior people are overseas trained medical officers with poor or supposedly an adequate command of English. I don't know the solution other than I write it down, but that takes a lot of time because we can't do that simultaneously with me seeing the patient, or alternatively we just have to check more. But it is certainly imperfect."⁹³

14.91 Dr Newcombe of Gosford and Wyong Hospitals said:

"Inevitably, the task of writing in the patient's notes on ward rounds, with both registrars and consultants, falls to the most junior medical officer, typically an intern. This vital job is typically de-prioritised by registrars and consultants; It is a rare ward round which will wait for the intern to finish a logical, legible and comprehensive clinical note about the patient's progress and the plan for their ongoing clinical care. Interns are further disadvantaged by the lack of training in this area in medical school and their own lack of clinical experience, which makes it difficult for them to isolate the key points to put in a patient's clinical notes."⁹⁴

14.92 I was given a disturbing example by Associate Professor Martin Jones of Shoalhaven Hospital:

"I recently asked a PGY 2 to chart Heparin 5000 u/s TDS and the nurse soon brought [sic] me the chart to show what was written - Hepauroin 5000 unites tee dee ess ...this is obviously a gross example but this is not unusual."⁹⁵

14.93 The deficiencies in note-taking by junior doctors seems to me to be referable to several factors.

- (a) Junior doctors are "run off their feet" and can struggle to devote the amount of time required to do a proper job.⁹⁶ Ms Carmichael submitted that this lack of time can increase clinical risk to patients.

"The lack of time junior medical staff have on the wards to complete paperwork in the clinical setting is not only risky in terms of a lack of decent clinical documentation to pass on to other health care providers, it often means that errors occur with regards to documentation. Errors that appear simple or easily explained at first glance can mean a significant risk to the clinical care of a patient and these are seen routinely by coders and administrative staff in medical records. For instance, incorrect discharge summaries will be in the medical record, another patient's sticker may be placed on a form incorrectly, or the wrong chart is picked up to write in. When medical officers are tired or stressed, these mistakes are easily made and one of these mistakes may lead to a more serious outcome than just a minor irritation."⁹⁷

This may be remedied by better use of technology referred to in Chapter 15 and more support staff, which I have discussed in Chapter 11.⁹⁸

- (b) Junior doctors transfer from one hospital to the next quite frequently during the early years of medical practice, and this reduces the ability and incentive on other staff to take any deficiencies in record-keeping in hand. There can be a sense, from the hospital staff, that the problem will move on. Meanwhile the junior doctors bad habits become entrenched. One witness told me:

"[Clinical supervisors] have no time to worry about minor details like that, yet they are important clinical habits to have."⁹⁹

Dr Whyte of Gosford Hospital said:

"...it's very difficult getting a fairly itinerant highly moveable junior staff to complete forms in a uniform fashion."¹⁰⁰

- 14.94 While junior doctors complete the notes, the Admitting Medical Officer remains responsible and professionally accountable for the care of the patient.¹⁰¹ Some submissions called for a requirement for supervising doctors to review and sign off on the clinical records made. Dr Newcombe drew my attention to a model used at the Cleveland Clinic in Ohio:

"At the Cleveland Clinic ... all notes written by a registrar, resident or intern in a patient's clinical record must be read, annotated and signed off on by the relevant consultant. Where the consultant is not on the premises, JMOs can of course write notes without a consultant present, but these must be later signed off by the consultant at their earliest convenience, and usually within 24 hours."¹⁰²

- 14.95 This model offers a number of advantages:¹⁰³
- (a) the clinical record is a true representation of the most senior doctor's impressions and clinical plan for each patient;
 - (b) the clinical record becomes a key form of day-to-day supervision of junior doctors by specialists, helping specialists to identify strengths and deficiencies in their trainees and focus teaching;
 - (c) junior doctors continue to learn the vital task of clinical note-taking and record-keeping by doing, with the reassurance that their clinical work is being monitored closely and adjusted as necessary; and
 - (d) the medico-legal responsibilities of the specialist and their trainees in the area of record-keeping are more clearly satisfied.
- 14.96 Dr Newcombe also recognised that there were major obstacles to the implementation of such a system in NSW, including a cultural resistance to a closer level of supervision of registrars, especially in their later years when many are acting at the level of specialists.¹⁰⁴
- 14.97 In my view, the supervision requirements regarding clinical notes of the Admitting Medical Officer need to be adhered to and strengthened. While I recognise that a requirement to do so every 24 hours may be too onerous, a requirement to review notes and confirm their adequacy once every 2 days does not appear to be unreasonable.

Recommendation 49: *Within 6 months, NSW Health should implement and audit compliance with a policy which specifies the obligations of the Admitting Medical Officers (AMOs) in the supervision of clinical notes relating to their patients which includes a requirement that the AMO read and initial, at regular intervals each patient's clinical notes which have been written by the junior medical officer.*

Nurses

- 14.98 The evidence suggests that in general the standard of note-taking by nurses is considered to be good, an observation which is not applied in general to note-taking by doctors. This is perhaps a reflection of the training nurses receive in this area.
- 14.99 The Australian Nursing and Midwifery Council (**ANMC**)¹⁰⁵ prescribes 8 competencies for clinical note taking and medical records keeping of Australian registered nurses.¹⁰⁶ I was provided with clinical assessment profiles, clinical assessment records, course materials and related information from several nursing faculties in NSW.¹⁰⁷ These materials indicate that the development of competence in each of these ANMC competencies is taught and evaluated systematically in an integrated way throughout each of the pre-registration nursing degrees of nursing schools in New South Wales.¹⁰⁸
- 14.100 There is no good reason why training of medical undergraduates in note taking and record-keeping should be any less intense and the outcomes any less effective than that undertaken by nurses.

Allied health

- 14.101 As I have described in Chapter 9, there are numerous professions falling under the banner of allied health. I was not able, in the time available to me, to examine the teaching in respect of clinical notes provided to all such professions.
- 14.102 I did examine the teaching provided to 4 types of allied health professionals: psychologists, dieticians, physiotherapists and pharmacists. Based on this somewhat limited foray into the teaching of clinical notes to allied health professionals, it seems that there is considerable variability in the manner and detail in which this topic is canvassed with students, and a range of reliance on academic as opposed to on-the-job training.

Psychologists

- 14.103 I obtained teaching materials from 3 university psychology departments.¹⁰⁹ The material included psychology clinic policies and procedures handbooks and Australian Psychological Society ethical guidelines, which professional psychology students are furnished with during their education and training.¹¹⁰ Clinical note taking and record keeping formed part of the formal course content in each instance although, most commonly, as part of a single lecture.¹¹¹
- 14.104 The majority of skills development in this area appears to occur during profession placement, through familiarity with the Australian Psychological Society ethical guidelines, and policies and procedures of the student's placement site.¹¹²

Dieticians

- 14.105 I obtained information from the University of Newcastle indicating that a substantial portion of its Bachelor of Nutrition and Dietetics program includes content relating to clinical note taking and medical record keeping of dieticians within public hospitals.¹¹³ There are 5 subjects within the program which relate to clinical note taking and medical record keeping. These skills are taught explicitly in both lectures and practical components in the 3rd and 4th year of the degree.¹¹⁴

Physiotherapists

- 14.106 There are 6 courses which include a component on clinical note-taking and medical record-keeping and 5 clinical placement courses in which note-taking and record-keeping are an integral part of the University of Newcastle Bachelor of Physiotherapy program.¹¹⁵
- 14.107 Clinical note taking and record keeping is addressed in the University of Sydney Bachelor of Applied Science (Physiotherapy) Program and Master of Physiotherapy Program.¹¹⁶ Students have a tutorial on written professional communication which covers documentation, letter writing, relevance of documentation to physiotherapy, the purpose of documentation, types of documentation, elements of professional writing, and review of entries in medical records. Within lectures and tutorials relevant to each subspecialty of physiotherapy, students are introduced to case studies where documentation in clinical notes is addressed. When students are on clinical placement (which run for at least 20 weeks) the students are assessed on their ability for written communication via clinical notes. This is a core competency and a satisfactory level must be reached in each placement.¹¹⁷

Pharmacists

- 14.108 Charles Sturt University provided me with course materials from the Bachelor of Pharmacy degree, from which it appears that students are directed to comply with the Competency Standards for Pharmacists in Australia.¹¹⁸ The Competency Standards prescribe a number of standards for record-keeping which require pharmacists to:¹¹⁹
- maintain accurate and up-to-date medication and prescription records consistent with professional standards and conventions;
 - document the advice and recommendations provided and the outcomes achieved;
 - ensure continuity of care can be provided;
 - establish and maintain a secure patient record storage system;
 - maintain accurate records of dispensing errors (including those that are intercepted before they reach the patient) and the actions taken to minimise their effect on patients and/or to prevent their recurrence; and
 - establish systems for reporting and responding to medication errors.¹²⁰
- 14.109 It appears that developing the relevant competencies in the Competency Standards for Pharmacists is taught and evaluated systematically in an integrated way throughout the degree at Charles Sturt University.¹²¹
- 14.110 The University of Sydney provided teaching materials from both its Bachelor of Pharmacy and Master of Pharmacy degrees which indicate that themes of patient safety, communication skills, privacy and confidentiality and professional behaviour are integrated throughout the courses. The National Inpatient Medication Chart is introduced to students as part of orientation to clinical practice, while on clinical placements in hospitals. However, the University of Sydney considers that the specific requirements of documentation in hospital records are to be taught by NSW Health.¹²²

Further training required

- 14.111 I consider that further training on making clinical notes is required. I regard this as a topic suitable for inter-disciplinary training, which I have discussed in Chapter 10.

Information technology currently in NSW hospitals

- 14.112 In this section, I will examine existing examples of the electronic medical record in NSW public hospitals, together with the new electronic medical record that is in the process of being rolled out by NSW Health.
- 14.113 Further, there are a number of features of the existing use of information technology in NSW public hospitals which will be examined, being:
- (a) a variety of systems;
 - (b) a lack of information technology support staff;
 - (c) problems with password access;
 - (d) a lack of hardware;
 - (e) a lack of off-site access;
 - (f) an inability for other health professionals to access information; and
 - (g) a lack of implementation of information technology in rural areas.
- 14.114 Within NSW Health, the Strategic Information Management branch is responsible for setting the state-wide strategy, determining standards, information technology procurement and contract management, and engaging third parties to deliver state-wide information technology systems.¹²³

Existing examples of electronic medical record in NSW

- 14.115 An electronic medical record is already being used in some hospitals or units in NSW. Some have been in place for a number of years, such as the EDIS (Emergency Department Information System) in Emergency Departments in many NSW public hospitals. EDIS is now being replaced by a new electronic medical record system presently being rolled out by NSW Health.¹²⁴
- 14.116 Otherwise, I found different types of electronic medical records primarily in use in intensive care units and for geriatric and palliative care.

Intensive Care

- 14.117 Clinical Information System (**CIS**) is in use in some intensive care units. CIS includes the following features: data capture from monitors and ventilators; pathology results; alerts for clinicians identifying clinical deviations which automatically flag when data falls outside of pre-determined ranges; medication ordering and management; benchmarking; automated reporting; and integration with other systems in use in the hospital.¹²⁵
- 14.118 A group of senior intensive care clinicians submitted to me that, where Clinical Information Systems have been implemented, the experience of intensive care units has been positive and that such systems should be more widely introduced:

"There are four examples of ICU clinical information systems (CIS) installed in NSW ICUs (Blacktown, St George, Westmead Children's and Royal Prince Alfred Hospitals). These systems, while at the end of their life cycle, are still perceived as providing better documentation of a patient's ICU Care than the equivalent paper medical record. We strongly believe that it is inappropriate to have doctors and nurses transcribing results from electronic monitors onto large sheets of paper, with all the attendant risk of transcription errors.

... Appropriate Clinical Information Systems would improve written communication, improve the accuracy and timeliness of information, streamline nursing and medical work practices and allow more timely access to pathology and radiology results. We believe that implementation of a CIS will greatly improve clinical handover and provides the platform to provide decision support and academic detailing to clinical staff."¹²⁶

- 14.119 For the average patient in intensive care, there are about 1,700 observations made electronically, as compared with the 32 observations made for the average patient on a ward. So the intensity of information, how it is structured and formatted, is quite different. For that reason, there needs to be a specialised intensive care program.¹²⁷
- 14.120 I understand that the implementation of an information system in NSW intensive care units is scheduled for a roll-out that will commence in the 2010-11 financial year.¹²⁸ The introduction of this system would not be completed until mid-2015 at the earliest. This is clearly too slow and every month's delay is ultimately at the cost of the safety and quality of patient care.

Geriatric care

- 14.121 An electronic medical record is proving particularly useful in the treatment of elderly patients, who have numerous care providers, co-morbidities and frequent attendances at hospital. Professor Lipski gave evidence to me of its use at Gosford Hospital.¹²⁹ There, the geriatric team have developed an electronic record that:
- (a) can be accessed by GPs on a local intranet, access to which is controlled by security password;
 - (b) includes diagnosis, prognosis and a management plan;
 - (c) can be accessed by the geriatrician when the patient attends at the Emergency Department and provides clear direction for treatment without duplication of tests or prescribing dangerous medication;
 - (d) can be accessed after hours and on weekends;
 - (e) can be instantly retrieved; and
 - (f) contains high quality information (which is ensured through review by the junior staff every week).¹³⁰
- 14.122 A geriatrician informed me that, at Westmead Hospital, while they as yet do not have a complete electronic medical record for their aged care patients, they do use electronic discharge summaries, so that every patient discharged gets a typed discharge summary which involves clinicians completing pre-determined fields.¹³¹ They are also involved in a Commonwealth-funded aged care program for which they have developed a database that can be accessed from anywhere in the hospital.¹³² This database gives access to some community care and nursing records for 20-30% of the geriatrician's patients.¹³³

- 14.123 Dr Kurrel, a geriatrician at Hornsby Hospital, told me that an electronic medical record would assist communication between the hospital and GPs, particularly after hours, however, she did not have access to one.¹³⁴

Palliative care

- 14.124 The palliative care ward at Camden Hospital uses an electronic medical record, which is accessible for all of their patients. It includes letters sent by the hospital to GPs, scanned results, reports on chemotherapy and radiotherapy, and all clinical notes from Emergency Department presentations. I was told by a clinician that the electronic medical record provided a significant advantage in delivering good patient care and improved communication with all those involved, including primary health care providers.¹³⁵

New electronic medical record being introduced by NSW Health

- 14.125 NSW Health is part way through a 3 year strategy to implement an electronic medical record in NSW, which is expected to be completed by June 2010. This project, using CERNER Corporation technology, is introducing an electronic medical record with the following core components.¹³⁶

- (a) an Emergency Department system (FirstNet),
- (b) operating theatre system (SurgiNet),
- (c) an electronic ordering system,
- (d) an electronic results system,
- (e) an electronic discharge referral system, and
- (f) an enterprise scheduling system (which will co-ordinate patients, health care providers, locations and equipment across an integrated set of information systems in a single view).

This project will not lead to a complete electronic medical record and other components will be built on to this “foundation”.¹³⁷

- 14.126 The current information technology roll out program is one of the largest information technology programs, regardless of industry, in the country.¹³⁸ The roll out of the current statewide electronic medical record, when completed, will make NSW Health the biggest information technology user in the country, public or private.¹³⁹

FirstNet

- 14.127 The Emergency Department component of the CERNER electronic medical record is called FirstNet. Using FirstNet, Emergency Department staff register patients on presentation.¹⁴⁰ During the registration process, previous encounters and alerts for that patient are displayed.¹⁴¹ Once entered into FirstNet, the patient journey can be tracked in the Emergency Department and in other departments within the hospital.¹⁴²

- 14.128 Using FirstNet, hospital staff are able to view a snapshot of all patients in the Emergency Department.¹⁴³ Available information includes:

- (a) the number of patients waiting to be seen;
- (b) vacant beds; and
- (c) new results available for tests which have been ordered.¹⁴⁴

- 14.129 FirstNet allows for triage information to be captured electronically and immediately shared with all clinicians in the Emergency Department.
- 14.130 Clinicians can enter and view orders, including pathology, medical imaging and consultation orders.¹⁴⁵ The status of orders can be viewed and alerts are shown when an abnormal test result is returned.¹⁴⁶
- 14.131 FirstNet has already been implemented in some of Sydney's busiest Emergency Departments. During my visit to the Emergency Departments at Blacktown and Mt Druitt hospitals, the staff reported a positive experience. For example, although Blacktown Emergency Department had been short-staffed for a long time, the use of FirstNet has meant that this has not been as great a problem as it might be, due to the efficiency gains associated with the new technology.¹⁴⁷ Dr Hessian demonstrated to me how he was easily able to view records, test results and image results for each patient in his department.¹⁴⁸ This could be done at the patient's bedside using a Computer on Wheels ("COW").¹⁴⁹ A nurse at Mt Druitt Emergency Department informed me that while it had taken time to get used to the new electronic system, patient records were now much easier to read and it was not necessary to read other peoples "scribble".¹⁵⁰
- 14.132 Cumberland Psychiatric Hospital has a real time connection by FirstNet to Emergency Departments at Blacktown, Westmead and Katoomba hospitals.¹⁵¹ This allows staff at Cumberland Psychiatric Hospital to access patients' details at those other hospitals, facilitating the transfer of appropriate patients out of those Emergency Departments and to Cumberland Psychiatric. This helps to reduce access block in Blacktown, Westmead and Katoomba hospitals.¹⁵²
- 14.133 I have examined some of the problems encountered in implementing FirstNet below.

CERNER

- 14.134 I visited several hospitals where the CERNER electronic medical record was already being used.
- (a) Staff in the paediatric ward at Mount Druitt Hospital used an electronic medical record, entering and accessing relevant data through Computers on Wheels. The staff were able to review x-rays and blood results on screen and the nurses I spoke to reported it to be a fantastic system.¹⁵³
 - (b) Westmead Children's Hospital has used the CERNER electronic medical record throughout the hospital for about 10 years. I was told it was an intuitive system which is easy to train people to use and enhanced the ability to analyse results. It was noted that the system does occasionally crash, but there is an adequate back-up paper system.¹⁵⁴
 - (c) The CERNER electronic medical record system is in use at the Liverpool Mental Health Unit. Using the electronic medical record, relevant data is loaded into the system including discharge summaries and triage data. The quality of the information in the database has been an issue, which is being worked on. The electronic medical record allows them to get critical information at difficult times of the day.¹⁵⁵
 - (d) The use of the electronic medical record throughout a number of wards was demonstrated to me during my visit to Blacktown Hospital. The introduction of the electronic medical record has enhanced the Blacktown Hospital's ability to manage patient flow, bed allocation and patient discharge.¹⁵⁶

A variety of systems

14.135 As the above examples indicate, there is a wide range of information technology in use in NSW public hospitals. This is because, in NSW Health, the approach for some years for the delivery of information technology systems was to:

- (a) set the parameters for the systems NSW Health wanted,
- (b) select providers of those systems,
- (c) provide some options, and
- (d) leave implementation of clinical information technology systems up to each area health service.¹⁵⁷

14.136 There was great variability in the level of investment and advancement by different area health services, leading to distinct information technology systems which don't talk to one another.¹⁵⁸ There was no standardisation of information technology systems throughout NSW Health, so that information often could not cross area health service boundaries.¹⁵⁹

"The hospital units tend to operate in isolation and not share information, not because they don't want to or because it's not clinically relevant, but simply because they don't have the tools".¹⁶⁰

14.137 An average tertiary hospital in NSW has more than 250 computer applications that manage health care, including patient management, pharmacy, the Emergency Department and intensive care. Applications within a hospital are often incompatible with other applications within the same hospital, more so with applications being used in other hospitals or area health services.¹⁶¹ For example:

- (a) I was told that the Greater Western Area Health Service patient administration system introduced in July 2006 uses a different application system and does not interface with the CERNER electronic medical record.¹⁶²
- (b) There are presently 5 rostering systems in use in NSW Health which are so old that they have no information technology support at all.¹⁶³

14.138 NSW Health made the decision, about 4 years ago, to change direction to establish uniform information technology across the state for core systems.¹⁶⁴

14.139 The challenge is to implement an information technology system across all 250 hospitals. NSW Health frankly conceded that 2 previous attempts to implement a state-wide system had failed and so area health services are understandably cautious about being told what to do by NSW Health in terms of information technology.¹⁶⁵

- The first failed attempt, in 1991, was a project to implement a Patient Administration System (**PAS**), financial system and pathology system (which were to provide the foundation for an electronic medical record).¹⁶⁶ This was installed in 4 hospitals.¹⁶⁷ The vendor of the system was unresponsive to the modifications required and clinicians found the system difficult to use.¹⁶⁸ The project was terminated in 1994, having cost \$12 million (the entire completed project was expected to cost \$90m).¹⁶⁹
- The second failed attempt was again for the implementation of a PAS system.¹⁷⁰ The project began in March 1999 and terminated in December 2001, after NSW Health lost confidence in the vendor's ability to provide value for money, particularly in respect of produce enhancements and support administration.¹⁷¹ At termination, \$30 million had been spent on purchasing PAS licences and services.¹⁷²

Lack of support staff

- 14.140 Another feature of information technology in NSW public hospitals is the lack of information technology support staff.
- 14.141 The reductions in support staff a few years ago saw the reduction in information technology staff at area health service level by between 50%-60%.¹⁷³ There are now very few staff who can be called on to handle general queries about computers and telecommunications (especially after hours).¹⁷⁴
- 14.142 Hospital staff submitted to me that hospitals have been denuded of knowledgeable information technology personnel, which has added significant delays.¹⁷⁵
- (a) A group of Nurse Unit Managers at a major non-metropolitan hospital submitted to me that the inadequacy of information technology support at a local level means that they are the ones who oversee maintenance of equipment such as printers, facsimile machines, label printers and photocopiers, taking them away from clinical care and unit governance work.¹⁷⁶
- (b) Staff are experiencing delays of 3 to 6 months to get a laptop or mobile phone.¹⁷⁷
- 14.143 Clearly, this is not a good use of clinicians time, and reduces the prospect of successfully implementing a state-wide information technology system.

Onerous password procedures

- 14.144 A feature of the present system which causes considerable irritation to clinicians is that all staff are given passwords which frequently expire and the processes for renewal are sometimes poorly managed.
- (a) I heard evidence from a Nurse Unit Manager at Mudgee Hospital that, for access to patients medical records,
- "[W]e all have to have individual passwords and those personal passwords only last for a month. When our passwords run out we have to rely on somebody resetting us up and that person is not always here, and I just find it very frustrating and time consuming trying to access these systems."¹⁷⁸
- (b) The need to frequently renew passwords to access electronic medical records was also identified as a problem at Dorrigo Multi-purpose Service.¹⁷⁹
- (c) Three junior doctors at Westmead told me computer log-ins don't work "half the time", meaning test results and patients' records are unable to be accessed.¹⁸⁰ This was identified as a particular problem for junior medical staff:
- "Ability to access [computer] services is often a laborious and complex process. It requires: application for and provision of new login identification and passwords, some times taking weeks to process, and attendance to computer training ... As junior medical staff are rotated through different hospitals and different area health services as often as every 10 weeks, this requires application process[es] and training (when provided) to be done on a repeated [basis]."¹⁸¹
- 14.145 While I appreciate that it is important that only authorised staff access computers and equipment, it is not only annoying but potentially unsafe if a clinician cannot use a computer or a piece of equipment in urgent circumstances because their password has expired, or they have forgotten their password. The Root Cause Analysis conducted

following Mrs Murray's death found that staff were unable to use the iSTAT machine (which tests blood results), in part, because they did not know the access password.¹⁸² This was one of the factors that contributed to delays in the efforts to resuscitate Mrs Murray.

- 14.146 Senior NSW Health staff acknowledged to me that it was important to overcome the need for staff to enter passwords for different computers and equipment. However the difficulty is that they are dealing with a number of historic systems (including corporate and payroll) that do not interact with each other and use independent passwords.¹⁸³
- 14.147 I obtained evidence of staff overcoming problems with passwords by using one generic password for all clinical staff or by using other people's passwords. This causes its own problems. An example of this occurred at Ryde Hospital, where staff changed data to improve key performance indicators (see Chapter 17). Investigations indicated that staff logged on using a generic password.¹⁸⁴ It was therefore impossible to definitively ascertain which member of staff had manipulated the data.¹⁸⁵ While I understand the frustrations staff experience with passwords, it is essential that only a person's own password is used. One proposal that merits consideration is that rather than passwords, staff are provided with cards which have a magnetic strip which can be swiped on computers and other equipment to enable ready access.

Inadequate hardware

- 14.148 A common complaint was there are not enough computers and associated equipment in the wards for staff to use.

- Dr Hodgkinson of Liverpool Hospital told me:

"For example, on our ward we have four computers. One of them is actually eight years old. This is for four doctors, nine allied health, eight nurses and 10 other people. If we are going to talk about adequate records, people actually have to be able to access a keyboard ...The interns actually can't get access to the computer unless it's after hours, so we have had some interns staying back to 9, 10, 11 o'clock, on the nights they are not on, to do their discharge summaries. So some of those things. They are quite simple, actually, but we are not able to order more computers."¹⁸⁶

- Dr Tan of Westmead Hospital said:

"There are insufficient computers particularly in the wards. A lot of clinical practice on the wards - things like test results and blood results - are important in a patient's care. In some wards where they are treating patients there are only two computers. One is usually used by the ward clerk for admissions of patients, which leaves, for a ward of perhaps 26 or 28 patients, one computer shared between maybe two or three medical teams and nursing staff."¹⁸⁷

"A lot of the time the computers on the wards are not connected to printers or the printers don't work, so we're not able to print information out and each with a workload of about 20 patients, it just slows everything down constantly."¹⁸⁸

- Dr Crampton, also of Westmead Hospital, explained:

"It seems clear that the ward clerk has one and everybody else fights for one other computer on each ward which results in quite a long delay."¹⁸⁹

- The Resident Medical Officers Association at Royal Prince Alfred Hospital told me:

"With the increasing reliance on [PACs, Powerchart and FirstNet] there needs to be ongoing investment in maintaining the existing and in purchasing new computer terminals for the wards. There are often delays in accessing computers as all daily tasks require their use: e.g. looking up medications, searching for medical references, accessing results, viewing images, writing discharge summaries, ordering tests. Improving technological infrastructure is critical to the improvement and increased benefit of these valuable systems."¹⁹⁰

- Dr Keegan of Nepean Hospital described:

"Computer access is generally poor and there are certain rules that exist which prevent clinical staff purchasing modern IT support such as blackberries which would assist in daily clinical work and communication. Medical staff have limited access to hardware such that the ability to enter and retrieve data is curtailed, in at least some instances detracting from what should be clinical time, requiring staying back after normal working hours or just not having an opportunity at all. Visiting medical staff will usually have no opportunity to contribute as many would have no access at all."¹⁹¹

- Dr Steiner of Cooma Hospital told me:

"The use of computers has exploded in hospitals in the last 10 years, sadly almost all of that has been in admin services rather than clinical services. Most rural VMOs use computers for their records etc. However at Cooma hospital I still do not have internet access when I am working within the accident and emergency dept."¹⁹²

- A group of Nurse Unit Managers at a major non-metropolitan hospital said:

"Lack of functioning PC availability at ward level creates delays in accessing patient pathology/radiology reports. This also affects the ability of medical officers to attend patient discharge summaries in a timely manner. An example is the 30 bed acute medical ward, where there are 2 computer terminals in the clinical area, and 2 very unreliable Computers on Wheels."¹⁹³

14.149 Computer servers often do not have sufficient capacity to run the required applications quickly. There are insufficient (or no) backup servers.

- (a) I was told by staff at Nepean Hospital that their computer server does not have sufficient capacity to run the available information technology programs adequately. To enter an incident in the Incident Information Management System, it can take 5 minutes for the program to load and another 2 or 3 minutes for it to save.¹⁹⁴ Although staff have requested a faster server a number of times, these requests have been refused on the basis that there is not sufficient budget.¹⁹⁵
- (b) Dr Reddel at Concord Hospital told me that there were frequent downtimes during which time patients' results were not available to clinicians. Dr Reddel said that there is one main server and no backup server for the entire area for these health results.¹⁹⁶

14.150 This is clearly inadequate for the reliable operation of a facility on which lives depend.

No off-site access

- 14.151 Hospital records are not generally accessible off-site. Dr Reddel explained:

"If I'm in my rooms or in my country outreach clinic seeing a patient who has been admitted to the hospital, I can't get the results. There is a system for doing that, but it depends upon a PKI security key ... I applied for mine six months ago. It is still in the waiting list. ... Even when that becomes available, I still won't be able to get results via a [Personal Digital Assistant], so I'll depend on having a direct connection. If somebody rings me up and wants to discuss a patient, and I want to look at all their results, they don't have time to read out 200 blood results over the phone. I need to be able to look at these on my computer."¹⁹⁷

- 14.152 I agree that clinicians should be able to access test results remotely.

No access by other health providers

- 14.153 Not only do clinicians working in a NSW hospital have trouble readily accessing medical records, other health professionals outside the hospital treating the same patient, such as GPs, pharmacists or community health workers, cannot access the information either. There is no interaction between the systems inside and outside NSW hospitals.

- 14.154 Medical Director, which is the information technology system most used by GPs is not compatible with the systems used in NSW public hospitals.¹⁹⁸ Similarly, whilst pharmacists keep good electronic records of their patient's medication history, that information cannot be imported directly into another system.¹⁹⁹ Community health does not have well developed electronic information systems.²⁰⁰

- 14.155 For those that do have access to an electronic system, that electronic system may not be compatible with electronic systems used in NSW hospital and other facilities making information sharing difficult:

"...[O]ur community-based nursing services had a new database system put in called CHIME. In no way can that CHIME system talk to the hospital. We still do our referrals handwritten. We do fax them through to a central intake system, but we have no way of talking to those services directly through a computer-based system, ... Our ACAT teams are another one that have a lot of information, but when a person arrives in a hospital system, an emergency department, we have no access to that."²⁰¹

Limited rural access

- 14.156 Concern was expressed by rural clinicians and communities that they are not given the same access as metropolitan hospitals to electronic medical records and information technology generally. There was a sense that the electronic medical record was being rolled out more slowly to rural and regional New South Wales.²⁰²

- 14.157 NSW Health told me that there are problems in implementing the electronic medical record in rural hospitals as they have quite different processes.

"The staffing models and resourcing models used are quite different. The process for clinical documentation quite often is more brief. They don't have a laboratory department. They may not have an operating theatre,

their emergency department may be a shared service between community health, GPs and the hospital, so the models of care are different, the resourcing models are different and therefore the IT must be implemented to follow the business model".²⁰³

- 14.158 I recognise that there may be some additional complexities when taking a system to rural areas. There is an obvious need for the local clinicians to be involved in the process surrounding the introduction of the electronic medical record. Nevertheless, it is important that any roll out of information technology is truly state-wide. If anything, rural areas stand to gain a greater benefit from information technology access. The story relayed by Mrs Appleby's (above), is one example of a rural patient who might have derived significant benefit from clinicians in rural NSW having access to an electronic medical record.

Tele-health

- 14.159 I have separately examined in Chapter 6 how tele-health has a vital role in providing emergency treatment of mental illness in rural and remote areas, as well as other applications. I have made recommendations there for the wider use of this technology across NSW.

Clinician's views

- 14.160 Overall, clinicians seemed frustrated at the lack of computer facilities in hospitals and were supportive of better systems that interacted with other hospitals and area health services. I was told of a questionnaire conducted by Liverpool Medical Staff Council in which 35 of the 40 respondents held the view that there had not been sufficient progress in information technology systems.²⁰⁴
- 14.161 Some clinicians found completing an electronic medical record, particularly electronic discharge summaries, more time consuming than the handwritten version.²⁰⁵
- 14.162 Some clinicians lack the keyboard skills to use an electronic medical record quickly, although staff lacking keyboard skills can be found in any industry and it is not a reason not to implement it.²⁰⁶ It is, however, a reason to ensure that there are good training programs in place and a proper change management strategy, and I will discuss this further below.

The way forward

- 14.163 In my view, the time has come for a comprehensive electronic medical record, including an electronic prescription system, to be implemented across NSW. (Obviously it would be preferable were such records available across all States and Territories.)

Electronic medical record

- 14.164 In 2008, it is not unreasonable to expect that if you go into an Emergency Department, you would have an information technology system that supports your emergency care. You would be entitled to expect that, should you then need to be admitted into hospital, you should be able to be electronically admitted, have a bed made available and all the documentation associated with your admission sufficiently captured and passed up to the ward.

14.165 As a senior representative of NSW Health put it:

If you require to go from the emergency department to the operating theatre ... then you expect that that can happen effectively and the operating theatre can schedule your appointment. It can take the information that was gathered in the emergency department and automatically populate your records so they don't have to keep asking your name and address when you are in pain, et cetera. If you need to schedule some pharmaceuticals, some lab tests, that these can be scheduled electronically and when it comes time to leave that you can be discharged with the appropriate medication having received the appropriate procedures and having advised your community health care worker or your GP that this has happened, and perhaps a three-day visit or an appointment follow-up by your GP or community health worker would be appropriate. ... that would be a reasonable expectation that the public would have.²⁰⁷

14.166 Whilst information technology systems work well in the Emergency Department, or in the pharmacy, or in the lab, the system does not generally enable a clinician working on a hospital ward to see lab tests outstanding, see radiology results, see when a person is scheduled for discharge and other important information. NSW Health acknowledged to me that there was a need to change this:

"We have got to break open the departmental systems, break open the emergency department and the pharmacies and provide a single view to the clinician or the nurse who is managing it ... so that they can have an understanding of all the things that are happening to a patient within a hospital and that provides the view of the electronic medical record rather than a departmental view. I am no longer just working in ED, I'm no longer just working in a pharmacy or a laboratory".²⁰⁸

14.167 Any electronic medical record should be easily accessible for all staff who treat patients, including allied health professionals.²⁰⁹ The work of allied health staff must be integrated into the medical records system so that other staff are aware of which treatments are being carried out and that there is a record of past treatments.

14.168 I have further discussed NSW Health's information technology strategy below. It is not intended to be completed for at least 10 years. The current roll-out of the "electronic medical record" is not a complete electronic medical record. It is only when all the various components of the planned information technology strategy are completed that NSW Health will have what I regard to be a complete electronic medical record (including the ability to make progress notes on the ward in an electronic medical record). The current planned roll-out, with its 10 year lead times, is far too slow.

14.169 An introduction of clinical information systems across the system needs a substantial increase in information technology staff and computers available in the wards.²¹⁰

14.170 Computer terminals need to be accessible at the bedside, so information can be entered directly and clinicians are not taken away from the bedside to enter data.²¹¹

14.171 It will also require a substantial increase in information technology staff and computers (or other handheld devices) available in community health facilities so that information can be entered into the system at the point of contact with the patient.

14.172 The CERNER electronic medical record that is being introduced by NSW Health will be accessible at the hospital by doctors, nurses, allied health professionals, scientific and technical staff, health information managers and administrative staff (including ward and

admissions clerks).²¹² Policies are necessary to permit a GP, allied health professionals and community health clinicians, who are located outside the hospital, to gain access the relevant parts of the electronic medical record generated within NSW hospitals.

- 14.173 This would not require new infrastructure. It may require some appropriate information technology programs to provide access. Primarily it requires policies to permit it.

Recommendation 50: *NSW Health should cooperate with and support the National E-Health Transition Authority including in particular developing appropriate policies to and platforms which govern the manner of and the circumstances sufficient to permit general practitioners, specialists, allied health professionals and community health clinicians, who are located outside the hospital, to gain access to relevant parts of, and information from, the electronic medical record generated within NSW public hospitals.*

- 14.174 Finally, and just as important as the system itself, teams trained in change management should be available to every facility to support staff who carry the burden of implementing the new technology. There exists throughout the private sector management experts able to participate as partners with NSW Health staff in managing change of this scope. Access to such resources is essential to the success of any implementation strategy.

Electronic prescription systems

- 14.175 A comprehensive electronic medical record should include an electronic prescription system. Electronic systems can be used to help prescribe and dispense medication and enhance record administration, reducing the number of medication errors. These systems can also support clinical decisions by providing prescribing information and computerised drug interaction warnings and transferring information between hospitals and community care providers.
- 14.176 Two senior pharmacists from Royal North Shore Hospital directed me to a 2002 report of the former Australian Council on Safety and Quality in Health Care which, they told me, estimated that 140,000 hospital admissions each year were associated with problems with use of medicines at an estimated cost of \$380m.²¹³ Among the 7 strategies the report recommended to decrease medication incidents were: use of electronic systems for prescribing with clinical decision support and computerised adverse drug event alerts.²¹⁴ A number of overseas studies have examined the benefit of the use of information technology in hospital pharmacies.²¹⁵
- 14.177 Besides supporting clinical decisions and reducing the number of adverse incidents electronic automation could speed up hospital pharmacy dispensing, automate medication stock re-ordering and allow technicians to perform more non-clinical duties saving the time of pharmacists, nurses and practitioners. Ideally, dispensed medication could be checked at a patient's ward by scanning a barcode. Patient safety would be increased with onscreen alerts concerning automatic drug interaction and correct dosage range alerts.²¹⁶
- 14.178 The Commonwealth government has already begun a community project aimed at electronic prescribing by community doctors and bar-coded drug dispensing.²¹⁷ Indeed many community pharmacists already have this technology in place allowing ease of medication dispensing and for PBS claims to be directly made to Medicare via the internet.²¹⁸ There may be some question as to the compatibility of the PBS software system with current hospital systems.

14.179 NSW Health told me that included in its proposed future information technology program are:

- Hospital Pharmacy roll-out, which is state-wide implementation of a replacement hospital pharmacy system. This means migration from a single site to multi-site implementations hosted in clinical hubs. The Hospital Pharmacy rollout is essential to support the planned rollout of Medication Management.²¹⁹
- Electronic Medication Management builds upon the current roll-out of the electronic medical record in NSW hospitals. It will provide clinicians with point of care tools that allows them to electronically prescribe medications. It provides alerts of potential drug allergies, drug interactions, drug contra-indications to patient conditions and dosage checks designed to pick-up errors in dosage. It will also alert doctors if a relevant blood test is outside the range recommended for a particular drug dosage.²²⁰

14.180 It is my view that the state-wide roll-out of these systems should be completed as soon as possible and I have further commented on this below.

Funding of health information technology

14.181 In my view, whilst NSW Health is now on the right track, it is severely constrained by a lack of resources from implementing a state-wide electronic medical record in an appropriate timeframe. Across NSW hospitals, system variety and lack of compatibility remains the rule, with functioning systems being the exception. This must change, and change quickly. As Dr McGlynn observed:

"It just seems like an issue that needs to be solved with one massive injection of capital from Treasury ... It is coming too slowly and it's not broad enough."²²¹

14.182 The comparatively low funding of information technology in health is something NSW has in common with other Australian jurisdictions. As National E-Health Transition Authority told me:

"According to Productivity Commission estimates, total spending on information and communications technology (ICT) in Australia accounts for 1-3 per cent of total healthcare costs - equivalent to expenditure of \$1-2 billion annually. This expenditure is lower than comparative levels of spending in the US and UK, which average 4-5 per cent of total healthcare costs."²²²

14.183 NSW Health's current approved information technology works in progress, the costing for each and their completion dates are as follows:

Table 14.1 NSW Health Information Technology Works in Progress²²³

Item	Costing	Completion date
Electronic Health Record Pilot	Software Development:	\$6m
	Hardware and Infrastructure:	\$5m
	Implementation and Support:	\$8m
	Total:	\$19m
Phase 1 of Infrastructure: procuring the necessary equipment, environment and services to support centralised hosting of core and common applications, eg. Patient Administration System	Strategy and planning:	\$1m
	Data Centre Infrastructure:	\$14m
	Total:	\$15m
Patient Billing System	Purchase Licensing:	\$0.7m
	State-wide implementation:	\$0.8m
	Total:	\$1.5m
Electronic medical record: implementation across all area health services and the Children's Hospital, Westmead of: <ul style="list-style-type: none"> • results reporting, • order management, • discharge referral, • FirstNet, • SurgiNet, • scheduling. 	State-wide implementation:	\$56m
	Software Licensing:	\$29m
	Hardware:	\$15m
	Total:	\$100m
Corporate Systems Stage 1: hardware, licensing, foundation layer base human resources and payroll functionality and upgrading of finance systems.	Implementation:	\$56m
	Software Licensing:	\$17m
	Hardware:	\$8m
	Total:	\$81 m
Medical Imaging Program: hardware and software that enables medical images to be digitized, stored and transmitted electronically. It gives access to images across NSW to better support diagnostic reporting.	State-wide implementation:	\$19m
	Software Licensing:	\$14m
	Hardware:	\$30m
	Total:	\$63m
Business Information Program: to deliver real-time information to hospitals on performance and activity flow and next day information to the remainder of the system.	Application Build & Software Licensing:	\$13m
	Change management & training	\$2m
	Hardware & Infrastructure:	\$4m
	State-wide implementation:	\$17m
	Total:	\$36m
TOTAL		\$315.5m

14.184 The proposed future information technology program and its estimated cost as at March 2008 (which is unfunded) includes the following:

Table 14.2 NSW Health Proposed Future Information Technology Program²²⁴

Item	Costing (\$m)	Completion date
Community health system redevelopment	110.0	July 2015
Intensive care	50.0	July 2015
State-wide roll out of the electronic health record	144.3	July 2016
Automated rostering to release nurses to patient care	85.0	July 2010
Incident information management system upgrade	18.5	July 2014
Medication management	112.0	July 2019
Network connectivity	115.0	Not yet determined
Clinical Documentation	70	July 2017
Hospital Pharmacy system rollout	Not yet determined	July 2015
TOTAL	704.8 (plus pharmacy system rollout)	

14.185 These projects and their costs are the subject of review by NSW Health and are likely to change in accordance with the priorities of the NSW Government. Even these lengthy time frames for completion may be further delayed by 1 or 2 years.²²⁵

14.186 The current information technology program for clinical and corporate systems is not scheduled to be completed before the middle of 2019 at the earliest. In order to try and obtain these monies from NSW Treasury, an investment program schedule is set for 10 years completing in 2018-19. This means that some critical programs are not due for completion until 2014-15.

- (a) The contribution of errors in prescription and administering of medication to adverse patient events has been referred to above. The present program in NSW Health would commence roll out of Medication Management in the middle of 2011 and complete it in the middle of 2019. The Hospital Pharmacy system roll out is not due to be completed until the middle of 2015.
- (b) The "Clinical Documentation" project is not scheduled to be implemented by NSW Health until 2017. All notes made by doctors, nurses and allied health professionals on the ward will be on paper until this project is implemented. When it is implemented, it will include ward notes, handover notes, surgical specialty notes, nursing admission and medical admission notes. If a consultation with a specialist takes place in the hospital, it will be captured in the hospital system on Clinical Documentation system. (If it is written up outside the hospital, it will be captured in the electronic health record outside).²²⁶
- (c) Reference has already been made to the fact that planning for the introduction of the Clinical Information System in all intensive care units is not scheduled for completion until the middle of 2015.

The risks to safety and quality of patient care occasioned by these delays in the introduction of an up to date information technology system throughout NSW Health cannot be over emphasised. It is not until the implementation of these key projects that NSW will actually have an electronic medical record for all patients that is integrated across the system.

14.187 In my view, insufficient funds are allocated to information technology to get it up to the standard needed in an acceptable timeframe. Information technology competes with major building works for funding for health in NSW.²²⁷ Nonetheless a need exists for a one-off injection of substantial new funding to implement this key recommendation. As Professor Downton, the Vice President and Chief Operating Officer of Partners Harvard International, said:

"...the increasing complexity of the health care that we deliver to our patients requires an enormous and thoughtful clinician-engaged investment in IT systems to support rapid access to information. The quality of care is improved by connecting information about patients across the diverse system. For my vote as well, it is about enhancing the transparency of decision-making including and especially to the patients."²²⁸

14.188 A senior representative of NSW Health indicated to me that funding is not the only constraining factor in rolling out a complete electronic medical record. Other constraining factors include:²²⁹

- (a) releasing staff for training;
- (b) changing current clinical practice, as standardising practice for the electronic medical record can be time consuming and it is necessary to ensure that sufficient consultation occurs;
- (c) historic information technology practices, as people are often wedded to their existing system; and
- (d) ensuring sufficient information technology implementation resources from the private provider of the system.

14.189 Such factors tell against setting unduly aggressive targets for the roll out of information technology projects. Nonetheless, far more aggressive targets are necessary and must be set than those currently in place.

14.190 Another potential constraint in the introduction of comprehensive electronic medical records is the need for a unique patient identifier. There are Commonwealth projects aimed at introducing a unique patient identifier, however it remains unclear when those projects will be completed. It is also possible that the outcome of those projects may not completely solve the problem. A senior representative of NSW Health explained the issue to me:²³⁰

"... if you have an identifier and the hospital medical record for your last inpatient event, and another record at another hospital, a medical record for your current inpatient event, you want to connect the two together. So the fact that the numbers are different is a little bit of a distraction. ... It is the connecting the two together and having a relationship that is the most important.

... the philosophy of medical record unique identifiers [needs to be] changed to one of relationship management between numbers ... the relationship management between them is more important than the numbers themselves. The software that manages the relationship is more important than the software that generates the random number. ... we believe the state will have to solve the problem of the relationship. While the Commonwealth may very well provide us with a unique number ... to a large extent that will not solve our problem. So I now have another number, but I still do not have the relationship between the numbers defined."

14.191 This seems to be a sensible solution to a complex problem which should be further developed by NSW Health.

Recommendation 51: *Within 4 years NSW Health should complete the current information technology program including the following stages:*

- (a) *Stage 1: 12 months* *Infrastructure*
- (b) *Stage 2: 18 months* *Electronic medical record*
Patient Administration System
- (c) *Stage 3: 24 months* *Human Resources Information System*
Business information strategy
Medical imaging
Intensive care
Hospital pharmacy system
- (d) *Stage 4: 36 months* *Community health system redevelopment*
Automated rostering
Clinical Documentation
Medication management
- (e) *Stage 5: 48 months* *State-wide roll out of the electronic health record*

14.192 I was also told by a senior representative of NSW Health that, as a general rule, software support and maintenance runs at 16 to 22% of the cost of acquisition.²³¹ In addition to the initial funding provided for the provision of any information technology project, it is obviously necessary to provide adequate funding to ensure each of the systems are maintained, upgraded and continuously improved.

Secure Broadband Network

14.193 The broadband system for NSW Health is problematic. Some remote and rural areas have no broadband network. Others have an unreliable broadband network. There are poor connections between area health services, making it difficult to reliably share information.²³² The Commonwealth's program for rolling out broadband to remote rural areas is of great assistance,²³³ however, it will not provide a complete solution to the existing need of the NSW Health systems for a reliable and secure broadband network.

14.194 As noted in Table 2 above, NSW Health's current "network connectivity project" does not, as yet, have a projected completion date. Part of the network connectivity project, includes a component for the implementation of a Virtual Private Network (VPN). A VPN allows the creation of a secure private network over a shared public network infrastructure such as the internet. A VPN facilitates transparent and secure communication. It is estimated that the establishment of a VPN by NSW Health would take 2 years and cost approximately \$85 million, including base infrastructure costs.²³⁴

14.195 I have discussed:

- (a) in Chapter 6, the use of tele-medicine to provide specialist consultant services to rural and remote hospitals;

- (b) in Chapter 24, the establishment of a 24 hour a day and 7 day a week state-wide medical imaging and reporting service.

Both require NSW Health to have a VPN with sufficient bandwidth to allow adequate clinical quality, including for the provision of real time intensive care and emergency care.

- 14.196 A VPN is also an essential building block of the entire electronic medical record and information technology system needed by the NSW health system. The establishment of VPN will enable patients' medical records to be reliably and securely accessed by health professionals throughout NSW.

Recommendation 52: *A high speed broadband network should be established within 18 months securely linking all public hospitals in NSW so as to enable the provision of specialist clinical services and support via the network from metropolitan-based clinicians and hospitals to regional, rural and remote clinicians and hospitals.*

Implementation of electronic medical record

- 14.197 I recognise that information technology is not a panacea for all ills. I accept that its benefits can be oversold as a definitive safety and quality solution. Nevertheless, in my view, the introduction of the electronic medical record throughout public facilities in NSW Health should go a long way to solving some of the immediate problems I have observed, and set up NSW's health system for the future.

Experience in implementing FirstNet

- 14.198 I recorded above the positive experiences of some clinicians who have had FirstNet implemented in their Emergency Departments. However, it is instructive to consider some adverse comments.
- 14.199 One emergency physician informed me that it was not user friendly, was complicated to use and had not been implemented in a consultative manner or with sufficient education.²³⁵ Another told me that his department had been involved in a pilot of CERNER FirstNet which led to a blow-out of waiting times for some patients of up to 10 hours. Further, none of the complaints made by clinicians about the introduction of FirstNet were heeded or actioned.²³⁶
- 14.200 A nurse told me that the system was difficult to use and that, due to the number of screens that must be opened and entered, many patients exceeded triage benchmarks while people were working through the clerical aspects.²³⁷ The submission of the Australasian College of Emergency Medicine provided a number of comments which were equally negative as those made above.²³⁸
- 14.201 The Executive Committee of the Royal Prince Alfred Hospital Resident Medical Officers Association submitted to me that there is a perception that the recent introduction of FirstNet has done little to enhance patient care, but merely allows greater evaluation of waiting times by hospital administrators and bureaucrats without benefiting the triage/treatment process.²³⁹
- 14.202 The Australian Medical Association (NSW) Limited and Australian Salaried Medical Officers' Federation submitted that:

"There is a widely-held view amongst our membership that IT systems are designed to provide information upwards to the Department of Health rather than to provide information that can be used to improve patient care. ... We suggest that NSW Health should start with the principle that IT systems should not be introduced unless they are primarily designed to improve patient care and have been developed in consultation with clinicians."²⁴⁰

- 14.203 In my view, the use of information technology is essential to improve safety and quality of patient care. In this regard, it is important to distinguish between information used to enhance patient care on the one hand and information used for the benefit of system-wide planning, and in particular key performance indicators. The primary purpose for new information technology must always be recognised as the improvement of patient care.
- 14.204 NSW Health acknowledged there had been significant challenges introducing a new system such as FirstNet into Emergency Departments, which obviously must, during that implementation, efficiently operate 24 hours a day, 7 days a week, with no downtime.²⁴¹
- 14.205 I was concerned when I was told that some Emergency Departments chose to "opt out" of implementation of either part or all of the FirstNet system upon encountering difficulties (some after only 6 hours of using the system).²⁴² This may reflect an inadequate investment on the part of NSW Health in change management and staff training on new systems. It may reflect that the FirstNet system is not a perfect system. It may also reflect a reluctance on the part of some clinicians to change existing processes. This must be addressed by appropriate change management resources and the involvement of clinicians in that change.
- 14.206 It is important that NSW Health has an electronic medical record that is system-wide and can talk across units, departments and facilities. I understand that the CERNER system was chosen because it has this advantage.²⁴³ Adequate commitment, both financial and otherwise, must be made to ensure that this project, now started is indeed implemented on a system-wide basis and implemented in a way that ensures a commitment from the staff who use it day to day. After all, the staff carry the burden of implementing the change and NSW Health needs to provide active support to help them get through the inevitably rough patches which accompany any new system.

Lessons to be learned

- 14.207 The experiences where the electronic medical record has already been implemented in NSW point to 3 important matters in introducing a state-wide electronic medical record.
- 14.208 First, in introducing a state-wide system, there is obviously a tension between being consultative with local clinicians and heeding their individual requirements, as opposed to giving priority to uniformity.
- 14.209 Australian Medical Association (NSW) Limited and Australian Salaried Medical Officers' Federation conveyed to me that:

"...there is a strongly-held view amongst our members that many useful locally-based IT initiatives have been abandoned by direction of NSW Health and replaced with a system imposed from above. There should be sufficient flexibility for local systems to continue, provided that they are able to provide a required minimum data set."²⁴⁴

14.210 As a NSW Health official explained, many hospitals have peculiar little requirements that they have had in place for many years, for example, putting the “P” in front of a patient number to indicate on their wrist band if they are a private patient or using “Z”, if they have an infection, or putting the phone number of the patient on their wrist band.²⁴⁵ Moving to a state-wide system causes problems when these local requirements are overlooked.

“Doing it well means you have got to listen very hard to all the issues that come up, and either duplicate the way it was done before because it was actually very smart or say that life has changed, this is the way we are doing things in the future. That is the challenge that we are currently facing.”²⁴⁶

14.211 In my view, the benefits of a state-wide system that can be used by all clinicians, from whichever hospital they come, and be accessible to other health professionals outside the hospital, points strongly in favour of uniformity over local requirements. However, the two are not always mutually exclusive. Uniformity need not obliterate local initiatives of the type referred to. The key principle is that there must be genuine consultation with clinicians at the hospital and clinical unit levels to identify what data is needed to help improve quality of care and how requirements at the individual unit level may be accommodated *within* a uniform system.

14.212 Second, the introduction of a state-wide system must be properly supported by teaching clinicians how to use it and providing them with information technology support for the changeover.

14.213 A clinician at Mount Druitt hospital informed me that, while there were some teething problems when the FirstNet electronic medical record was introduced into Emergency Departments, they had direct access to information technology staff who prioritised any problems that arose with the system. This ensured that the introduction of the new system did not compromise the care given to patients.²⁴⁷ In addition to needing technical information technology support staff, clinicians may need extra administrative and clinical staff during the changeover period to mitigate the tendency of information technology systems to increase inefficiencies for a brief period while people adapt to them.²⁴⁸

14.214 To overcome the challenges posed to clinicians and management alike in implementing a state-wide electronic medical record, change management must be funded. Change management is not currently funded within NSW Health’s information technology programs.²⁴⁹ It is not an optional “extra” but an absolutely fundamental requirement if change is to succeed through the system. It needs to be done in partnership with experts in change management who can be found in the private sector if the expertise is not available within the area health services.

14.215 The roll-out of all NSW Health information technology programs should have a change management component which is appropriately funded. The change management component should ensure that there is sufficient consultation with clinicians at the hospital and clinical unit levels to identify what data are needed to help improve quality of care.

14.216 Third, ongoing supervision and administrative support of staff is needed to ensure the quality of data input into the system.

(a) I have noted above that during my visit to Emergency Departments at Blacktown Hospital, where the FirstNet electronic medical record has been introduced, a senior clinician informed me that they have found that they had to introduce a template within the electronic medical record to ensure doctors follow proper

procedure. Ongoing supervision, which may include the need for templates or protocols, is essential to ensure the standard of the information being entered.

- (b) Dr Lipski of Gosford Hospital indicated that the electronic medical record used for geriatric patients requires supervision on a weekly basis.²⁵⁰

Without adequate supervision and sufficient skilled staff, errors are likely to occur.

- 14.217 A lack of staff to ensure accurate and timely data entry will impede the efficacy of an electronic medical system. Ms Nott told me at Mudgee Hospital that:

"Initiatives such as the electronic medical record are a positive step in improving access and timeliness of access to patient information for patient care as a tool for clinicians. However, in our facility, one of the main impediments to the effectiveness of its introduction is the lack of clerical staff to perform real-time registration of patients, especially in ED, which is necessary for the ordering of tests et cetera."²⁵¹

- 14.218 Without adequate staff with sufficient skill and time, errors can increase, for example by the creation of 2 medical records when the person entering the data misspells a patient's name.²⁵² The introduction of the electronic medical record may mean that roles may need to be re-designed, including new work associated with overseeing the system.²⁵³

- 14.219 It should be borne in mind that the importance of the electronic medical record is not necessarily to save administrative costs, but to ensure that more accurate, comprehensive and accessible records are available to improve patient care.

Privacy concerns

- 14.220 I have recommended that an electronic medical record be implemented across the state which can be readily accessed by all health professionals treating a patient. By their very nature, medical records contain intensely personal information. There will no doubt be room for discussion about how such information can be protected from disclosure to other health professionals for whom it may be of no relevance.

- 14.221 Many privacy concerns are raised in the health sector which prove, on closer examination, to be based on unnecessary fears. Unwarranted privacy concerns may become an obstacle to much-needed reform. As Dr Goldstein explained:

"In an ED the risks to a patient of a lack of medical history information (basically, death or incorrect treatment) are very high, and privacy considerations should be weighed against these risks. Regrettably, privacy and security are frequently cited as impediments to a medical history database, even though these issues have been solved for on-line banking."²⁵⁴

- 14.222 When considering the issue of privacy and access by other health professionals to the hospital's electronic medical record there will be several competing considerations:

- (a) the possibility that another health professional may read something embarrassing to the patient that is irrelevant to the treatment which that particular health professional is providing;
- (b) the complexity of limiting access to particular portions of a health record to particular health professionals; and

- (c) the risk that, by limiting access, relevant and vital information is not conveyed to those who need it.

14.223 In my view the present State²⁵⁵ and Commonwealth²⁵⁶ privacy legislation provide appropriate protection for patients both as to privacy and safe clinical practice. They are sufficient to regulate communications between GPs and other primary health care providers, on the one hand, with their professional colleagues in the NSW public health sector on the other. Further strengthening of Commonwealth privacy laws may occur following recent recommendations by the Australian Law Reform Commission in relation to sharing of electronic health records.²⁵⁷ However, in my view, the existing legislation does provide good privacy protection.

Electronic Health Record

14.224 Before passing from this subject, I note that there have been long-running efforts to implement an Electronic Health Record in NSW and across Australia.²⁵⁸

14.225 An Electronic Health Record is different from an electronic medical record: it contains summary information only of:

- a patient's personal details,
- family history,
- allergies and alerts,
- medical history,
- procedures,
- a *summary* of services provided to an individual by hospitals, community and allied health, GPs and dental clinics, and
- some documents such as diagnostic results, assessments, discharge letters and care plans.²⁵⁹

14.226 The Electronic Health Record is intended to be fed with information from health professionals, who will provide event summaries or documents. The Electronic Health Record will be available via a secure internet connection.²⁶⁰ The National E-Health Transition Authority envisages that participation in the Electronic Health Record will be voluntary and creation of the record will only occur if the individual agrees. A person can decline to continue participating at any time.

14.227 NSW Health is running 2 pilots on the Electronic Health Record, called "Healthelink", one in Maitland and one in Greater Western Sydney. Some 40,300 patients are enrolled in the pilots.²⁶¹ A state-wide roll-out of the Electronic Health Record is scheduled for 2016,²⁶² at a cost of \$144.3 million.²⁶³

14.228 There is a perception that progress on national Electronic Health Record has stalled. Newspaper reports have indicated that it is not anticipated that an electronic health record will be available until 2012.²⁶⁴ Health Ministers are awaiting business cases from NEHTA and Deloitte Touche Tomatsu before it is clear when an national electronic health record might be available.

14.229 In the circumstances, I recommend that NSW Health proceed with energy in introducing the electronic medical record across the whole public system, whilst ensuring that it will be compatible with the Electronic Health Record by adopting the definitions and infrastructure as recommended by NEHTA which will ensure uniformity and

interoperability between the NSW health sector and the Electronic Health Record when it is finally introduced.

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- ¹ Professor Peter Lipski, Gosford hearing, 10 March 2008, transcript 80.39, see also submission of Professor Peter Lipski, undated, SUBM.011.0160 at 161.
 - ² Submission of The Australian Institute of Radiography, 28 March 2008, SUBM.002.0002 at 6.
 - ³ Submission of Sharyn Medway, 12 May 2008, SUBM.045.0276.
 - ⁴ Final RCA Report provided as part of submission of Sharyn Medway, 12 May 2008, SUBM.045.0276 at 282.
 - ⁵ Submission of Dr Greg Goldstein, 2 April 2008, SUBM.040.0245 at 247.
 - ⁶ Inquest into the Death of Bryce Keenan (Unreported Westmead Coroners Court, Westmead File 1201/2004, Magistrate Milovanovich, 22 April 2005) p. 16.
 - ⁷ Kathryn Carmichael, Tweed Heads hearing, 29 April 2008, transcript 2303.09.
 - ⁸ Dr Christopher Arthur, Royal North Shore Hospital hearing, 2 April 2008, transcript 1243.26.
 - ⁹ Geoffrey Oakley, Nepean Hospital hearing, 8 April 2008, transcript 1437.34-1438.21.
 - ¹⁰ Final RCA (RCA RI 07/523) provided as part of submission of Adrienne and Lewis Furner, 17 March 2008, SUBM.005.0248 at 52-3 (I note that this statement was made under the heading "other system vulnerabilities identified by the team – not contributing to the final outcome").
 - ¹¹ NSW Health Briefing, 31 March 2008, transcript 69.9.
 - ¹² NSW Health, *Medical Records*, PD2005_015; NSW Health, *Medical Records in Hospitals and Community Care Centres*, PD2005_004; NSW Health, *Records – Principles for Creation, Management, Storage and Disposal of Health Care Records*, PD2005_127.
 - ¹³ NSW Health, *Medical Records in Hospitals and Community Care Centres*, PD2005_004.
 - ¹⁴ NSW Health, *Records – Principles for Creation, Management, Storage and Disposal of Health Care Records*, PD2005_127.
 - ¹⁵ NSW Health, *Medical Records*, PD2005_015; NSW Health, *Medical Records in Hospitals and Community Care Centres*, PD2005_004; NSW Health, *Records – Principles for Creation, Management, Storage and Disposal of Health Care Records*, PD2005_127.
 - ¹⁶ Julie Gibbs, St George Hospital hearing, 14 May 2008, transcript 2857.16-21.
 - ¹⁷ Jennifer Kiddle, Mudgee hearing, 20 March 2008, transcript 737.26; Information provided during visit to St George Hospital on 21 February 2008; Submission of John Hunter Hospital Medical Staff Council, 25 March 2008, SUBM.015.0285 at 288; Information provided during visit to Wollongong Community Mental Health Centre, 3 September 2008.
 - ¹⁸ Information provided during visit to The Children's Hospital, Westmead on 27 October 2008.
 - ¹⁹ Submission of Dr Greg Goldstein, 2 April 2008, SUBM.040.0245 at 247.
 - ²⁰ Professor Anthony McLean, Nepean hearing, 8 April 2008, transcript 1462.2. I was told that paper notes were cumbersome and it was difficult to integrate the notes of medical and nursing staff: Information provided during visit to Concord Repatriation General Hospital on 21 February 2008.
 - ²¹ Root Cause Analysis Report, provided as part of submission of Kevin and Christine Griffey, 8 April 2008, SUBM.069.0115 at 119.
 - ²² Dr Christopher Arthur, Royal North Shore Hospital hearing, 2 April 2008, transcript 1243.44.
 - ²³ Dr Sarah Smith, Royal North Shore Hospital hearing, 14 March 2008, transcript 428.13.
 - ²⁴ Jennifer Baroutis, Port Macquarie hearing, 28 March 2008, transcript 1102.32.
 - ²⁵ Dr Michael McGlynn, Sydney Children's Hospital hearing, 19 May 2008, transcript 3092.33.
 - ²⁶ Submission of Therese Mackay, 3 February 2008, SUBM.012.0130 at 136.
 - ²⁷ Information provided during visit to Westmead Children's Hospital on 15 May 2008.

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- 28 Dr Sarah Smith, Royal North Shore hearing, 14 March 2008, transcript 428.15; Confidential Bankstown hearing, 13 May 2008, transcript 7.23; Jennifer Baroutis, Port Macquarie hearing, 28 March 2008, transcript 1099.26.
- 29 Dr Rebecca Kozor, Hornsby hearing, 11 March 2008, transcript 181.41; Sydney South West Area Health Service, *Electronic Medication Management (eMM) – Adult eMM Pilot Site for NSW Health*, December 2007, NSW Health, North Sydney.
- 30 Information provided during visit to Blacktown Hospital on 7 July 2008.
- 31 Submission of Dr Stephen McGregor Barratt, 28 March 2008, SUBM.035.0088 at 90.
- 32 Letter from NSW Health to Special Commission of Inquiry, 3 October 2008, p. 2.
- 33 Letter from NSW Health Response to Special Commission of Inquiry Request, 3 October 2008, p. 2.
- 34 Letter from NSW Health to Special Commission of Inquiry, 3 October 2008, p. 2.
- 35 Letter from NSW Health to Special Commission of Inquiry, 3 October 2008, p. 2.
- 36 Letter from NSW Health to Special Commission of Inquiry, 3 October 2008, p. 2.
- 37 Letter from NSW Health to Special Commission of Inquiry, 3 October 2008, p. 2.
- 38 Submission of Adrienne and Lewis Furner, 17 March 2008, SUBM.005.0244 at 47; Adrienne and Lewis Furner, Bathurst hearing, 17 March 2008, transcript 463.18-26; Meeting with Jim Murray, 4 April 2008.
- 39 Ms Harman and Ms Hill reported to me that, during the continuing care project they participated in at Royal North Shore Hospital in 2007, 72 patient files were audited and those files generally showed inadequate communication and documentation, particularly in relation to discharge plans and completion of patient risk assessment: Paula Harman and Rose Hill, Royal North Shore hearing, 14 March 2008, transcript 283.39 and 284.33. Ms Baroutis, a nursing unit manager at Port Macquarie Base Hospital, submitted to me that patient's progress notes are not always documented by Visiting Medical Officers: Jennifer Baroutis, Port Macquarie hearing, 28 March 2008, transcript 1102.37.
- 40 Inquest into the death of Vanessa Ann Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 4.
- 41 Inquest into the death of Vanessa Ann Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 4.
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- 43 Inquest into the death of Vanessa Ann Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 6.
- 44 Inquest into the death of Vanessa Ann Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 7.
- 45 Inquest into the death of Vanessa Ann Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 11.
- 46 Amy Willesee, Wollongong hearing, 14 April 2008, transcript 1620.41 and 1621.24.
- 47 Joanna Willesee, Wollongong hearing, 14 April 2008, transcript 1622.31.
- 48 Sydney West Area Health Service Re: Briefing for the Special Commission of Inquiry concerning the transcript evidence provided by the daughters of Ms Carol Willesee 14 April 2008, 14 August 2008.
- 49 Jennifer Baroutis, Port Macquarie hearing, 28 March 2008, transcript 1103.29.
- 50 Lynette & Keith Appleby, Armidale hearing, 26 March 2008, transcript 882.05-24.
- 51 Submission of Dr Greg Goldstein, 2 April 2008, SUBM.040.0245 at 248.
- 52 Information provided during visit to Dorrigo Multipurpose Service on 26 March 2008.
- 53 Submission of National E-Health Transition Authority, 26 March 2008, SUBM.029.0037 at 72.
- 54 Information provided during visit to Dorrigo Multi-Purpose Service on 26 March 2008.

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- 55 Submission of the Health Services Association of NSW to the National Health and Hospitals Reform Commission, provided by the Health Services Association of NSW, SUBM.076.0339 at 365.
- 56 Submission of the Board of Directors of the North West Slopes Division of General Practice, 28 March 2008, SUBM.009.0230 at 232.
- 57 Glenis Geldard, Nepean hearing, 8 April 2008, transcript 1403.35.
- 58 Dr Neil Phillips, Concord hearing, 24 April 2008, transcript 2130.03.
- 59 Submission of Northern Rivers General Practice Network, 28 April 2008, SUBM.077.0023 at 24.
- 60 NSW Health Briefing, 31 March 2008, transcript 69.32.
- 61 Carol Thurgate, Lismore hearing, 28 April 2008, transcript 2264.6-17.
- 62 Dr Christopher Arthur, Royal North Shore hearing, 2 April 2008, transcript 1243.32.
- 63 Meeting with Warren and Michelle Anderson, 7 March 2008. The Deputy State Coroner, however, did not refer the loss of the CT scan as having been a contributing factor in the death of Vanessa Anderson.
- 64 Health Care Complaints Commission Investigation Report, File No. 05/03573, re complaint concerning the care and treatment of Vanessa Anderson at Royal North Shore Hospital and the response of the Royal North Shore Hospital following Vanessa's death, 4 March 2008.
- 65 Kathryn Carmichael, Tweed Heads hearing, 29 April 2008, transcript 2306.18.
- 66 Maree Nott, Mudgee hearing, 20 March 2008, transcript 743.6; Submission of Kathryn Carmichael, 29 April 2008, SUBM.077.0018 at 19; Submission of Patricia Mort, 20 March 2008, SUBM.074.0079.
- 67 Professor Peter Lipski, Gosford hearing, 10 March 2008, transcript 79.24.
- 68 Maree Nott, Mudgee hearing, 20 March 2008, transcript 743.3.
- 69 Submission of the Health Services Association of NSW to the National Health and Hospitals Reform Commission, provided by the Health Services Association of NSW, SUBM.076.0339 at 365.
- 70 Submission of Professor John Harris, 2 April 2008, SUBM.006.0229 at 30.
- 71 Final Report of the Special Commission of Inquiry into Campbelltown and Camden Hospitals (Bret Walker SC), 30 July 2004, pp.139-141.
- 72 Dr Michael McGlynn, Sydney Children's Hospital hearing, 19 May 2008, transcript 3092.21.
- 73 Hillestad, Bigelow, Bower, Girosi, Meili, Scoville and Taylor, "Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, And Costs" (2005), Health Affairs, Vol 24, No. 5; Benefits Realisation Study, High Level Results, National E-Health Transition Authority, 6 November 2007 [response to summons – REP.145.0001]; Goldsmith, *The Healthcare Information Technology sector*, Burns, L.B (ed), *The Business of Healthcare Innovation*, 5th ed, 2008, Cambridge University Press, Cambridge, p.323.
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- 76 Health Informatics Review Report, UK Department of Health, 10 July 2008.
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- 83 Submission of Professor Bruce Robinson on behalf of the Deans of all Medical Schools in NSW and ACT, 28 March 2008, SUBM.034.0016 at 28.

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- ⁸⁵ Dr Rebecca Kozor, Hornsby hearing, 11 March 2008, transcript 183.19-28.
- ⁸⁶ Letter from Faculty of Medicine, University of New South Wales to Special Commission of Inquiry, 27 August 2008; Letter from Faculty of Medicine, University of Sydney to Special Commission of Inquiry, 19 August 2008; Email from Graduate School of Medicine, University of Wollongong to Special Commission of Inquiry, 20 August 2008; Email from School of Medicine and Public Health, University of Newcastle to Special Commission of Inquiry, 7 October 2008; Letter from School of Medicine, University of Western Sydney, to Special Commission of Inquiry, 20 August 2008.
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- ⁸⁸ Letter from Faculty of Medicine, University of New South Wales to Special Commission of Inquiry, 27 August 2008; Letter from Faculty of Medicine, University of Sydney to Special Commission of Inquiry, 19 August 2008; Email from Graduate School of Medicine, University of Wollongong to Special Commission of Inquiry, 20 August 2008; Email from School of Medicine and Public Health, University of Newcastle to Special Commission of Inquiry, 7 October 2008; Letter from School of Medicine, University of Western Sydney, to Special Commission of Inquiry, 20 August 2008.
- ⁸⁹ Submission of NSW Health, 14 April 2008, SUBM.075.0002 at 65.
- ⁹⁰ Submission of NSW Health, 14 April 2008, SUBM.075.0002 at 103.
- ⁹¹ Submission of NSW Health, 14 April 2008, SUBM.075.0002 at 103.
- ⁹² Submission of NSW Health, 14 April 2008, SUBM.075.0002 at 103.
- ⁹³ Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2120.13.
- ⁹⁴ Submission of Dr Jim Newcombe, 7 May 2008, SUBM.028.0007 at 8.
- ⁹⁵ Submission of A/Professor Martin Jones, 7 April 2008, SUBM.024.0190 at 191.
- ⁹⁶ Dr Rebecca Kozor, Hornsby hearing, 11 March 2008, transcript 178.16; Dr Scott Whyte. Gosford hearing, 10 March 2008, transcript 108.41. Dr Reddel a neurologist at Concord Hospital, submitted to me that there is a limited amount of time to see each patient: Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2115.35.
- ⁹⁷ Submission of Kathryn Carmichael, 29 April 2008, SUBM.077.0018 at 21.
- ⁹⁸ Dr Michael McGlynn, Sydney Children's Hospital hearing, 19 May 2008, transcript 3093.7.
- ⁹⁹ Confidential Bankstown hearing, 13 May 2008, transcript 8.10.
- ¹⁰⁰ Dr Scott Whyte, Gosford hearing, 10 March 2008, transcript 98.17.
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- ¹⁰⁴ Submission of Dr Jim Newcombe, 7 May 2008, SUBM.028.0007 at 8.
- ¹⁰⁵ The ANMC is a peak body established in 1992 to facilitate a national approach to nursing and midwifery regulation. The ANMC works with state and territory Nursing and Midwifery Regulatory Authorities (NMRA) in evolving standards for statutory nursing and midwifery regulation. These standards are flexible, effective and responsive to the health care requirements of the Australian population. <http://www.anmc.org.au/about/index.php> at 22 September 2008.

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- ¹⁰⁷ Letter from School of Nursing and Midwifery, University of Western Sydney to Special Commission of Inquiry, 2 September 2008; Letter from School of Nursing, Midwifery and Indigenous Health, University of Wollongong to Special Commission of Inquiry, 3 September 2008; Letter from Faculty of Nursing and Midwifery, University of Sydney to Special Commission of Inquiry, 3 September 2008; Letter from Faculty of Nursing, Midwifery and Health, University of Technology to Special Commission of Inquiry, 1 September 2008.
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- ¹¹² Email from School of Psychology, University of New South Wales to Special Commission of Inquiry, 11 September 2008; Letter from School of Psychology, University of Sydney to Special Commission of Inquiry, 8 September 2008; Letter from Department of Psychology, Macquarie University of New South Wales to Special Commission of Inquiry, 17 September 2008.
- ¹¹³ Letter from School of Health Sciences, University of Newcastle to Special Commission of Inquiry 17 September 2008;
- ¹¹⁴ Letter from School of Health Sciences, University of Newcastle to Special Commission of Inquiry, 17 September 2008.
- ¹¹⁵ Letter from School of Health Sciences, University of Newcastle, 17 September 2008.
- ¹¹⁶ Letter from Faculty of Health Sciences, University of Sydney to Special Commission of Inquiry 7 October 2008
- ¹¹⁷ Letter from Faculty of Health Sciences, University of Sydney to Special Commission of Inquiry 7 October 2008
- ¹¹⁸ Email from Rural Pharmacy, Charles Sturt University to Special Commission of Inquiry 16 September 2008.
- ¹¹⁹ Pharmaceutical Society of Australia, *Competency Standards for Pharmacists in Australia*, 2003: under functional Area 3, which is “promote and contribute to optimal use of medicines”, there is a section: “Manage patient records”; under Functional Area 4, which is “Dispense medicines”, there is a section: “Maintain records”.
- ¹²⁰ Pharmaceutical Society of Australia, *Competency Standards for Pharmacists in Australia*, 2003
- ¹²¹ Email from Rural Pharmacy, Charles Sturt University to Special Commission of Inquiry 16 September 2008.
- ¹²² Letter from Faculty of Pharmacy, University of Sydney to Special Commission of Inquiry 19 September 2008
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- ¹²⁴ NSW Health Briefing, 31 March 2008, transcript 80.25-31.
- ¹²⁵ NSW Health Intensive Care Unit Clinical Information Systems Business Case attached to Submission of Dr Robert Herkes, Ms Linda Williams, Professor Theresa Jacques, Dr Tony Burrell, Dr Graham Reece, Dr John Lambert, Dr Ray Raper, 28 March 2008, SUBM.007.403 at 425 to 426.
- ¹²⁶ Submission of Dr Robert Herkes, Ms Linda Williams, Professor Theresa Jacques, Dr Tony Burrell, Dr Graham Reece, Dr John Lambert, Dr Ray Raper, 28 March 2008, SUBM.007.0394 at 399.
- ¹²⁷ NSW Health Briefing, 23 October 2008, transcript 12.11-25.
- ¹²⁸ NSW Health, *Special Commission of Inquiry Presentation: Health Information Systems*, 31 March 2008, slide 11.
- ¹²⁹ Professor Peter Lipski, Gosford hearing, 10 March 2008, transcript 77.46-81.
- ¹³⁰ Professor Peter Lipski, Gosford hearing, 10 March 2008, transcript 77.46-81
- ¹³¹ Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 10.14-24.
- ¹³² Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 10.33-40.
- ¹³³ Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 10.33-40.
- ¹³⁴ Dr Susan Kurrle, Hornsby hearing, 11 March 2008, transcript 267.41-268.13.
- ¹³⁵ Information provided during visit to Camden Hospital on 16 April 2008.
- ¹³⁶ NSW Health, "The Electronic Medical Record", (Healthelink Brochure).
- ¹³⁷ NSW Health, "The Electronic Medical Record", (Healthelink Brochure), NSW Health.
- ¹³⁸ Submission of NSW Health, 14 April 2008, SUBM.075.0002 at 70.
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- ¹⁴⁵ NSW Health, "Emergency Department System" (Healthelink Brochure).
- ¹⁴⁶ NSW Health, "Emergency Department System" (Healthelink Brochure).
- ¹⁴⁷ Information provided during visit to Blacktown Hospital on 7 July 2008.
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- ¹⁵⁰ Information provided during visit to Mount Druitt Hospital on 7 July 2008.
- ¹⁵¹ Information provided during visit to Cumberland Hospital on 13 May 2008.
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- ¹⁵⁶ Information provided during visit to Blacktown Hospital on 7 July 2008.
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- ¹⁶⁰ NSW Health Briefing, 31 March 2008, transcript 66.27-30.
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- ¹⁷⁵ Submission of Dr Robert Herkes, Ms Linda Williams, Professor Theresa Jacques, Dr Tony Burrell, Dr Graham Reece, Dr John Lambert, Dr Ray Raper, 28 March 2008, SUBM.007.0394 at 396.
- ¹⁷⁶ Confidential submission, 18 April 2008, SUBM.045.0016 at 18.
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- ¹⁷⁸ Kerry Shanahan, Mudgee hearing, 20 March 2008, transcript 752.36-41.
- ¹⁷⁹ Information provided during visit to Dorrigo Multi-Purpose Service on 26 March 2008.
- ¹⁸⁰ Dr Jeremy Hsu, Dr Timothy Tan & Dr Lisa Phipps, Westmead hearing, 10 April 2008, transcript 1488.44.
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- ¹⁸³ NSW Health Briefing, 31 March 2008, transcript 106.28-47.
- ¹⁸⁴ Northern Sydney Central Coast health Internal Briefing, Workforce Development – HR Operations, Northern Sydney Sector, 17 December 2007, p.1-2.
- ¹⁸⁵ Northern Sydney Central Coast health Internal Briefing, Workforce Development – HR Operations, Northern Sydney Sector, 17 December 2007, p.1-2.
- ¹⁸⁶ Dr Suzanne Hodgkinson, Liverpool hearing, 17 April 2008, transcript 1859.47-1860.13.
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- ¹⁸⁹ Dr Roslyn Crampton, Westmead hearing, 10 April 2008, transcript 1512.8-11.
- ¹⁹⁰ Submission of the Executive Committee of the Royal Prince Alfred Hospital Resident Medical Officers Association (RMOA), March 2008, SUBM 002.0033 at 36.
- ¹⁹¹ Submission of Dr Andrew Keegan, undated, SUBM.016.154 at 157.
- ¹⁹² Submission of Dr Hamish Steiner, 26 May 2008, SUBM.053.0092 at 93.
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- ¹⁹⁴ Geoffrey Oakley, Nepean Hospital hearing, 8 April 2008, transcript 1440.24-1441.24.
- ¹⁹⁵ Geoffrey Oakley, Nepean Hospital hearing, 8 April 2008, transcript 1440.24-1441.24.
- ¹⁹⁶ Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2120.35-46.
- ¹⁹⁷ Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2121.22-36.
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- ²⁰¹ Glenis Geldard, Nepean Hospital hearing, 8 April 2008, transcript 1403.45-1404.12.

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- 207 NSW Health briefing, 31 March 2008, transcript 79.22-24.
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- 212 NSW Health, *Frequently asked questions on EMR* brochure, NSW Health, North Sydney at 67.
- 213 Submission of Margaret Duguid and Jenny Crane, 25 March 2008, SUBM.004.0142 at 144.
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- 221 Dr Michael McGlynn, Sydney Children's Hospital hearing, 19 May 2008, transcript 3092.3-19.
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- 223 NSW Health Briefing, 31 March 2008; NSW Health, *Special Commission of Inquiry Presentation: Health Information Systems*, 31 March 2008; Letter from NSW Health to Special Commission of Inquiry, 3 October 2008; NSW Health Briefing, 23 October 2008, transcript 6-25.
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- 228 Professor Bruce Dowton, Special Commission of Inquiry's Expert's Conference, 15 September 2008, transcript 8.41-9.1.
- 229 NSW Health Briefing, 23 October 2008, transcript 26.44-36.02.
- 230 NSW Health Briefing, 23 October 2008, transcript 51.39-52.37.
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- 232 NSW Health Briefing, 23 October 2008, transcript 60.24-61.09.
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- 235 Confidential Prince of Wales hearing, 1 May 2008, transcript 58.40.
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- 238 Submission of the Australasian College of Emergency Medicine, March 2008, SUBM.027.0007 at 32-34.
- 239 Submission of the Executive Committee of the Royal Prince Alfred Hospital Resident Medical Officers Association (RMOA), March 2008, SUBM 002.0033 at 36.
- 240 Submission of Australian Medical Association (NSW) Limited and Australian Salaried Medical Officers' Federation, 28 March 2008, SUBM.016.0015 at 46.
- 241 NSW Health Briefing, 31 March 2008, transcript 81.90-81.44.
- 242 Confidential Westmead hearing, 26 May 2008, transcript 31.1-34.03.
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- 244 Submission of Australian Medical Association (NSW) Limited and Australian Salaried Medical Officers' Federation, 28 March 2008, SUBM.016.0015 at 46.
- 245 NSW Health Briefing, 31 March 2008, transcript 82.30-44.
- 246 NSW Health Briefing, 31 March 2008, transcript 84.3-8.
- 247 Information provided during visit to Mount Druitt Hospital on 7 July 2008.
- 248 Dr Roslyn Crampton, Westmead hearing, 10 April 2008, transcript 1512.25-38; Denis Quinn, Wagga Wagga hearing, 22 April 2008, transcript 2026.23-31; Confidential Wagga Wagga hearing, 22 April 2008, transcript 12.1-10.
- 249 NSW Health Briefing, 31 March 2008, transcript 97.37-40.
- 250 Professor Peter Lipski, Gosford hearing, 10 March 2008, transcript 79.24-29.
- 251 Maree Nott, Mudgee hearing, 20 March 2008, transcript 743.36-43.
- 252 Kathryn Carmichael, Tweed Heads hearing, 29 April 2008, transcript 2304.25-47
- 253 Submission of Kathryn Carmichael, 29 April 2008, SUBM.077.0018 at 20.
- 254 Submission of Dr Greg Goldstein, 2 April 2008, SUBM.040.0245 at 255-56
- 255 Privacy obligations in NSW arise under the *Privacy and Personal Information Protection Act 1998* (NSW), which regulates personal information in the public sector and the *Health Records and Information Privacy Act 2002* (NSW), which regulates personal health information in the public sector. The Health Privacy Principles (or HPPs), contained in the Health Records and Information Privacy Act, establish 15 rules for the management of information. HPP 11 sets out the limits on disclosure of personal health information and relevantly provides:

"11 Limits on disclosure of health information

(1) An organisation that holds health information must not disclose the information for a purpose (a secondary purpose) other than the purpose (the primary purpose) for which it was collected unless:

(a) Consent

the individual to whom the information relates has consented to the disclosure of the information for that secondary purpose, or

(b) Direct relation

the secondary purpose is directly related to the primary purpose and the individual would reasonably expect the organisation to disclose the information for the secondary purpose, or ...

Note. For example, if information is collected in order to provide a health service to the individual, the disclosure of the information to provide a further health service to the individual is a secondary purpose directly related to the primary purpose.”

- ²⁵⁶ The *Privacy Act 1988* (Cth) regulates the Commonwealth public sector and private sector health providers (such as individual medical practitioners and private hospitals) in NSW. The Commonwealth legislation includes National Privacy Principle 2 which mirrors the principles enshrined in the NSW legislation quoted above.
- ²⁵⁷ Australian Law Reform Commission, *For Your Information: Australian Privacy Law and Practice* (ALRC 108, 2008), Australian Law Reform Commission, 2051-2
- ²⁵⁸ In March 2000, the NSW Health Council set an objective for the NSW health system to implement the Electronic Health Record by 2010. This was in parallel to the commencing by the Commonwealth and the states of a National Health Information Network Initiative, known as the Shared Electronic Health Record: NSW Health, Electronic Health Record, Business Case, March 2006, DOH.010.0271 at 79.
- ²⁵⁹ NSW Health, Electronic Health Record, Business Case, March 2006, DOH.010.0271 at 84.
- ²⁶⁰ NSW Health, Electronic Health Record, Business Case, March 2006, DOH.010.0271 at 84.
- ²⁶¹ KPMG, excerpt from *An Evaluation of the Healthelink Electronic Health Record pilot, Summary Report*, draft, undated, p. 5s.
- ²⁶² NSW Health, *Special Commission of Inquiry Presentation: Health Information Systems*, 31 March 2008, slide 11.
- ²⁶³ NSW Health, *Special Commission of Inquiry Presentation: Health Information Systems*, 31 March 2008, slide 12.
- ²⁶⁴ Karen Dearne, “Rush to build personal e-health records risky”, *The Australian*, 16 September 2008 <http://www.australianit.news.com.au/story/0.24897.24348898-24169.00.html>; Karen Dearne, “E-health logjam frustrates health providers”, *The Australian*, 9 September 2008; Ben Woodhead, “National health record edges forward slowly”, 1 July 2008, MIS Financial Review.

15 Communication

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15.1 My terms of reference require me to:

"... 2. identify existing models of patient care used in the delivery of acute care services in NSW public hospitals with particular regard to case management including ... **communication between health professionals involved in the care of a patient ...**"

15.2 In this chapter, I will look at communication between health professionals, with patients and their carers. I have dealt with the issue of communication between hospital management and clinicians in Chapter 31.

Importance of communication between health professionals

15.3 Clear, reliable and accurate communication between health professionals is essential to patient safety and the efficient operation of NSW public hospitals.

Vanessa Anderson

15.4 The events leading to Vanessa Anderson's death tragically demonstrate the dangers of communication failures between health professionals. There were several communication breakdowns related to medication, and some of these breakdowns were found to be factors in her death:

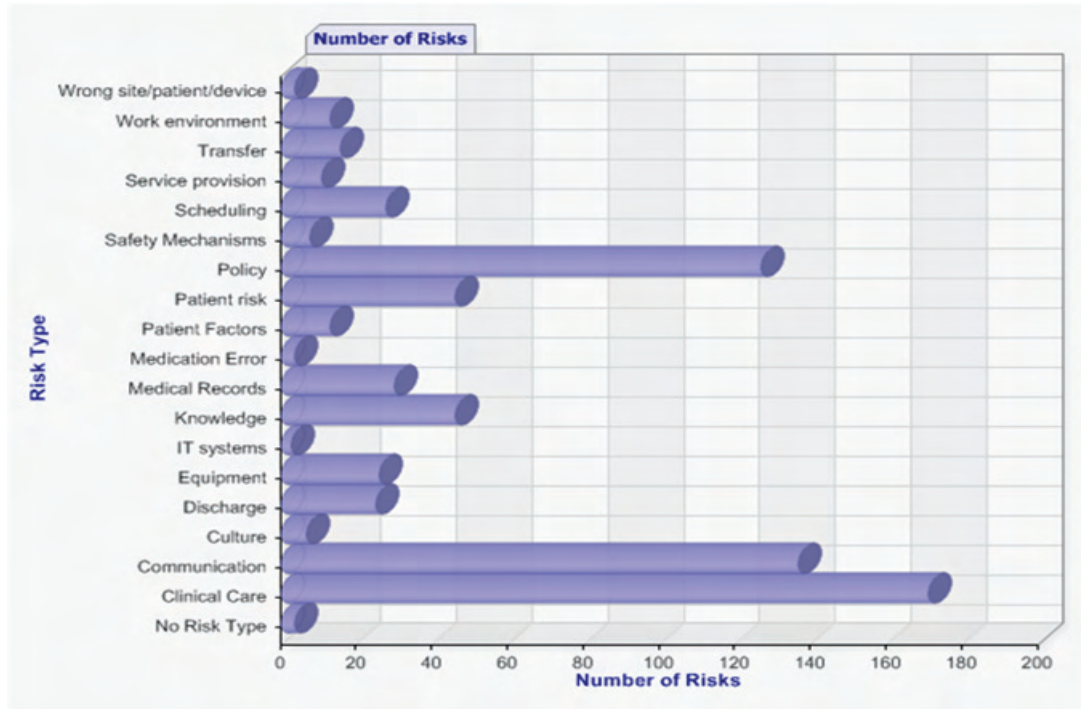
- The anaesthetic registrar attending to Vanessa was not aware of protocols followed by the specialist neurosurgeon, including that any change in analgesia was to be determined by the specialist or neurosurgical registrar. The anaesthetic registrar did not discuss or seek the input of the neurosurgical team regarding her decision to increase the dose of an analgesia.¹
- The senior medical resident decided not to give the anti-convulsant medication (Dilantin) directed to be given by the specialist neurosurgeon because of concerns that Vanessa's brother had had an allergic reaction to Dilantin. The senior medical resident had intended to raise the issue with the neurosurgical registrar, but failed to do so.²
- Even though the specialist neurosurgeon's direction to give Dilantin was not followed, the specialist was not notified.³

15.5 Sadly, the Anderson family found that very poor communication continued in the months following Vanessa's death. The Anderson family encountered a number of difficulties in their dealings with Royal North Shore Hospital, which I discuss elsewhere in this chapter.

15.6 As has so often been demonstrated to me during my Inquiry, Vanessa Anderson's case is illustrative of a wider issue that is repeated throughout the NSW health system (and, it must be said, many others).

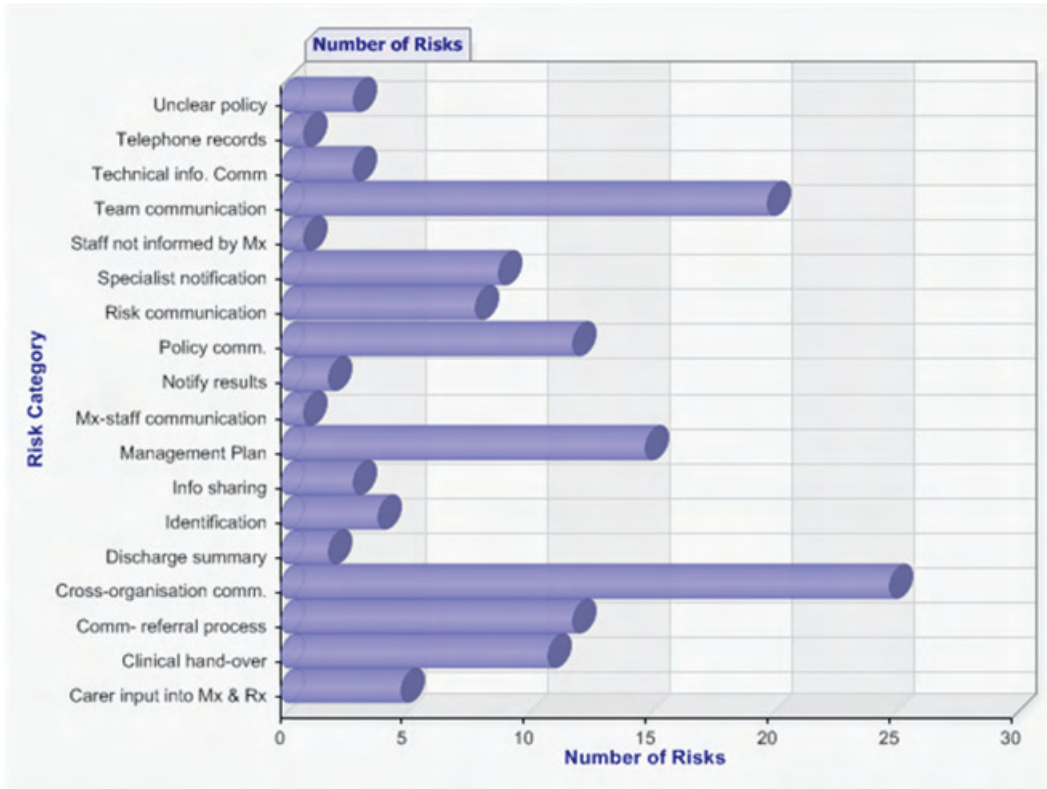
Communication is key to patient safety

- 15.7 Poor communication has been identified as a major risk to patient safety in NSW public hospitals.
- 15.8 In a review of Root Cause Analysis reports from 2005-06, the Clinical Excellence Commission identified poor communication as a factor contributing to 25% of serious incidents occurring in NSW public hospitals,⁴ as can be seen in the below chart.⁵



- 15.9 On further reviewing the Root Cause Analysis reports for which communication was a contributing factor, the Clinical Excellence Commission found that communication issues commonly arose when:⁶
- communicating patient history and risk factors when handing over the care of the patient to a new medical team or hospital;
 - relaying concerns about the deteriorating condition of a patient to a more senior clinician;
 - communicating policies to new staff and visiting clinicians; and
 - providing information about investigations to those in charge of treatment, in a timely manner.⁷

15.10 The factors identified by the Clinical Excellence Commission as contributing to communication errors are depicted in the below chart.⁸



15.11 A survey of the area health services conducted by the Clinical Excellence Commission in 2007 identified the top 12 risks to patient safety. One such risk was inadequate communication or documentation, which included:⁹

- poor standards of documentation (including errors);
- inadequate clinical handover;
- miscommunication between doctors and nurses;
- the lack of a centralised point of accountability; and
- duplication of diagnostic procedures due to poor history taking and documentation.

15.12 The Inquiry received submissions to like effect from a variety of organisations.

- Medical indemnity insurer, Avant, informed the Inquiry that it identifies poor communication (including communication between health professionals and communication with patients) as being one of the most important factors contributing to adverse health outcomes;¹⁰
- The Australasian College for Emergency Medicine submitted that more than a third of incidents or complaints occurring in the Emergency Department are caused by sub-optimal communication;¹¹
- In 2007, the UK's National Patient Safety Agency identified communication factors as the biggest problem area in deterioration incidents. Problems occur, in particular, during handovers and transfer of care of patients;¹²
- The Clinical Excellence Commission's "Between the Flags" project, which targets deteriorating patients, identified communication about patient information as a key area requiring attention.¹³

- 15.13 I heard evidence of many examples of poor communication between health professionals. One witness, who had recently been a patient, told me that her experience was that:

"The surgeon and the registrar never did rounds together, and when they did rounds separately, they gave conflicting reports and instructions both to me and the nursing staff."¹⁴

- 15.14 One witness, who was a clinical reviewer in the clinical governance unit at a tertiary hospital, summed up the issue:

"...if things are going to go wrong ... there is always a communication breakdown in some way, shape or form that has impacted on it."¹⁵

Communication problems between health professionals

- 15.15 Some common themes regarding communication issues between health professionals emerged.

Informing specialists of admissions

- 15.16 I heard evidence that specialists are not consistently informed that a patient has been admitted to hospital under their care.
- When Vanessa Anderson was transferred from Hornsby Hospital to Royal North Shore Hospital, the neurosurgical registrar did not inform the on-call specialist neurosurgeon that Vanessa had been admitted under his care. It was not until almost 24 hours after Vanessa's admission that the specialist neurosurgeon discovered she had been admitted.¹⁶
 - Dr Reddel, a neurologist at Concord Hospital, told me that a delay or failure to notify a specialist of an admission or transfer of a patient still occurs approximately fortnightly at that hospital.¹⁷ Hospital staff may be too busy to urgently notify the specialist, an emergency may arise or they simply forget to do so.¹⁸ Occasionally, the wrong specialist is informed, or the clerical staff put the wrong specialist's name on the patient's record in the computer system so that the patient does not appear on the specialist's list when he or she attends the hospital to do a ward round. He said this has resulted in significant cases of morbidity and/or mortality.¹⁹
 - The Medical Staff Council at Orange Base Hospital submitted:

"Major errors can occur with no one seeing the patient for days if the consultant concerned knows nothing about the admission or is away. This does still happen too frequently."²⁰
 - Dr McCusker, a specialist who cares for young people with Huntington's disease, informed me that, because staff are too busy, her patients often spend a long time in the Emergency Department until she is contacted. She said that the failure to involve her early in their admission can lead to wasteful and unnecessary intervention.²¹
 - A senior specialist submitted to me that there needs to be a clear requirement that communication occur between specialists and registrars for all new patients being admitted via the Emergency Department.²² It should be mandatory that specialists be telephoned within one hour of the decision to admit a patient, irrespective of the time of day or night.²³

15.17 NSW Health policy provides as follows:

"Mechanisms should be in place for the appropriate Visiting Medical Officer or Staff Specialist to be notified of each hospital admission through the emergency department. The notification should be made by the rostered medical officer attending to the patient in the emergency department, prior to the end of his or her shift. In hospitals with specialty registrars, this notification can be made to the appropriate registrar."²⁴

15.18 The evidence I heard indicates that adherence to this policy is not uniform.

15.19 In my view, one way to ensure that a specialist is appropriately informed is to introduce a mandatory form to be filled out each time a patient is admitted as an inpatient from the Emergency Department or in the context of an inter-hospital transfer. This should require details to be entered (or ticked, as the case may be) including the patient's identification, provisional diagnosis, whether or not any tests and investigations have been carried out and results have been checked or obtained, and, importantly, whether or not the consultant or inpatient team has been notified about the admission (with the identity of the consultant under whose care the patient is admitted and the date and time of notification recorded). It should be the responsibility of a medical officer in the Emergency Department to ensure that the checklist is completed for each patient who is to be admitted to the ward prior to the patient leaving the Emergency Department. This checklist should then be included in the patient's clinical notes. The nurse who escorts the patient to the ward should ensure that the relevant doctor has appropriately filled out the form.

15.20 Such a system should be standardised state-wide. Of course, in some areas, such as the smaller rural hospitals where the treating doctor under whom the patient is to be admitted may also be the doctor assessing the patient in the Emergency Department, the checklist may appear unnecessary. The form or checklist is, however, designed for a statewide audience and to avoid the potential disaster of 'losing' patients in a complex system. In my view, the form should therefore be mandatory for all admissions from the Emergency Department and inter-hospital patient transfers. This will minimise situations arising where consultants are not notified, in a timely fashion or at all, about admissions and where previously performed tests and investigations are left unchecked. Given my recommendations about admissions from the Emergency Department being at the discretion of the emergency physician, subject to the conditions I outlined in Chapter 20, such a form would also minimise the potential for inappropriate or premature decisions about admission to the hospital.

Recommendation 53: *Within 18 months, NSW Health should introduce a mandatory policy for a form containing a checklist to be completed each time a patient is admitted as an inpatient to a hospital ward from the Emergency Department. The checklist ought require details including patient's identification, provisional diagnosis, whether or not any tests and investigations have been carried out, and whether or not the inpatient consultant has been notified of the admission and accepted the admission (with the identity of the consultant under whose care the patient is admitted and the date and time of notification recorded). This form should be completed by a junior medical officer in the Emergency Department and the same form should be used throughout the State.*

Junior staff afraid to seek assistance

15.21 The Inquiry received evidence that nurses and junior doctors can be fearful of contacting specialists, particularly after-hours, when a patient's condition deteriorates or significantly changes, and so communication is inadequate.

15.22 A junior doctor told of her experience while working an evening shift at Wollongong Hospital:

"[I] was called to review a sick patient. I had identified a number of problems with the patient, but was not sure of the best way to manage her illness as the treatments for each problem were conflicting. I phoned the medical registrar who was on that evening to ask for assistance. He was not interested in helping as the patient had documented that if she had a cardiac arrest she did not want to be resuscitated. She did, however, want all active management up until that point. The registrar told me to call the consultant who was looking after her to see what he wanted to do. I called her consultant, who was not on call that night. His response was to shout at me and swear at me for calling him when he was not on call, and he refused to offer any advice."²⁵

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15.23 I was told that a "mythology" exists amongst medical students and young doctors that if they contact specialists in the middle of the night to express a concern or ask a question, they will not be accepted into a training program.²⁶

15.24 There are two aspects to this issue. Some specialists or senior doctors do not welcome contact outside normal hours and react, inappropriately, in the way described above. Yet others are frustrated that they are not contacted **more** often.

15.25 Dr Barratt, a staff specialist at Royal North Shore Hospital, told me that if a patient deteriorates acutely, the junior doctor needs to pass information to the registrar and specialist as required.²⁷ He said that out-of-hours, there needs to be a clearly established pathway of communication to get experienced staff involved as early as possible.²⁸ While junior doctors may feel inhibited when ringing specialists directly, in the rare situations when a registrar is absent, then it is Dr Barratt's view that:

"a consultant MUST be brought into the loop and the [junior doctor] should not soldier on by themselves."²⁹

15.26 The circumstances in which junior doctors are entitled or expected to initiate communications with their supervisors needs to be made clear. The NSW Branch of the Australian Medical Association and the Australian Salaried Medical Officers' Federation submitted that there is a need for clear and consistent guidelines to govern these communications.³⁰ The junior doctor should not be fearful of criticism for contacting a specialist.

15.27 One consultant submitted:

"It is a time-honoured tradition that registrars "store" cases overnight to ring the consultant the following morning and whilst I do not particularly relish the thought of being woken regularly throughout the night, it is imperative for good patient care that the decision regarding the need for consultant input is made by me, rather than someone more junior.

"I have had patients under my care die in the hospital ward overnight and I have not known this until late the following day when I have received a call from the

patient's relatives. This is entirely unsatisfactory and requires a change of culture, as junior staff are often afraid to ring consultants during the night. In some cases this is because the junior staff have actually been abused for doing so. This can easily be resolved if it becomes mandatory for the junior staff to have to ring regardless of the time of day or night and if hospital directors of medical services become actively involved in departmental activities."³¹

- 15.28 I have no doubt that there are occasions when junior doctors receive a hostile response from consultants when they telephone them during the night about patient care. However, there may also be occasions where consultants do not realise that they are perceived as intimidating and, having been woken during the night or 'interrupted' during the day to respond to a query, they do not, for a variety of reasons, appear to be receptive to the questions or concerns communicated to them, when in reality they are quite willing to participate. Were it mandatory to contact the relevant consultant in clearly specified circumstances, these subjective elements would not be given the importance they are presently given in a junior doctor's decision whether or not to telephone the consultant. I agree that there is a need for clear and consistent guidelines to govern communications with specialists by registrars and more junior doctors about patient care, particularly for contact outside ordinary business hours. As I describe below, I heard about one such system presently used at Concord Hospital to ensure that junior staff know who to contact in the event of a change in clinical condition and in what circumstances.
- 15.29 In my view, the Clinical Excellence Commission is best placed to devise an appropriate protocol to clarify the roles and responsibilities of medical practitioners in this area of communication.

Communication of results

- 15.30 I also heard evidence that test results are not always communicated to the correct health professional, or are not communicated to anyone at all. A number of patients and families of patients gave evidence regarding the failure to either convey or read test results and the adverse consequences that can occur as a result.³²
- 15.31 The Root Cause Analysis conducted in relation to Ms Belinda Griffey is one example. Ms Griffey suffered a brain injury due to overcorrection of dangerously low sodium levels. The Root Cause Analysis noted that Ms Griffey's abnormal pathology results were communicated to nursing ward staff by pathology by telephone, but were not communicated to medical staff.³³ Routine blood tests were not verified by the ordering junior medical officer (who was on a rostered day off) and the practice for checking pathology results by medical officers was informal.³⁴ The Root Cause Analysis concluded that the delay in notification of low sodium levels and the delayed response to symptoms impacted on Ms Griffey's treatment.³⁵
- 15.32 This is also an important area where adequate communication systems are essential. Presently there is no state-wide policy applying to communication of test results. This is presently a matter which is largely determined on a hospital by hospital or ward by ward basis. The state-wide introduction in NSW public hospitals of the electronic medical record (which I discuss in Chapter 14) and Picture Archiving and Communication System (PACs) (which I discuss in Chapter 24) should improve this situation.
- 15.33 The effective communication of results partly relies on the junior medical officer's diligence in following up on test results ordered by him or her. In my view, it should be mandatory for pathology laboratories to notify the doctor concerned by telephone if

there are results that lie outside the normal range to an extent that may constitute a risk to the patient.

- 15.34 In my view, in ordering tests it should be mandatory that the name of the ordering doctor and contact number be clearly printed (if written) or entered (if computerised) on the pathology form.
- 15.35 If the junior medical officer concerned is away the pathology department ought use the junior medical officer's team as a contact point for the communication of results, say by contacting the supervising resident or registrar. There should be a protocol in place outlining how this ought to happen. The pathology order should also require the ordering doctor to include the name and contact details, of an alternate contact for test results.
- 15.36 In my view, as part of the interdisciplinary training to PGY1 and PGY2 doctors, pathology laboratory specialists should explain to junior medical officers about the consequences of errors and the need to know clearly who ordered tests and their contact details. This will obviate the unfortunate situations that I heard about during the course of the Inquiry, such as that in relation to Ms Griffey, where test results are carried out but communicated poorly.

Recommendation 54: *Within 6 months, NSW Health should introduce a mandatory policy which requires that when orders for pathology tests are made, the name of the ordering doctor and contact number be clearly printed (if written) or entered (if computerised) on the pathology form. The policy should include a protocol outlining the appropriate channel of communication where (a) the relevant details are incomplete or illegible and (b) the ordering doctor is not on duty or contactable.*

Inter-disciplinary communication

- 15.37 The Inquiry received submissions that health professionals fail to communicate with health professionals from other disciplines, for example, doctors neglect to share information with nurses and *vice versa*.
- "There's the nursing stream ..., which is very effective and very important, and the medical stream [but] if they're not actually meshing at some stage ... that information gets lost and the patient suffers because of that."³⁶
- 15.38 I was told by one witness that, during her involvement in a focus group for the Clinical Excellence Commission's "Between the Flags Project", one of the questions to the participating nurses related to whether or not the nurses read patients' medical notes. I was told that most nurses in the focus group said that they did not read doctors' clinical notes.³⁷ The witness told me that during her own admission to hospital, it was evident to her that nurses had not read the results of her blood tests nor did they communicate those results to the doctor for at least 2 hours.³⁸
- 15.39 Similarly, the Root Cause Analysis relating to Ms Griffey indicated that nursing notes had not been reviewed on medical ward rounds. The Root Cause Analysis referred to a "culture" of reading "like-profession entries" in progress notes, meaning that nurses only read notes made by other nurses. This was found to have limited the handover of information about changes in the patient's conditions.³⁹

15.40 I received evidence from doctors,⁴⁰ nurses⁴¹ and allied health professionals⁴² alerting me to this type of issue. I was told that:

“Face-to-face communication between nursing staff and junior and senior medical staff will result in less problems and near misses.”⁴³

15.41 Allied health professionals told me that the absence of effective communication between all members of the health care team may lead to disagreement or misunderstanding as to who is responsible for a particular task.⁴⁴ It may also result in patients falling between the gaps and not receiving specific treatments.

15.42 Whilst the integration of allied health into multi-disciplinary teams such as those established in stroke units assists in a clear understanding the roles of all members of the team in the care of the patient, I was concerned to learn that outside of these clearly defined roles, there is sometimes confusion as to whether allied health services are required, or about the most appropriate treatment of particular patients.⁴⁵

15.43 Recognition and acknowledgement of the important role of allied health professionals and the development of an understanding within the health professions of how these roles can be utilised is required.

“I believe as an allied health professional that the fundamental ingredient is appropriate assessment, and that every aspect of the patient journey needs to be considered. I will say that allied health professionals are part of that multidisciplinary approach.”⁴⁶

15.44 I was told about models of care and training initiatives that work to overcome this issue.

- Professor Lindley, a specialist geriatrician, informed me that the OPERA (Older Persons Evaluation Review and Assessment) Unit at Westmead Hospital improves communication through the use of multi-disciplinary groups.⁴⁷
- Associate Professor Jacques told me about the Recognition and Management of Patients with Acute Conditions (**RAMPAC**) course, which trains medical and nursing staff together to recognise deteriorating patients. Feedback from course participants identified enhancement of communication as a benefit of the course.⁴⁸ Doctors and nurses participating together in the scenarios (some of which included role reversal exercises) provided an opportunity to gain insight into the other's role.⁴⁹

15.45 Communication is the responsibility of everyone involved in patient care. It involves a two-way exchange of information. It is important to emphasise that whilst systems, protocols and training will help, ultimately each person involved must communicate with each member of the team.

15.46 I hope that the recommendations I have made in Chapter 10 for inter-disciplinary training will enhance the respect in which each professional group holds the others, and thereby encourage inter-disciplinary communication on a day-to-day basis.

Ward rounds

15.47 The term “ward round” generally refers to the time, usually each day, when the senior doctor walks around the hospital reviewing all of the patients admitted under his or her care in the company of junior medical staff and, sometimes, nursing and allied health staff. During the ward round, the senior doctor gives verbal instructions for the patients’

management. The ward round is generally the forum for obtaining the input of senior doctors and for supervision of junior medical staff to occur.

- 15.48 There are several kinds of ward rounds, primarily:
- (a) a teaching ward round, where interns, registrars and specialists go from patient to patient to test the knowledge of the more junior doctors and train them in how to identify particular conditions and determine treatment;
 - (b) a more efficient type of ward round attended by the different health professionals caring for the patient, such as the specialist, registrar, nurse and physiotherapist, or primarily or solely by doctors, to discuss how the patient is progressing and what the future plans are for the care of the patient; and
 - (c) a review of the wards that is not attended by medical staff, such as a ward round conducted by the nurse unit manager with his or her nursing staff or by a group of allied health professionals.
- 15.49 It is the second type of ward round that I am interested in here. The teaching ward round certainly has an important place in the education and training of health professionals, but is not intended solely to be a context for discussing the management and care plans for the patients in the ward. The ward rounds conducted by single disciplines, such as nurses or allied health professionals, play an important role in the management and care of patients, but are not my focus here. My focus is on the need for a structured multi-disciplinary ward round.

The value of multi-disciplinary ward rounds

- 15.50 The Inquiry received evidence about the advantages of a multi-disciplinary ward round from a number of witnesses. Dr Paul Harnett of Westmead Hospital explained as follows:
- "Nurses should do rounds with the resident staff to enhance communication. A simple practical point is that before doctors do their patient rounds, ward nurses, even the most junior nurses, could present the case to the consultant staff and then the registrars and consultants could have their discussion. That adds enormous value to know what is actually happening on the ward and the nurses feel more valued and respected for the contribution only they can make - that is not being done enough."⁵⁰
- 15.51 Generally speaking, allied health professionals are not included in ward rounds. This appears to be due, in part, to the hierarchical structure of the health professions, and partly to the fact that allied health professionals are so over-stretched that they are unable to dedicate the required time to a ward round.
- "Imagine if you had enough pharmacologists to come on the ward rounds with you. Just imagine how many adverse events you would prevent."⁵¹
- 15.52 The communication problems which may result if nurses and allied health professionals do not participate in ward rounds were made plain by the following witnesses.

- Dr Arnold, a cardiologist and chair of the Medical Staff Council at Orange Hospital spoke about the value of having a nurse present on ward rounds who is familiar with the patients and who can record all the changes to patient care discussed on during the round. She told me that if there is no nurse on the ward round, it can sometimes be difficult for the doctor to locate a nurse afterwards to whom he or she can communicate what is required for each patient. Even if the doctor does locate a nurse, it may be a junior nurse or a nurse who is not responsible for the particular patient and who may therefore be reluctant to accept responsibility for the information. I was told that sometimes doctors “give up” in the hope that the nurses read the clinical notes. That is not good enough for the patient.⁵²

- The Westmead Medical Staff Council told me:

“Under the current system, it is almost impossible for doctors to do ward rounds with the nurses and allied health staff who look after the same patients. This leads to the situation where communication occurs via entry in the patient record rather than directly. Communication errors become inevitable. A fragmented care system delivers care which can only be as good as the weakest link in the chain.”⁵³

- Another witness, who had recently been a patient, told me of her personal observations in this regard:

“... never at any time were there any nurses accompanying the doctors on the ward rounds ... The doctors discussed that the drain should be pulled back and discussed that it should then be stitched in, so I had an idea of what the plan was. When the nurse came in to do that procedure later, I said, “Hang on a minute, they want you to stitch it in so it doesn't fall out”, and she said “No, no, no, this is what we do on this ward”... She just wouldn't take my word for it. She proceeded to pull the drain back and, of course, the doctor had wanted it stitched in, and later that day it came out even more than it should have, so they had to urgently call the surgical team back in and they had to stitch it in ... if nurses were part of the doctors' ward rounds, if it were mandatory that the nurse caring for the patient or the team leader of the shift accompanied the doctors on the ward rounds, then ... communication problems like that wouldn't occur.”⁵⁴

15.53 In contrast, I heard evidence about a unit that has a multi-disciplinary ward round every morning – the neurology ward at Westmead Hospital. The round usually includes 6 people: the registrar, resident, nurse unit manager, occupational therapist, and physiotherapist and a speech therapist. The round, that takes approximately 15 minutes, provides the opportunity to briefly discuss all of the patients in the ward. I was told that this system decreases the length of stay and greatly improves the quality of care of all of the patients. This is an excellent example of the effective use of a multi-disciplinary team and an opportunity for all professionals engaged in the care of the patient to discuss the most appropriate treatment.⁵⁵

15.54 The Institute of Medical Education and Training (IMET) emphasised to the Inquiry the role of the ward round in improving communication and team work.⁵⁶ IMET advised that effective team ward rounds should include doctors, nurses, allied health staff and ward clerks, and be non-hierarchical.⁵⁷ IMET expressed the view that it was particularly critical for patient care that senior nurses, who are familiar with the patients on the ward, attend the ward rounds.⁵⁸

15.55 However, it was noted that nurse unit managers are often too busy carrying out administrative tasks.⁵⁹

15.56 The Inquiry received a great deal of evidence that nurses rarely participate in ward rounds these days due to understaffing and the administrative load on nurse unit managers.

(a) Mr Rodwell, the Director of Nursing at Coffs Harbour Hospital, told me:

"...the nursing staff on the surgical unit [at Coffs Harbour Hospital] in the morning are so busy moving patients and organising for patients to be discharged, transferred and otherwise moved, that they're unable to attend a doctor's round as they used to be able to."⁶⁰

(b) In its submission, the Liverpool Medical Staff Council said:

"In the current model of patient care communication between doctors and nurses is sub-optimal. There is never any nursing staff available to accompany the medical staff on their ward rounds. Clearly this limits any face to face communication regarding patients' clinical status and needs, and it is impossible to directly communicate changes to therapy to nursing staff. This is a significant problem in the current model of care which directly impacts on case management including the supervision of junior clinical staff, clinical note-taking and recordkeeping, and communication between health professionals involved in the care of a patient."⁶¹

(c) A senior clinician observed that in his experience:

"Communication at ward level is generally poor. The clinical team, which includes doctors, nurses and allied health, does not conduct a ward round together as a rule; nurses are now too busy to engage with doctors in the care of the patient. This has a significant impact on patient care ..."⁶²

15.57 I expect that the reforms I have recommended in respect of staffing and the administrative load on nurse unit managers (in Chapter 8) will make it possible for nurses, particularly senior nurses, to return to the ward round.

Notes made on ward rounds

15.58 Accurate, legible notes should be made on the ward round (preferably in an electronic medical record). I heard evidence that adequate note-taking rarely occurs.

15.59 Sometimes no note is made at all. The Anderson family said that they observed a number of people on the ward round with the senior doctor that reviewed Vanessa, with no one taking any notes.⁶³ This was remarked upon in the coronial report regarding Vanessa's death:

"Dr Little, Dr Williams and Nurse Becker then attended on Vanessa in the presence of her mother. Dr Little reviewed Vanessa, and, among other matters stated that he was constrained regarding the amount of analgesia that could be given to Vanessa.

There were no medical notes regarding this second ward round. In evidence, Dr Williams conceded that it was her responsibility to write in the medical records."⁶⁴

15.60 The task of making notes on ward rounds is usually undertaken by the most junior doctor present. As the Medical Staff Council at Orange Base Hospital submitted to me,

the most junior member of the team writing the notes may miss the point entirely or not record all that is said. The registrar or specialist in charge of the ward round rarely makes time to check or amend what is written.⁶⁵

- 15.61 In Chapter 14, I have addressed the deficiencies in note-taking by junior doctors in some detail, and made recommendations to remedy this problem.

Improving ward rounds

- 15.62 In my view, a ward round should be regularly conducted (at least daily) and include doctors, nurses, ward clerks and other relevant health professionals. It should be structured, efficient and non-hierarchical.
- 15.63 To enhance communication with the patient, it should go without saying that those on a ward round should introduce themselves to the patient, and tell them whether they are a doctor, nurse, student, specialist and so on. Patients and their families can be distressed by clinicians' failure to introduce themselves and fully explain their area of expertise.⁶⁶

Recommendation 55: *Daily multi-disciplinary ward rounds should be introduced at which accurate and complete notes are taken which are approved by the supervising doctor within a specified timeframe.*

- 15.64 IMET suggested that the introduction of an effective multi-disciplinary ward round could be monitored through meaningful accreditation processes coordinated through IMET, which would include the capacity to withdraw trainee medical staff from terms where adequate supervision could not be guaranteed and incentives to acknowledge senior clinicians who provide excellent medical training and supervision.⁶⁷ This is an idea which merits careful consideration and review.

Handover

- 15.65 Handover is defined as:

"...the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis"⁶⁸

- 15.66 Generally the term "handover" refers to handover undertaken in hospitals rather than between hospital and community settings, although in its broad sense it may encompass the latter. For the purposes of the present discussion, handover refers to the process that occurs within the hospital setting. I am referring in particular to handover within the same hospital, however I make some general remarks about the transfer of the care of patients between public hospitals.
- 15.67 During a person's hospital stay, handover can occur:
- (a) on change of shifts, for example, nursing shifts; or
 - (b) when the responsibility for the treatment of a patient changes from one doctor to another, for example, when a renal physician completes their treatment and the patient comes under the care of a geriatrician; or when a patient deteriorates and their care is transferred to the intensive care unit; or when the patient is moved to another ward or hospital.

15.68 It is these 2 types of handover that I discuss below.

Importance of handover to patient safety

15.69 The Australian Medical Association has issued a guide on clinical handover. It describes the purposes of handover:

"Sufficient and relevant information should be exchanged to ensure patient safety so that:

- the clinically unstable patients are known to the senior and covering clinicians
- junior members of the team are adequately briefed on concerns from previous shifts
- tasks not yet completed are clearly understood by the incoming team"⁶⁹

15.70 As the Australian Medical Association has identified:

"Continuity of information is vital to the safety of our patients. With the changes in doctors' working hours and increasing demand for flexible work practices (e.g. part-time work) - both of which inevitably increase the number of individuals caring for each patient - the need for comprehensive handover of clinical information is more important than ever."⁷⁰

15.71 Effective handover is important for the safety of all patients. The Inquiry received submissions that it is particularly important for some groups, such as the elderly, chronic and complex patients. In its submission to the Inquiry, the Council on the Ageing, a non-governmental organisation which represents all persons over 50 years old in NSW, said:

"... people in the 65 years and over age group take more prescribed medications than younger people. It is vital that hospital staff are fully aware of all the pharmaceuticals an older patient has been prescribed and other non-prescription products they may be taking. In hospital there may be the danger of inadequate information exchange between health professionals looking after a particular older patient."

15.72 I was told that an inadequate exchange of information can occur as a result of the workload on nurses, doctors and allied health professionals, the turnover in staff managing a patient's case, a patient's poor grasp of English, a patient's age or their condition. I was told, and accept, that communication breakdowns and discontinuity in the care of patients can be potentially lethal.⁷¹

15.73 Inadequate handover compromises patient safety. It may lead to delays in the review and assessment of a patient and in test results being followed up. It may result in clinical staff not understanding the status of a patient's condition or care.⁷²

15.74 For example, the Root Cause Analysis completed by Greater Western Area Health Service regarding the death of Rebecca Murray found that no appropriate handover process had taken place between the scrub nurse and the recovery nurse. The recovery nurse was unaware of Rebecca's low platelets antenatally and the blood loss she had suffered intra-operatively.⁷³

- 15.75 Consistently effective and safe handover is not something that merely happens as a matter of course. As I was told, for those units that do it well, a great deal of effort and teamwork goes into ensuring that this occurs.⁷⁴

Shift handover

- 15.76 Curiously, handover on change of shift is not mandatory across NSW hospitals. There is no NSW Health state-wide policy applying to shift handover.
- 15.77 There are policies and guidelines in place on an *ad hoc* basis in some area health services, hospitals or units.
- 15.78 Several senior clinicians expressed to me the view that shift handover is not done well in NSW hospitals. I was told that handover does not systematically occur on every shift,⁷⁵ yet senior staff often assume that it has occurred between junior medical staff and nurses.⁷⁶
- 15.79 I was told that there is huge variability in handover practices between hospitals, wards, and shifts. Generally, however, shift handover is not multi-disciplinary. Nurses carry out their own handover and doctors also carry out a separate handover between themselves (or not carry out any handover at all).

"The clinical handover of patients between shifts is not systematised and often the medical handover is done separately to the nursing handover, except in units such as intensive care."⁷⁷

Nursing

- 15.80 Nurses told me that their ability to complete an effective shift handover was hindered because insufficient time was allocated to this important task. The Inquiry received evidence from nurses to the effect that a dedicated handover time of around 30 minutes is adequate.⁷⁸ I was told that little time was allocated, for example, 15 minutes when it was felt 30 minutes was needed⁷⁹ or that in some wards no time is allocated at all.⁸⁰ Evidently, the appropriate amount of dedicated handover time is something that will vary from unit to unit and will also vary depending on the number and acuity of patients being cared for.
- 15.81 Nurses shift handover can be compromised in units that have multiple start and finish times for staff. Nurses at Bankstown Hospital informed me that nurses working on a casual basis or recruited through an agency might sometimes be offered slightly shorter shifts than ordinary shifts in order to save money. I was told that this can result in there being a shortage of staff (and, no doubt, an inadequate skill mix) on the ward, at the beginning and end of shifts.⁸¹ I was told that there are multiple start and finish times for shifts in wards and that this adversely affects the capacity to ensure an effective clinical handover.⁸²
- 15.82 At Orange Hospital, I heard that some wards have a handover system whereby the nurses dictate handover notes to the next shift of nurses about their own patients only. The "handover" consists of leaving the dictaphone and tape in the ward for the nurses taking over the following shift to listen to. I was told that this can result in messages being missed or misunderstood.⁸³ I was told about the same practice at Wollongong Hospital where this handover method is used at the change from the night to the day shift. This is reportedly done in order to allow nurses to remain on the floor during handover.⁸⁴ The practice means that nurses coming onto the next shift are unable to ask questions or clarify issues. In my view, this process is manifestly inadequate and

ought be discontinued. Face-to-face handover should occur at the change of every shift.

- 15.83 The reforms I recommend in respect of relieving understaffing and nurses' administrative load elsewhere in my report should assist nurses to perform a proper handover by freeing up time for clinical responsibilities.
- 15.84 I was told that extending the length of shifts has been attempted as a solution to poor handover in a number of units. A nurse at Nepean Hospital told me that one of the recommendations of the Root Cause Analysis regarding Ms Griffey's treatment was that a senior registered nurse work a longer shift (a 10 hour shift) to assist in the transfer of information from one shift to another and to act as a focal person for the transfer of information from doctors and to relay that information to nurses and families of patients. I was told that this position was occupied for some time, but recently dropped back to being an 8 hour shift.⁸⁵ At Tamworth Hospital, a 10 hour night nursing shift has been introduced, with a 2 hour overlap between the 8 hour morning and afternoon shifts to facilitate handover and staff education.⁸⁶

Medical

- 15.85 Having insufficient time allocated to handover is also a difficulty faced by medical staff. The Australasian College for Emergency Medicine submitted that this was a very real problem throughout Emergency Departments in NSW.⁸⁷ It was submitted that communication would be improved by structuring rosters to allow realistic timeframes for clinical handover.⁸⁸ This would include a shift overlap sufficient for a direct handover of every patient. The current rostering system in Emergency Departments allows for variable crossover times for junior doctor shift changes of nil, to 30 or 60 minutes.⁸⁹ The junior doctor may have up to 40 or more patients to handover and the shift overlap time is insufficient.⁹⁰
- 15.86 Dr Hawkesford, an Emergency Department doctor at Armidale Hospital said that medical staff in the Emergency Department at Armidale do not have any dedicated handover time. He said that due to the small number of medical staff working in that department, this does not prove to be a problem.⁹¹ He said that he and his colleagues try to ensure that they complete the necessary work for the patients they have cared for on their respective shifts, including speaking to the specialist who is to accept the care of the patient (if the patient is to be admitted to the hospital) and making arrangements for the patient to be transferred to the ward before the doctor departs. He told me that the doctors will regularly stay for an extra hour or half an hour to complete the necessary work.⁹²
- 15.87 Dr Buist, an obstetrician at the Royal Hospital for Women at Randwick and the former director of obstetrics said that there is sometimes a lack of supervision by specialists during handover:

"[J]unior doctor handovers occur in delivery unit at 8am, 5pm and 10pm. The only time that specialists regularly attend at handover meeting is the 8am handover, so that by and large the 5pm and 10pm junior doctor handovers tend to occur in an unsupervised nature and again the onus is on the junior medical staff and the midwives to contact the specialists if there's a problem, rather than the specialist proactively seeing what's happening around the place to see if there are problems."⁹³

- 15.88 Associate Professor Jones of Shoalhaven Hospital submitted that handover should be supervised by the senior medical officer in charge of the patient and that such supervision should be mandatory and remunerated.⁹⁴
- 15.89 Dr Arnold, a cardiologist and Chair of the Medical Staff Council at Orange Base Hospital expressed the view that junior doctors struggle to complete an adequate handover. If junior medical officers rostered on the day shift care for 25 to 30 patients, then realistically they will not complete every task assigned to them. However, they may be reluctant to admit this to the doctor commencing the night shift and they may not, for example, inform the new doctor that they have not had an opportunity to check a patient's results and that this still needs to be done.⁹⁵
- 15.90 As noted above, the Root Cause Analysis conducted in relation to Ms Belinda Griffey noted that routine blood tests were not checked by the ordering junior medical officer and that the practice for checking pathology results by medical officers was informal.⁹⁶ Further, there was no set procedures or allocated time for handover between junior medical staff when going off duty or covering for rostered days off.⁹⁷ There were no formal triggers to direct attention to routine blood tests results awaiting review.⁹⁸

Shift Handover - The Way Forward

Better use of technology

- 15.91 I found some good examples of shift handover across NSW public hospitals. At Blacktown Emergency Department, they have access to an electronic medical record and to the Picture Archiving and Communication System. I was told that the team in the Emergency Department make use of this technology during handover. Each patient's electronic medical record is projected on to the wall of the handover room, which adjoins the department. The team can look at both the records and x-ray images for that patient (including x-rays from other hospitals, to which they have access via a web-based program). This method of conducting handover appeared to me to enhance communication significantly.⁹⁹

Bedside handover

- 15.92 A method of shift handover used at some hospitals which I found particularly impressive is handover at the bedside. The advantage of bedside handover is that it ensures good communication with patients and carers. Dr Harnett, a specialist oncologist and director of the Sydney West Cancer Network expressed the view that:

"There should be handovers by the bedside by the nursing staff changing shifts so that the patient knows who their nurse is who is coming on this shift - the same for residents."¹⁰⁰

- 15.93 Chris Dolan, a Clinical Nurse Specialist in paediatrics at John Hunter Hospital shares this view:

"It's normal practice to have general ward handover between each shift, but only in [a neo-natal intensive care unit] does the nurse, coming on duty, also gain a one-to-one handover with the nurse caring for her patients at the bedside. This should be normal practice in all wards."¹⁰¹

15.94 Mr Dolan also recommended the use of “cheat sheets”, that is a document which has on it a short summary and inpatient information about the patient’s clinical condition, currently used on the neo-natal ward at the handover of nursing shifts, in all wards.

15.95 A number of other nurses also expressed the view that a bedside handover was advantageous. Senior nurses at Concord Repatriation General Hospital told me that a ‘walk-around handover’, has recently been introduced for the nurses handover on the general wards at that hospital.¹⁰² I was given further details of this nursing handover by the Acting Director of Nursing, Sharne Hogan.¹⁰³ The features of this handover are as follows:

- It is one aspect of the “shared care” model of nursing care being used on the wards at Concord Repatriation General Hospital,¹⁰⁴ which I have discussed in Chapter 13. The shared care model of nursing practice involves splitting the ward (of about 24 beds) into 2 nursing teams, with an experienced registered nurse directing each of the teams and co-ordinating the patient care. The 2 registered nurses also liaise with each other about the entire ward.
- At the beginning of each shift, there is a clinical handover of the patients by the 2 team leader registered nurses finishing their shift, to the 2 team leader registered nurses commencing their shift.¹⁰⁵
- This is then followed by the team of nurses attending each patient’s bedside.¹⁰⁶ At the bedside, there is a review of the patient’s clinical history and current clinical status (including the expected date of discharge for the patient), a review of the patient’s observation charts, vital signs and nursing care plan and a further plan of care for the shift is determined.¹⁰⁷
- The team leader registered nurses talks to the other staff on duty about the priorities for the patient that day. This may include tasks, or priorities including discharge arrangements.¹⁰⁸

15.96 A formal evaluation of this method of clinical handover has not yet been made. However, I was told that nursing staff who use this form of clinical handover like it: it has led to positive results and has been embraced by nursing staff.¹⁰⁹ I was told that one positive outcome has been that the patients are much more involved in their own care than they were previously¹¹⁰ in the sense that the patients are introduced to the staff who will be caring for them and they know who they can call for help.¹¹¹ I was told that this has resulted in improved cooperation from patients who receive more information about their condition at an earlier stage.¹¹²

15.97 A group of nurses at Westmead Hospital told me that a new nursing handover policy¹¹³ that has been introduced at that hospital has greatly improved the care of patients.¹¹⁴ Previously nurses would handover in an area removed from the clinical areas. Handover now takes about 10 minutes beside the patients’ beds. The policy sets out criteria that the nurses handing over care must address. For handover from night to morning shift 30 minutes is allocated to handover. Handover from morning to afternoon is 1 hour and handover at night varies from 45 minutes to 1 hour. I was told that these timeframes provide enough time for each patient to be seen by at least 2 nurses.¹¹⁵


Clinical handover protocols and tools

15.98 Some wards use a clinical handover tool, which seems to have vastly improved informal handovers.

15.99 At Concord Repatriation General Hospital, I was told that the Patient Care Committee has developed a compulsory, formal handover mechanism for evenings and weekends, which is set out in a handover booklet.¹¹⁶ I was told that all changes in condition are

required to be discussed with the senior registrar and documented in the handover book.¹¹⁷ The senior registrar is required to ring the specialist if he or she has any concerns about the patient, even if the registrar has not yet seen the patient, to warn the specialist that there may be an issue and once reviewed, the registrar may telephone again at a later time.¹¹⁸ The booklet is reviewed by the hospital's Patient Care Committee.¹¹⁹

15.100 The handover booklet provides a clear and simple explanation to staff about what to do in the event of a change in the patient's condition (namely, who to contact and how to contact them after hours) and what information to provide to colleagues during handover and when raising a concern.¹²⁰ Common information is required to be stipulated in both situations, no doubt because handover plays a role, and is affected by, the processes for detecting and managing the deteriorating patient.



Clinical Handover: Liaison with Consultant Staff

Breast Endocrine	Dr
	<i>Order of calling if first person not available:</i>
Who should be contacted in the event of deterioration of a patient under the care of your unit AFTER HOURS?	1. Surgeon 1 2. Consultant caring for patient 3. Consultant on call
Does the above change on weekends and weeknights?	NO
Are there clear clinical indications and circumstances when you expect your team always to be called?	Any Significant change in condition: - BP/Pulse/Temperature - Pain - Wound swelling - Bleeding etc
Who should be called in the MORNING by night RMO to be informed of acute events overnight? (ie: handover to day team)	1. Registrar of the team caring for the patient 2. Consultant caring for the patient 3. Consultant on call
Other comments	

15.101 This booklet states that staff should be sure to communicate the following information:

- Name, position, hospital and department;
- Verification of the listener's identity;
- Identification of the patient, the main problem and reason for the communication;
- The diagnosis and management plan, stating clearly what has already been done and what else needs to be done;
- A repetition back to the listener about the agreed management plan.¹²¹

15.102 Dr Reddel (of Concord Hospital) expressed the view that face-to-face handover is the only way to truly determine whether another doctor is worried about a patient.¹²² He considers that oral handover is necessary and its effectiveness would be improved if it were electronically recorded into the patient's notes. He says that using a Personal Digital Assistant would also assist. I note that this would prompt the doctor to follow up tasks or obtain test results, and could be carried with the doctor rather than requiring the doctor to find a computer and endure a slow log-in process.¹²³

- 15.103 The Campbelltown Hospital Emergency Department has introduced a clinical handover tool known as “P-VITAL” for handover by nursing staff.¹²⁴ I was told that the P-VITAL tool is designed to provide a consistent and standard approach to the handover of information by ensuring that certain key items of information are transferred,¹²⁵ including the presenting problem, the patient’s vital signs, input and output, treatment and diagnosis, admission and discharge and recording of consent and documentation.¹²⁶ I was told that handover using the P-VITAL occurs at the bedside.¹²⁷ The tool has been in use since February 2008 and a preliminary evaluation has shown a decrease in patient complaints as a result of the tool.¹²⁸ This seems to me to be a functional and effective tool as it involves a checklist which helps to ensure that material information is not lost.
- 15.104 I was also told about a handover tool used at Royal North Shore Hospital for a time. Ms Harman and Ms Hill reported to me that, as part of the Continuing Care Project in which they participated in 2007, an electronic nursing patient summary and handover sheet were developed.¹²⁹ This was, in effect, a ward summary containing a broad range of information about the patient and his or her condition, which could be electronically accessed by all nursing staff, printed out and carried around the ward by the nurses.¹³⁰ I was told that it also served as a teaching tool because it prompted junior staff to fill in the gaps about the patient’s condition and details, such as his or her discharge destination and any other services the patient may need. I was told that this had a immensely positive impact as a handover tool¹³¹ and that it shortened the amount of time needed to complete an adequate handover. As it was an electronic tool, I was told that it was possible to store the information in a database.
- 15.105 Ms Harman and Ms Hill gave evidence that during the period the essential patient care model and electronic handover sheet were used, there was a reduction in the length of stay of patients from 6.8 to 6.1 days.¹³² I was told that the tool developed in the context of that project also allowed a number of measurements to be made about the acuity of patients and the extent of the falls risk on a given ward, as well as a graph of the patients’ estimated dates of discharge.¹³³
- 15.106 Ms Harman and Ms Hill said that their handover tool did not detract attention from the full clinical notes because it was developed as a handover tool and used as such in practice. They each gave evidence that an effective tool such as this requires a clinical champion to ensure its success. They also said that an impediment to the overall success of such a project is the lack of a projects department at the hospital to manage and encourage its implementation.
- 15.107 Mr Oakley, a senior nurse at Nepean Hospital, told me that a generic handover process was introduced at Nepean Hospital for the nursing staff in an effort to improve communication. This consisted of a computerised system into which all relevant information is typed. I was told that a copy is given to every nurse on the relevant ward. Mr Oakley acknowledged that the information gap had not been completely bridged, but said that a hand-over tool goes part of the way to bridging the gap.¹³⁴
- 15.108 I was referred to a published article about an effective communication tool developed by Professor Peter Pronovost, a critical-care specialist at John Hopkins Hospital in the United States. Professor Pronovost is a world renowned expert in patient safety and quality. The tool involved the use of a simple checklist as a method of enhancing patient safety.¹³⁵ It has been reported that the adoption of the checklist relating to the insertion of a central-line led to significant decreases in the number of central-line bloodstream infections. Within 1 year of the introduction of the checklist, the 10 day line-infection rate at that hospital reportedly decreased from 11% per cent to zero.¹³⁶ Within 2 and half years of the introduction of the checklist, only 2 line infections had

occurred in the hospital. It was calculated that the use of the checklist had prevented 43 infections, 8 deaths and saved \$2 million dollars in costs.¹³⁷

- 15.109 As a result of these positive outcomes, further checklists were established, including one intended to ensure that nurses observed patients for pain at least once every 4 hours and provided timely pain medication. This reportedly reduced the likelihood of a patient experiencing untreated pain from 41% to 3%.¹³⁸ It was found that simply having the doctors and nurses in the I.C.U. make their own checklists for what they thought should be done each day improved the consistency of care to the point that the average length of patient stay in intensive care dropped by half.¹³⁹
- 15.110 A checklist is designed to ensure that simple things are not overlooked and to make explicit the required steps in a complex process.¹⁴⁰ It appears to me that the use of a checklist process during clinical handover (similar to those I have described) is to be embraced.
- 15.111 It was suggested to me that a formal clinical handover tool should be used to minimise lost information and improve communication. Dr Collett's suggestion was that a label should be placed in the clinical notes, to be completed by the most senior doctor to have treated the patient, with the following information:
- (a) diagnosis;
 - (b) outstanding issues in terms of decision making and diagnostic investigations,
 - (c) what investigations are pending, and
 - (d) the current management plan.¹⁴¹
- 15.112 These categories of information should be provided during handover, whether handover be carried out in writing or face to face, or a communication of both. As mentioned above, in my view handover needs to primarily be carried out verbally.
- 15.113 NSW Health informed the Inquiry about several initiatives that have been undertaken by the Australian Commission on Safety and Quality in Health Care, the Clinical Excellence Commission and NSW Health in an effort to improve nursing handover.¹⁴² I have referred to some of these above: for example, the projects undertaken regarding nursing shift handover at Campbelltown Hospital and Concord Repatriation General Hospital. Others, such as the Clinical Excellence Commission, Between the Flags project, I have discussed elsewhere.
- 15.114 The Australian Commission on Safety and Quality in Health Care is undertaking a national program to identify, develop and improve clinical handover communication.¹⁴³ Phase 1 of the program looks at the improvement of handover communication in a number of settings (including public and private hospitals and primary and ambulatory care settings).¹⁴⁴ A number of NSW Health facilities are participating as pilot sites.¹⁴⁵ Phase 2 involves the roll out of successful solutions from phase 1 to other sites around the country.¹⁴⁶
- 15.115 A clinical handover literature review has been undertaken in the context of that program.¹⁴⁷ The literature review examines the evidence for effectiveness of improvement interventions in clinical handover. The conclusions of the literature review include as follows:
- (a) Studies clearly confirm that clinical handover is a high risk scenario for patient safety with dangers of discontinuity of care, adverse events and legal claims of malpractice. The literature identified the risk factors in clinical handover including:¹⁴⁸

- (i) the seniority and experience of medical staff;
 - (ii) the quality of information recorded or exchanged;
 - (iii) the lack of standardised protocols;
 - (iv) health professional fatigue;
 - (v) discontinuity in patient care.
- (b) Identified risks specifically relating to shift to shift handover, including lack of structure, policy or procedures, the role of medical discretion in handover, particularly during weekend handover, poor quality of information in Emergency Department handover, and information overload and the dangers of overly long handovers.
- (c) Verbal handover carries the risk that information will be lost across each handover.
- 15.116 The literature also pointed to a number of benefits derived from good clinical handovers, including:
- (a) improvements in information exchange during handover where junior medical officers used word processors in the handover process and where nurses used standardised information through a minimum data set and where a handover sheet was used. Some of the major themes identified in the literature relating to interventions, critical success factors and effectiveness of clinical handover include:¹⁴⁹
 - (b) a range of positive benefits from developing and implementing standard operating protocols;
 - (c) that bedside handover leads to better informed nursing staff and positive feedback from patients;
 - (d) the positive benefits of appropriate handover education and training;
 - (e) electronic handover tools (including the use of hand-held devices) to improve handover.
- 15.117 The literature also highlights that a number of aspects of clinical handover remain complex and under-researched, including: patients' perception and involvement in clinical handover, the use of protocols and tools to improve handover, the role of education and training in handover and electronic handover documentation and integration into broader electronic health records systems.¹⁵⁰
- 15.118 While the individual projects carried out to date are clearly very worthwhile, they have not yet delivered system-wide improvement. NSW Health has stated:
- "...it is expected that as pilot site and project evaluations are assessed a best practice model will be implemented state wide..."¹⁵¹
- 15.119 A state-wide approach needs to be taken to shift handover as a matter of priority. In my view, handover needs to be 'face to face' and should occur, at least in part, at the bedside when it is conducted by nurses. In my view, a checklist ought be designed to help to ensure that the minimum required information is transferred during handover. It is essential that the time required for handover is built in to the rostering system so that effective handover can take place. This means that shifts need to overlap (for, say, half an hour). This will minimise the risk that important information is lost and patient care is jeopardised.

Recommendation 56: *Within 18 months, NSW Health should ensure that each hospital designs and introduces a mandatory shift handover policy, which includes, as a minimum:*

- (a) *a requirement that part of the handover occurs at the patient's bedside;*
- (b) *a requirement that sufficient time designated for handover is built into the rostering system;*
- (c) *a requirement for the information which is to be conveyed during handover; and*
- (d) *a requirement that a written or electronic record be made of the handover.*

The system-wide roll-out of the policy should be accompanied by appropriate coaching and training to ensure sustainability of the new policy.

Transfer of care between doctors or hospitals

- 15.120 I turn now to the question of hand-over between doctors in different specialties or different locations. Acutely unwell patients are often cared for by several clinicians in different locations. Multiple handovers occur between clinicians as the care of the patient moves from one to the other. These handovers are largely verbal.
- 15.121 Dr Collett, Chair of the Liverpool Hospital Medical Staff Council and the hospital's Director of Respiratory Medicine told the Inquiry that each time a patient moves from one doctor to another, or one location to another, information about the patient is inevitably lost.¹⁵²
- 15.122 Ms Khatri, a Clinical Nurse Consultant at Concord Hospital, gave evidence that complex patients are treated by several specialists, sometimes in other public and private hospitals or in the specialist's rooms.¹⁵³ She said that, currently, continuity often relies on patients reporting medical information about their conditions rather than formal communications from institutions or specialist.¹⁵⁴ She considered that it would assist if clinical notes included a list of all specialists involved in the patient's management and indicating the condition in respect of which each specialist is providing treatment.¹⁵⁵ This would assist in better management of the patient and in keeping all relevant health care providers informed of the patient's progress.¹⁵⁶
- 15.123 During the course of the Inquiry, I heard about several instances where health professionals failed to communicate with other health professionals in other hospitals in the context of patient transfers.
- Mrs Mackay alerted me to the Root Cause Analysis finding that, when her late husband was transferred from Port Macquarie to Royal North Shore Hospital, the hospital understood that Mr Mackay was being transferred for a pleurodesis operation on the recommendation of a local specialist, whereas in fact he had not seen a specialist at all. As a result, the hospital proceeded to carry out an operation without making any comprehensive assessment of her husband's condition.¹⁵⁷
 - At Wagga Wagga, Mr Dillon told me about the treatment of his daughter who has Ehlers-Danlos syndrome, a connective tissues disorder, and the need for significant improvement in communication about her condition between the specialist children's hospitals in Sydney and Wagga Wagga Base Hospital.¹⁵⁸

- 15.124 I expect that implementation of my recommendation for the state-wide introduction of the electronic medical record will improve information sharing between NSW hospitals.
- 15.125 When a patient transfers from the care of one doctor to another doctor or from one hospital to another, the information that must be transferred with him or her is no different to the information that must be transferred during a shift to shift handover. I found Dr Collett's suggestion that a label should be placed in the clinical notes that is completed by the most senior doctor to have treated the patient, with the information listed at paragraph 15.111 above, to be a sensible one. I also made a recommendation above about the use of a form every time a patient is admitted from the Emergency Department. There is no reason why such a form could not be used when a patient is transferred between medical teams or hospitals, to ensure that there is effective notification of the patient's transfer and that the previous steps taken in the management of the patient have been appropriately followed up and completed.

Information exchange between general practitioners, other community health professionals and hospitals

- 15.126 A critical area of communication between health professionals is between hospitals and GPs. The care received by patients in hospital is only one component in the continuum of medical care they need and receive. It is essential that there be an effective exchange of information between the hospital and GP, and *vice versa*. Failure to adequately communicate between hospital staff and GPs leads to a waste of resources (for example, through the unnecessary duplication of tests) and compromises the safety and quality of patient care.
- 15.127 NSW Health Policy, with which compliance by area health services is mandatory, provides that hospitals "should" provide every GP with a written discharge summary within 48 hours of a patient's discharge from hospital:

"Every GP or [Aboriginal Community Controlled Health Service (ACCHS)] should receive a written discharge referral (known also as the discharge summary) when their patient is discharged - or within 48 hours of discharge. There are varied systems in place across area health sectors that provide GPs a copy of the discharge referral. The optimal method is for an electronic transfer of information at the time the patient is discharged. This is being developed in a number of Area Health Services. As this technology is not available for all ward areas each hospital should review how GPs are to receive this information. Options available are by mail, fax or hand delivery by the patient at the first GP visit (this is not a suitable method for certain patient groups such as those with cognitive impairment for example).

The discharge referral represents the formal transfer of responsibility for patient treatment and care from the hospital to the GP. It provides:

A summary of the patient's clinical episode of care

A list of discharge medications with information about changes to medications

Follow-up advice for the GP or ACCHS

Details of community service arrangements

The discharge referral must be:

Legible (preferably typed)

Relevant to the needs of the GP."¹⁵⁹

15.128 Although this policy is in place, the Inquiry received a significant amount of evidence that discharge letters are not systematically sent to GPs and community health workers.

15.129 The Inquiry received a submission from Palliative Care New South Wales about the importance of the provision of information from public hospitals to primary care and other health providers when it comes to patients receiving palliative care:

"Admissions to acute care in NSW public hospitals form part of the Palliative Care journey for many persons. Their initial referral to Palliative Care may come during such an admission, and further admissions for symptom management or other problems are common. Many of our members have raised issues about the quality and timeliness of information flow from the public hospitals to primary care and other providers. Accurate information about the acute care hospital stay, the care received, and plan of care on discharge, can help non-public hospital services to play their part in continuing care and reducing avoidable admissions. Further, such notification enhances safety around the delivery of post hospital care. Ensuring that relevant services are engaged prior to discharge also contributes to seamless care, and this is not always achieved. Our members have also raised concerns that when death occurs in public hospitals notification of this to involved external care providers may not occur."¹⁶⁰

15.130 In their joint submission the NSW Branch of the Australian Medical Association (NSW) and the Australian Salaried Medical Officers' Federation (NSW) submitted that:

"General practitioners report a sense of sending patients into the public hospital system and then having to care for them on their return, often with little clear idea of the care the patient has received in the process."¹⁶¹

15.131 In its submission, General Practice NSW said that inadequate communication was the common experience of GPs:

"It is a common experience for GPs to have patients admitted and discharged from hospitals with little or no information sought from or provided to the GP. Frequently it is the patient themselves who notifies the GP of their acute hospital or specialist treatment."¹⁶²

15.132 During the course of the Inquiry, similar concerns were raised throughout the State. When I visited Broken Hill, Richard Western, the Regional Director of Maari Ma Health Aboriginal Corporation at Broken Hill told me that communication from Broken Hill Base Hospital to the primary carers in the community is not adequate. He said that communication to primary health carers about the treatment received in the hospital and medication regime that may have been commenced is important to ensure the safe return of patients to their communities.¹⁶³ He said that there is a need for a formal process for communication between the health care professionals upon discharge to ensure that effective communication occurs.¹⁶⁴

15.133 A GP at Bellinger River told me that he rarely receives discharge summaries from Coffs Harbour hospital, especially for patients being treated for psychiatric issues.¹⁶⁵ The deputy clinical information manager at The Tweed Hospital, told me that it was common

for discharge summaries and referrals not to be completed until weeks after discharge.¹⁶⁶

- 15.134 I was told by one GP that she has been told by staff in the Emergency Department at Queanbeyan Hospital that “they did not have to tell her anything” in relation to one of her patients who spent the night in the Emergency Department. Dr Brodie-Cross gave evidence that she was told that it was protocol to refuse information to the GP. She described her struggle to obtain information about patients who receive acute inpatient mental health care.¹⁶⁷ She said:

“The State Health Plan and the State Mental Health Plan state and talk to the rhetoric of working collaboratively with general practice and GPs, but the evidence is to the contrary.”¹⁶⁸

- 15.135 Dr Harnett was of the view that for some patients, a written discharge summary is not sufficient. He was of the view that every time a complex patient is admitted or discharged, the patient’s GP should be telephoned.¹⁶⁹

- 15.136 Patients came forward during the course of the Inquiry to complain about inadequate communication with their GPs including as to medication requirements. For example:

“I was given a discharge letter from Royal North Shore...[to] take to my GP. It was a handwritten one and there was confusion about simple things like the medication I should be on, and I think that was part of the problem of why my condition started because of the lack of notes being sent home.”¹⁷⁰

- 15.137 While most of the submissions received by the Inquiry highlighted the deficiencies in the discharge summaries provided, the Inquiry also received evidence about positive experiences. Mr Warburton gave evidence to me at Goulburn of his positive experience as a patient in the NSW public hospital system. He told me that when he was discharged from Goulburn Base Hospital, he was provided with a typed document that contained the history of the treatment he had received. The hospital also liaised directly with Mr Warburton’s GP.¹⁷¹

- 15.138 Some say that there is a very limited appreciation on the part of hospitals of the role played by GPs in the patient’s care and their follow-up care.¹⁷² I was told that a good, complete discharge summary might well be written for a neurosurgeon at Royal North Shore Hospital if transferring a patient to their care, but the same thing will not be done for a GP undertaking the patient’s continuing care.¹⁷³

Incomplete, illegible, unsigned and undated discharge summaries

- 15.139 Another concern drawn to the Inquiry’s attention was that, when discharge information is provided, the information is often inadequate because it is incomplete, unclear or illegible.

- 15.140 A number of GPs and GP groups reported to me that discharge summaries are inadequate. The Riverina Division of General Practice and Primary Health Limited submitted that the majority of discharge summaries that GPs receive from Wagga Wagga Base Hospital are impossible to read.¹⁷⁴

- 15.141 De-identified copies of discharge summaries were provided to the Inquiry, which are, indeed, difficult to read. Those that can be read are not signed, only partly completed and do not articulate a clear follow-up plan.¹⁷⁵

- 15.142 Professor Reid, a GP and the former head of the University of NSW Clinical School in Wagga Wagga, informed me that it was his experience that the discharge information that goes to the patient's GP is generally very poor.¹⁷⁶ The Southern General Practice Network submitted that:

"GPs report delayed, illegible or non-existent discharge summaries being provided by [Greater Southern Area Health Service] hospitals. This obviously affects the GPs ability to manage the discharged patient effectively in the community. It is particularly dangerous when medications have been changed in the hospital and the managing GP is not informed of these changes."¹⁷⁷

- 15.143 A further barrier to good communication with primary care providers is that often the discharge summaries that can be read are not signed or only partly completed.¹⁷⁸ This makes it difficult, if not impossible, for a GP to obtain clarification, if needed, of some aspect of the patient's treatment or medication.

- 15.144 Medical indemnity organisation, Avant, submitted to the Inquiry that in its experience:

"A common cause of adverse events and claims is a lack of continuity of care and stories abound of patients who suffer poor outcomes because hospital staff fail to communicate with primary care providers and, in particular, the patient's general practitioner at the time of discharge from hospital. For instance, it is a very common occurrence for elderly patients to be discharged from public hospitals without information about their medications, which may or may not have been changed during their hospital stay. This is simply unsafe."

- 15.145 Avant suggested that a reasonable and simple performance standard for public hospitals would require every patient discharged from a public hospital to have a discharge summary (or similar communication) that informs the patient and the patient's GP of relevant matters including the patient's diagnosis, what therapies or treatments have been given in hospital, discharge medications and their use, follow up arrangements, and the point of contact for the patient and GP should problems arise."¹⁷⁹

Involve General Practitioners early

- 15.146 GPs also hold important information that should be provided to hospitals when a patient is being admitted. The work of hospital staff can be frustrated by a lack of input from the patient's GP, who may hold vital information relating to the patient's condition.

- 15.147 I was told that patients are often admitted to hospital without GPs being asked to provide any of the extensive history obtained by them over years of treating the patient. This can result in duplication of tests and investigations. The North West Slopes Division of General Practice recommends that GPs be involved early in a patient's admission to hospital, especially to provide history, medications and investigations.¹⁸⁰

- 15.148 In its submission, the Northern Rivers General Practice Network said that:

"The hospital seldom seeks background information from the GP for those admitted directly from the community ... Involving the GP before discharge is likely to help ensure secondary but important health issues are addressed while in hospital, avoiding rapid readmission. ...

Improved phone or email communication between the hospital medical team and the [Primary Health Care] team

is likely to improve patient care and efficiency. This may be through avoiding duplication of investigations, avoiding medications with known idiosyncratic bad reactions with that patient, highlighting aspects of follow up care with the PHC team, highlighting aspects of the patients home and history for the hospital team. Such communication could and should happen at the medical and nursing levels."¹⁸¹

- 15.149 Involving GPs in the patient's care early can save an enormous amount of time and resources, as far as gathering information and making plans for that person to be discharged.¹⁸²
- 15.150 Dr Morton, a GP and the current president of the NSW branch of the Australian Medical Association, told me that at Royal North Shore Hospital there is a direct phone number which GPs can use to talk to the Admitting Medical Officer and discuss the patient being admitted. This discussion enables the Admitting Medical Officer to assess whether the patient needs to be sent to the Emergency Department. A referral letter with the patient's past medical history and relevant investigations (if available) is then faxed through to the Emergency Department.¹⁸³

General Practice Liaison Officers

- 15.151 Dr Brodie-Cross gave evidence in which she contrasted the differing practices at The Canberra Hospital and Queanbeyan Hospital with respect to communication with GPs. She said that the system used in Canberra is vastly superior, by reason of the use of GP liaison officers. The role of the GP liaison officer is to provide a link between the GP and the hospital. By contrast, she said that GPs in NSW often do not know who to talk to when there are problems. Dr Brodie-Cross said that she receives discharge summaries directly from The Canberra Hospital which contain information about changes in medication, instruction for further consultations with specialists and general information for both the GP and the patient.¹⁸⁴
- 15.152 Some hospitals in NSW have GP liaison officers. Dr Kurrle, a geriatrician at Hornsby Hospital told me that a GP liaison officer works with the hospital 4 hours per week. In Dr Kurrle's view, use of GP liaison officers is a cost effective way of developing links with GPs and provides a formal conduit for information both to and from hospitals.¹⁸⁵
- "She liaises with her GP colleagues, she tells us where things are going wrong, where things are going right, what we can do to change. It is an absolutely wonderful position. We have good links anyway, but four hours a week is a very, very cheap way of developing the links more and allows a more formal pathway for input in and out of acute hospital services."
- 15.153 Dr Kurrle expressed the view that involving GPs in case conferences at the hospital is also beneficial, however, financial reimbursement can be problematic under the Medicare scheme.¹⁸⁶ I was told that teleconferencing with GPs can also be effective, however it can be difficult to organise.¹⁸⁷
- 15.154 I received submissions in support of a GP liaison service. The North West Slopes Division of General Practice submitted that to resolve the problem of discharge information being inadequate or absent, hospitals ought have a dedicated employee who is responsible for conveying discharge information to GP and answering questions from the patient's GPs.¹⁸⁸ I agree with this proposal.
- 15.155 As noted above, privacy concerns are sometimes raised as an impediment to the sharing of information between hospitals and GPs. I have also discussed this issue in

Chapter 14. I reiterate my view that many privacy concerns are raised in the health sector which prove, on closer examination, to be groundless. Both State¹⁸⁹ and Commonwealth¹⁹⁰ privacy legislation permits information to be disclosed to a health professional who is responsible for the ongoing care of a patient. The present State and Commonwealth privacy legislation provides appropriate protection and does not prevent information being shared between staff in hospitals and GPs in appropriate circumstances.

An electronic discharge letter

- 15.156 It is to be expected that the state-wide introduction of the electronic medical record will improve information sharing between NSW hospitals and GPs. One component of the state-wide roll-out of the electronic medical record is the Electronic Discharge Referral System. It is anticipated that the Electronic Discharge Referral System will improve coordination of services and improve the way in which patient information is conveyed to health professionals in the community, such as GPs. The state-wide roll-out of the Electronic Discharge Referral System is to commence in January 2009.¹⁹¹
- 15.157 Ms Poole, a Clinical Nurse Consultant in aged care at Royal North Shore Hospital told me that an electronic discharge record is in use in her department. I was told that the electronic discharge record can be faxed or emailed to the GP and that it has enabled much better communication, particularly with aged care facilities.¹⁹²
- 15.158 Some say that electronic discharge summaries are more time consuming to complete than handwritten summaries.¹⁹³ I was also told that a lack of computers, or access to them (say, by interns), as well as general busyness, makes it difficult to complete electronic discharge summaries even if there is a computer system in place for them.¹⁹⁴
- 15.159 NSW Health have indicated that the steps involved to complete an electronic discharge referral in the Electronic Discharge Referral System are as follows:¹⁹⁵
- A medical officer logs on and accesses the patient's chart;
 - The medical officer then selects a discharge referral template (either a generic template or one of the available specific templates, for example a paediatric discharge template);
 - The template auto-populates as much information as possible upon opening. This includes the name of the patient's GP and the GP's address, the admission date and attending doctor's name;
 - The medical officer then inserts, through a series of prompts, specific information from the patient's record such as diagnosis, medications and selected results;
 - Additional instruction or information can also be inserted to complete the note;
 - The note is then printed and mailed or faxed, or sent electronically to the relevant person(s).
- 15.160 This process does not appear to be overly onerous. In fact, on the contrary seems rather efficient. I would expect that any implementation of the electronic discharge summary would include sufficient change management and education processes to ensure that clinicians are supported in its implementation, and in the event that processes can be improved or simplified to facilitate the use of the EDRS, this will be done.
- 15.161 In the event that my recommendation that GPs be able to remotely access the electronic medical record in respect of a patient's admission to hospital is implemented, then the electronic discharge summary may be simplified, as the GP would be able to access the required information if needed.

Recommendation 57: *Recommend that the function of liaison with general practitioners be undertaken as a designated role in every public hospital in NSW, either by the creation of one or more positions to undertake the function on a full time basis or alternatively the allocation, on a part time basis of the function, to an existing position.*

Recommendation 58: *In order to ensure compliance with the NSW Health policy on the mandatory provision of discharge summaries to a general practitioner the GP Liaison Officer in each hospital is to institute a regular process of checking and auditing:*

- (a) *the provision of a discharge summary;*
- (b) *the accuracy of and the sufficiency of the discharge summary; and*
- (c) *where appropriate, the legibility and readability of the discharge summary.*

Communication training

15.162 Communication skills do not necessarily form part of the training of health professionals

Doctors

15.163 I was told by Dr Kozor, a resident medical officer completing her PGY2 at Hornsby Hospital, that she was not formally trained in communication skills during her university degree:

"I did not have any formal training of [communication skills], and it would only be learning about bedside manner and communication when we had small tutorial groups that went around and saw patients, but the purpose of that was more to be able to recognise clinical signs and complete an examination-time exam. The focus was not on communication."¹⁹⁶

15.164 The medical schools advised the Inquiry that communication skills are taught in lectures and tutorials during the early years of the medical degree.¹⁹⁷ A broad range of communication strategies are covered, including appropriate use of verbal and non-verbal cues, the cultivation of an empathetic, non-judgmental tone, and the need for full disclosure to patients about their condition and future prospects.¹⁹⁸ Students are given specific tuition for optimal communication with elderly, young, non-English speaking and nervous patients, and some medical schools further instruct students in methods of inspiring lifestyle changes in each of these cohorts.¹⁹⁹ Advice is provided on how to inform patients and their families of unwelcome news. The students develop their skills through clinical activities.²⁰⁰ During the later years of their medical degrees, students are placed in clinical units or GP rooms and it is expected that they will further develop their communications skills through observation of other health professionals and through practice.²⁰¹ Students are tested on the extent to which they have acquired the necessary communications skills.²⁰²

15.165 Following graduation, PGY1 and PGY2 doctors may be exposed to further communication training. Communication is one of 3 core subject areas in the Australian Curriculum Framework for Junior Doctors. Trainees are required to have skills and

competencies in communicating with patients and families, communicating with the interdisciplinary team and communicating with colleagues.²⁰³

15.166 IMET informed the Inquiry that current approaches to communication skills training for prevocational trainees varies through the networks and hospitals. I was told that IMET has in the past supported development of a range of resources to support training in this area but their application has always been a matter for individual hospitals, subject to compliance with accreditation requirements.

15.167 IMET informed the Inquiry that it assists in communication training by:²⁰⁴

- (a) requiring supervisors of PGY1 and PGY2 doctors to assess the communication skills exhibited by the trainee and to provide monitoring and feedback to the JMO, including by completing a Progress Review form at the midpoint and end of each term;
- (b) gathering evidence from sites during 3 yearly accreditation surveys about educational activity. IMET says that training sites (hospitals) offer formal education sessions, during orientation and in regular lecture series, covering a range of communication-related topics: including bedside manner, breaking bad news, case presentation and other communication topics. I was told that the content varies according to the network and site in which the trainee is employed;
- (c) encouraging networks and hospitals to share information and innovations about improving JMO communication skills through a range of regular forums for Directors of Prevocational Education and Training, prevocational trainees, and relevant health service managers;
- (d) running a pre-employment program for Australian Medical Council graduates twice a year which includes sessions on communication, breaking bad news, working within a multidisciplinary team and documentation.

15.168 IMET believes that communication skills training could be improved by:²⁰⁵

- (a) the development and publication of resources to support communication skills training in NSW hospitals that align with the Australian Curriculum Framework for Junior Doctors;
- (b) developing structures and resources to support groups with particular needs in communication skills development, particularly graduates of the Australian Medical Council process and international medical graduates more broadly; and
- (c) increasing resources at a hospital level to ensure that training outlined in the resources described above actually occurs and that appropriate feedback is provided to trainees regarding their performance.

15.169 I am concerned that while the current training given to undergraduate and postgraduate training doctors is a good start, it is not sufficient. My recommendations regarding increased education to PGY1 and PGY2 regarding communication in a multi-disciplinary setting are set out below.

Nurses

15.170 The Australian Nursing and Midwifery Council (**ANMC**)²⁰⁶ prescribes 3 competencies relating to communication skills for Australian registered nurses, being:

- communicates effectively with individuals and groups to facilitate the provision of care;

- assists and supports individuals and groups to make informed health care decisions; and
- communicates nursing assessments and decisions to the inter-disciplinary health care team and other relevant service providers.

15.171 I was provided with clinical assessment profiles, clinical assessment records, course materials and related information from several nursing faculties in NSW. These materials indicate that the development of competency in each of these ANMC-prescribed areas is taught and evaluated systematically during the pre-registration nursing degrees, either by way of semester-length courses on effective communication²⁰⁷ or as a component of a number of different courses.²⁰⁸

Allied Health

15.172 Given the range and diversity of professionals categorised as allied health workers, I am reluctant to make broad generalisations in regards to their education and training. I have, however, examined the course content and lists of assessment tasks provided to me by some of the tertiary allied health schools, and make the following observations.

15.173 On the basis of the information I have been provided, allied health students are taught verbal and written communication skills (including completing assessments regarding communication skills) to varying degrees during the early years of the university courses in lectures and tutorials.²⁰⁹ Like medical and nursing students, allied health students are then expected to further develop communication skills, and be assisted to do so, during clinical placements in the later years of the degree, through observation of other health professionals and through practice.²¹⁰

15.174 In Chapter 10, I recommend the introduction of interdisciplinary training, and it seems to me that communication between health professionals is an ideal subject for such training. This would have the additional benefit of increasing the ability of different health professionals working in NSW public hospitals to work in multi-disciplinary teams, which appears to me to be an increasingly important part of the delivery of medical care today.

Better use of technology

15.175 It seems to me that there are several pieces of relatively inexpensive technology that could enhance and streamline communication between clinical staff. These include:

- (a) Voice recognition dictation equipment for busy doctors, to enable them to dictate clinical notes, letters and discharge summaries as they do ward rounds. This might assist clinicians to deal with the issues raised by Dr Reddel, a neurologist at Concord General Repatriation Hospital, regarding the limited amount of time to see each patient and to ensure that all pertinent matters are appropriately recorded.²¹¹
- (b) Personal Digital Assistants which can collect emails, test results and access hospital records.²¹² This would be particularly useful for community nurses, who, currently need to come back to the hospital or community health centre to review and enter notes and update their appointments schedule.²¹³ This would also allow important test results for patients to be automatically forwarded to the relevant doctors.²¹⁴

- (c) A better paging system. The current paging system used in NSW hospitals is archaic and causes delays.²¹⁵ The following description from the submission of Dr Goldstein, an emergency doctor at Ryde Hospital, amply illustrates the frustrations:

"Were the consequences not so serious, the malfunctions of the telephone system would be hilarious in the manner of a Laurel and Hardy comedy. This may be best illustrated with a typical example:

A phone rings in the doctors office. There are 3 doctors busily working on patients files and the PCs. Each is reluctant to pick up, as each knows the call is unlikely to be for them, they are extremely busy, and their work has already been repeatedly interrupted as the phones ring all the time, about many matters not related to the doctor's work. Eventually one picks up the call, which is from orthopaedic registrar ("OR"). OR (irritated by the wait): "did someone page me?" Resident medical officer (RMO): "I did not, let me check". RMO asks the 2 doctors in the room whether they paged OR. They did not. Then RMO checks on the whiteboard ... but cannot see which patient requires the OR review ... RMO: "sorry I cannot find which patient or doctor, let me page the doctor". RMO goes to the loudspeaker paging phone, and asks for the doctor who paged OR. However nothing is heard over the department sound system, because when this is turned on it makes an annoying buzz and someone has turned it right down. The other 2 doctors then discuss the sound system problem and assist RMO to get the sound system working, and the page is made for the doctor who called OR to come to the phone.

The fiasco is not yet over, but the point is clear. The failure to implement an adequate communication/telephone system has led in this instance to wasted time by 4 busy doctors: the OR, the RMO who answered the phone, and the other 2 doctors in the office who have had their work interrupted. It has caused the OR to be annoyed and frustrated, and had a detrimental effect on teamwork and interpersonal relations...The current paging system should be banned, because it repeatedly generates incidents like this. ... The principle is that when A wishes to speak to B, it is bad practice to involve C and D if there is no reason. The paging system should be replaced by an intranet, and messages and calls to individual staff should be taken on mobile phones and/or handheld devices."²¹⁶

- 15.176 At Blacktown Hospital's Emergency Department, I observed the use of a wireless communication tool by a Voice Over Internet Protocol (VOIP). The Director of the Blacktown-Mt Druitt Emergency Departments demonstrated this technology to me. Staff wear a microphone around their necks which allows them to call other staff, for example, to request a wardman to take a patient to x-ray. When the Director demonstrated the system to me he simply asked for "wardman" and the system connected him to speak to the wardman. The wardman responded straight away. I was told that staff found this system to be much better than paging.²¹⁷
- 15.177 In my view, NSW Health should investigate which items of technology will make communication between health professionals in the same hospital most effective. Although the provision of technology to staff has obvious funding implications, the cost of this technology relative to the cost associated with adverse events, where for example, pathology results are not received or, or their receipt is delayed, is insignificant.

Recommendation 59: *Within 24 months, NSW Health should investigate and establish a plan for the introduction of modern internet based systems (e.g. VOIP) for all communications within hospitals including portable communication devices for all appropriate clinical staff members from patients and their carers are addressed as soon as reasonably practicable.*

Communication with patients and carers

- 15.178 Plainly enough, good channels of communication need to exist between health professionals and patients.
- (a) Health professionals need to obtain information from patients about the patient's history and symptoms, their responses to treatment and whether they consent to particular courses of treatment.
 - (b) Patients need to obtain information about their condition, their treatment options and what they have to do to manage their conditions.
 - (c) Health professionals need to secure the co-operation of the patient in the treatment process.
- 15.179 In 2007, NSW Health conducted a Patient Survey which sought to gain information from patients across NSW regarding their experiences of NSW public health care services. From the survey, NSW Health has identified 9 priority areas for improvement.²¹⁸ These were areas that had a high correlation with the overall care ratings provided by the patients and the current levels of performance of NSW Health.²¹⁹ Seven of the identified 9 areas for improvement relate to communication, those being:
- Health care professionals discussing anxieties/fears with patients;
 - Ease of finding someone to talk to about concerns;
 - Doctors and nurses answering patient's questions in simple language;
 - Patients receiving enough information about their condition/treatment;
 - Test results being explained understandably;
 - Patients having enough say about and being involved in care/treatment decisions;
 - Patients being given information about rights and responsibilities.²²⁰
- 15.180 Improved lines of communication between patients and hospital staff can reduce the number of problems a patient experiences during a stay in hospital. Good communication between patients and health professionals leads to fewer errors and better treatment outcomes.²²¹ Professors Ledema and Slade submitted to the Inquiry that clinician-patient communication is the target for the largest number of patient complaints, sometimes leading to costly litigation,²²² and that communication gaps or misunderstandings, especially during hospital care, are a defining feature of how patients experience health care systems.²²³
- 15.181 By exchanging some simple pieces of information the experience of both hospital staff and patients can be improved. Dr Harnett of Westmead Hospital informed me that there was evidence that demonstrated that if staff informed patients as to the time they would return to see the patient, there were fewer calls by patients to the ward nurses for assistance.²²⁴
- 15.182 Often the most basic communication with families and patients does not occur. I heard about instances where health professionals failed to introduce themselves to the

patients, their family or carers. Amy and Joanna Willesee told me that following their mother's admission to Nepean Hospital:

"We arrived and we were really hoping that someone would come and say to us, 'This is what's happened to your mum. This is why she has been brought in. This is her doctor. Her doctor is going to investigate,' but nobody introduced themselves to us. We had no communication with anybody. We stayed for several hours and we didn't even know who was nursing her."²²⁵

15.183 The Sydney South West Area Health Service acknowledged to me that the communication between staff and the family during Ms Willesee's admission to Nepean Hospital had been unsatisfactory.²²⁶ The candid briefing²²⁷ provided to me at my request about this case by the Sydney South West Area Health Service accepted that communication had also been inadequate in a number of other respects:

- (a) The initial conversation by medical staff with the family was undertaken by an inappropriately junior person;
- (b) Nursing staff regularly did not introduce themselves to the person providing care;
- (c) The specialist in charge of the patient's care had no direct contact with family members, and was unaware of their requests to speak with him;
- (d) The specialist's twice weekly visits were not recorded in the patient notes; and
- (e) The Acting Nurse Unit Manager did not manage the flow of information between all members of the treating team and the family.

15.184 This range of communication difficulties, although collected in one case, are typical of those which I encountered in the course of the Inquiry. Inadequate communication of this kind is simply unacceptable in a civilised society let alone in a system of patient centred health care.

15.185 I heard about some useful initiatives aimed at empowering patients to be involved in their own healthcare and to ask healthcare professionals pertinent questions.

15.186 Professor Bruce Barraclough AO told me that when he was Chair of the former Australian Council for Safety and Quality in Health Care,²²⁸ the consumer group of the former Council produced 10 tips, which, if given to patients before they went to hospital, resulted in the patient asking more questions and experiencing less communication problems.²²⁹ The 10 tips for safer healthcare produced by the former Council were:

- (a) Be actively involved in your own health care.
- (b) Speak up if you have any questions or concerns.
- (c) Learn more about your condition or treatments.
- (d) Keep a list of all the medicines you are taking.
- (e) Make sure you understand the medicines you are taking.
- (f) Get the results of any test or procedure.
- (g) Talk about your options if you need to go into hospital.
- (h) Make sure you understand what will happen if you need surgery or a procedure.
- (i) Make sure you, your doctor and your surgeon all agree on exactly what will be done.
- (j) Make sure you understand your continuing treatment, medicines and follow-up care.²³⁰

15.187 In her evidence before the Inquiry, Dr Hill, the Director of Clinical Governance at John Hunter Hospital, stressed the importance of good communication with patients.²³¹ Dr Hill was of the view that a tool called "ISBAR" was particularly useful in improving communication between clinicians and patients.²³² "ISBAR" is a system for interpersonal communication developed by the Veterans administration hospitals in the United States.²³³ "ISBAR" stands for: "I am" or Introduction, Situation, Background, Assessment, Recommendation.²³⁴ Dr Hill described the tool to me as working as follows:

"The "I" stands for introduction, and the introduction is a very important part of this because for people to say who they are, "I am Dr Hill, I am the clinical person looking after your care", et cetera, is a really important thing. ...

Following on from that is a brief description of the situation that we find ourselves in, some background to the information, an assessment of what the situation is and then a recommendation at the end. The recommendation is about the response that you want from the person that you are talking to."²³⁵

15.188 Dr Hill indicated that a number of projects are being used in the Hunter New England Area Health Service based on the ISBAR tool.²³⁶

15.189 The ISBAR tool seems to be a useful one, although I note that it does not explicitly allow for patients to raise questions or concerns (but could no doubt be modified to do this).

15.190 Healthcare is ultimately about the patient. Patients (and their carers) play a key role in ensuring that the healthcare they receive is safe and effective. As Ms Cridland, a former patient, put it:

"All the policies and procedures in the world will not change the outcome if a patient is not treated as the centre of what the whole thing is about."²³⁷

15.191 Some hospitals use case managers or patient liaison officers to deal with patients' concerns and complaints, to great effect. Ms Cridland recommended the use of a case manager with social work or medical qualifications that could, in difficult or complicated cases, communicate with the patient and ensure patient understanding and cooperation.²³⁸

15.192 Professor Michael Fearnside, the director of surgery for Sydney West Area Health Services, strongly supported the use of case managers:

"The use of clinical case managers aligned to clinical units is very attractive and has been successful. It should be policy and widely introduced to clinical services. The case managers may be clinical nurse consultants or clinical nurse specialists or allied health professionals. They need to be attached to clinical units and be responsible to [the] clinical unit directors. They are senior health professionals who actively liaise with consultants under whose care patients are admitted and other health staff to facilitate and organise patient management. Although there are examples of this throughout the health sector, there needs to be a deliberate policy to introduce case managers, particularly in tertiary and quaternary units. This would be an attractive pathway for senior nursing staff to work at a high level and also to maintain their clinical skills. One example of a successful case manager model is the neurosurgical department at Westmead

Hospital where, through funding from the GMCT, there has been a case manager for several years now which has greatly facilitated communication and been a source of information for patients.”²³⁹

- 15.193 Ms Baroutis, a Nursing Unit Manager, at Port Macquarie Base Hospital, considered a patient liaison officer, who can handle patient complaints and concerns, to be a very useful position to have in a hospital.²⁴⁰

Recommendation 60: *NSW Health should encourage all hospital staff to take all reasonable measures to enhance their communication with patients including by making sure that:*

- (a) *patients and their carers are told who staff are and what their function is;*
- (b) *patients and their carers are kept informed of the nature and purpose of any treatment about to be delivered;*
- (c) *any questions and concerns from patients on their case are addressed as soon as is reasonably practicable.*

Family & carers

- 15.194 The family and carers of the patient will frequently need to be involved in communication regarding the patient’s care. I acknowledge that there is a balance to be struck between the privacy issues of the patient and the needs and wants of the family or carers for information. NSW Health policy reflects the requirements of privacy law.²⁴¹ A general agreement by the patient to keep family and carers informed is usually all that is required.

- 15.195 Some of the submissions I heard suggest that too much weight is being given to privacy concerns such that important information is often inappropriately withheld from families and carers. Of course, this might not always be done with privacy considerations in mind, but simply because health professionals are too busy to appropriately deal with the concerns of families and carers.

- 15.196 Issues of consent and privacy become particularly vexed in the area of mental illness. Ms Rivers, the Vice-President of the Schizophrenia Fellowship of NSW and whose son has schizophrenia,²⁴² told me of the difficulties that carers and families of the mentally ill have obtaining information regarding patients and being involved in planning:

“Patients are regularly discharged without consultation with relevant persons, so accommodation, pharmaceutical and supervision needs are not met. Confirmation of information obtained from patients is rarely if ever checked with carers or family, so psychiatrists operate on misinformation from their psychotic or otherwise cognitively impaired patients. This severely impacts on their treatment and even on their diagnosis.”²⁴³

- 15.197 Ms Harnack conveyed to me her experience as the carer of her elderly father, who has profound hearing loss, heart failure, pulmonary oedema, arthritis and prostate cancer in remission, and of her husband, who has advanced Parkinson’s disease. It is her experience that communication between health professionals and between health professionals and carers is poor.

“It is difficult to get coherent and co-ordinated information. It is difficult for a relative to see the Medical Registrar or the attending specialist doctor.

Nurses can give very little information. Therefore, an aged patient and carer are not given the information needed to prevent or at least reduce further hospital stays for a recurrence of the original problem.

... Hospitals would save funds and recurring patient admissions firstly by investing time in consulting with primary carers. Secondly, at the very least, the hospitals should develop an information sheet for relatives of frail aged and disabled patients so that they are aware of the system and know who to talk to - consulting specialists, medical registrars, the role of the nurse, the role of the discharge planner."²⁴⁴

- 15.198 Mr Pilcher gave evidence at Port Macquarie about his experiences as the carer of his wife, Christine Pilcher, who has multiple sclerosis. Mrs Pilcher is a quadriplegic. She cannot speak and communicates by blinking one eye.²⁴⁵ Mr Pilcher told me that when his wife receives care at Port Macquarie Base Hospital, for example, to have her gastroscopy tube changed, the information provided to him upon her discharge is inadequate:

"I tell the staff where [we are] at, what's happening, but I have a lot of difficulty getting that feedback after they've taken her out of my care and given her back into my care. It's just, "You should take her home," and that's really difficult because she can't tell me what has happened.

... it's very hard to pick up [on] the unforeseen things that might happen whilst she's out of my care. I might be trying to move her around, do things with her at home and she shows pain and by her spelling, while we're going through the alphabet and her blinking on the letter, it takes a long time to get a sentence [that explains to me that] her foot dropped on the floor and it hurt, her leg's been sore. But to try and work out that that happened after is unbelievably difficult because you've got somebody who is in pain who is not normally in pain and you haven't ... observed anything to cause that pain."²⁴⁶

- 15.199 In its submission, Carers NSW outlined the benefits of providing information to carers:

"Educating and training caregivers can increase compliance with discharge plans and prevent readmissions. During hospitalisations, caregivers can act as quality monitors, alerting staff to potential costly problems before they happen.

That carers are a vital part of the health care support team is well acknowledged in hospital settings with regard to carers of children with chronic conditions or disabilities for example ... It is a fact, however, which is less acknowledged within other areas of the hospital system and then often only in relation to discharge planning."²⁴⁷

... There is a need for inclusion of the carer, as appropriate, throughout the patient journey. The pressure within hospitals is toward clinical and technical health delivery which can mean that carers are viewed as extraneous to the process, notwithstanding that the non-hospital and health care for the patient will often reside with the family.

Carers frequently do not receive the information, education and training that they need. At every level of

the health system carers need to be identified and supported whether it is at the birth of a child, diagnosis of a condition, the end of life, or at any stage throughout.”²⁴⁸

15.200 Carers NSW told me that international research indicates that carer inclusion can have benefits to patient quality of care and can reduce readmission rates.²⁴⁹

15.201 In the case of Ms Willesee (noted above), the patient was unable to communicate for herself due to the nature of the degenerative conditions from which she was suffering.²⁵⁰ I was told that her daughters were never asked to provide a history, were not greeted by staff and told anything about the patient’s investigations or treatment.²⁵¹

“Every day we would attempt to make contact with the specialist. We would ask the nurses to page him, to phone him. Could we have a meeting? Could we meet him? We had met the junior doctor by this point and we had met the registrar. Again they did not introduce themselves. They did not tell us they were looking for [Creutzfeldt-Jacob Disease (CJD)]. They did not tell us what they were trying to exclude. They didn't tell us anything. They did not offer us the opportunity to ask questions.”²⁵²

15.202 As referred to earlier, the Inquiry also received evidence about the death of Rebecca Murray. Ms Murray’s husband and parents feel that there was poor communication with them both during the period Ms Murray was receiving treatment and after her tragic death. I was told that they were left to wait for a lengthy period of time at the hospital without any information in relation to their wife and daughter’s condition.²⁵³

“We were left in the waiting room with very little information watching the staff run in and out of the operating theatre for blood products, we heard the Medical Emergency Team called around 11 am and thought 'someone is in a bad way', only to find out later it was our Rebecca. When asked later why we weren't kept better informed we were told, 'they couldn't afford to send anyone from the room and had to wait for the arrival of more staff'.”²⁵⁴

15.203 NSW Health policy expressly recognises the important role of carers in its policy *The Carers Action Plan 2007-2012*.²⁵⁵ However, based on the information that I have been provided by NSW Health, it appears to be the case that the area health services have not yet done a significant amount of work on the issue of the provision of health information to carers.²⁵⁶

15.204 Sydney West Area Health Service has required, as part of their Carer Action Plan 2008-2012 that by January 2010 a “Sharing Personal Health Information with Carers” tool for staff is to be developed.²⁵⁷ NSW Health has indicated that this is part of a proposed state-wide tool for staff regarding sharing personal health information.²⁵⁸ NSW Health has indicated that it is establishing a working party to co-ordinate and develop state-wide resources and guidelines regarding carers.²⁵⁹ It is proposed that the working party will develop a single resource for use across all area health services in 2009.²⁶⁰ It seems to me that that a state-wide “Sharing Personal Health Information with Carers” tool is a step in the right direction.

Information provided to patient on discharge

- 15.205 On discharge from hospital, patients should be provided with a document, in simple language, explaining:
- (a) what medications, if any, they are to take and the details related to those medications, including, for example, frequency, dosage and any medications which are contra-indicated;
 - (b) their care plan;
 - (c) an outline of resources available to assist them upon discharge (including contact details of patient support groups);
 - (d) a schedule of any follow up appointments, which have been made or which need to be made.

15.206 Without this information, mistakes can occur, which can lead to re-admission.

15.207 The Inquiry received evidence about such errors. One witness gave evidence about the provision to her of discharge medications and information upon her discharge from hospital.²⁶¹

"There was confusion about whether I should be on aspirin and warfarin together, which is apparently a no-no, and they were both listed and both given to me as discharge medications, and no further information given."²⁶²

15.208 I agree with following submission of the Medical Staff Council at Orange Base Hospital:

"On discharge the patient or their family/carer needs to be informed of follow up arrangements and changes to medication. This should be in person and in writing! Patients often forget or are not informed of changes. They frequently go home and take medications which have been ceased which can result in readmission or harm.

This must be a formalised part of the discharge process, to be completed by Registrar/[Resident Medical Officer] or intern."²⁶³

15.209 It seems to me that better use could be made of technology to provide patients with information following discharge. A nurse at Concord Repatriation General Hospital made the very sensible suggestion of an internet site with information on, for example, wound management.²⁶⁴

Recommendation 61: *On discharge from hospital unless clinically inappropriate, each patient or their carer should be provided with a document, in plain language, explaining:*

- (a) *what medications, if any, they are to take and the details related to those medications, including, for example, frequency, dosage and any medications which are contra-indicated;*
- (b) *what their care plan is;*
- (c) *an outline of resources available to assist them upon discharge (including contact details of patient support groups); and*
- (d) *a schedule of any follow up appointments.*

Communication when things go wrong

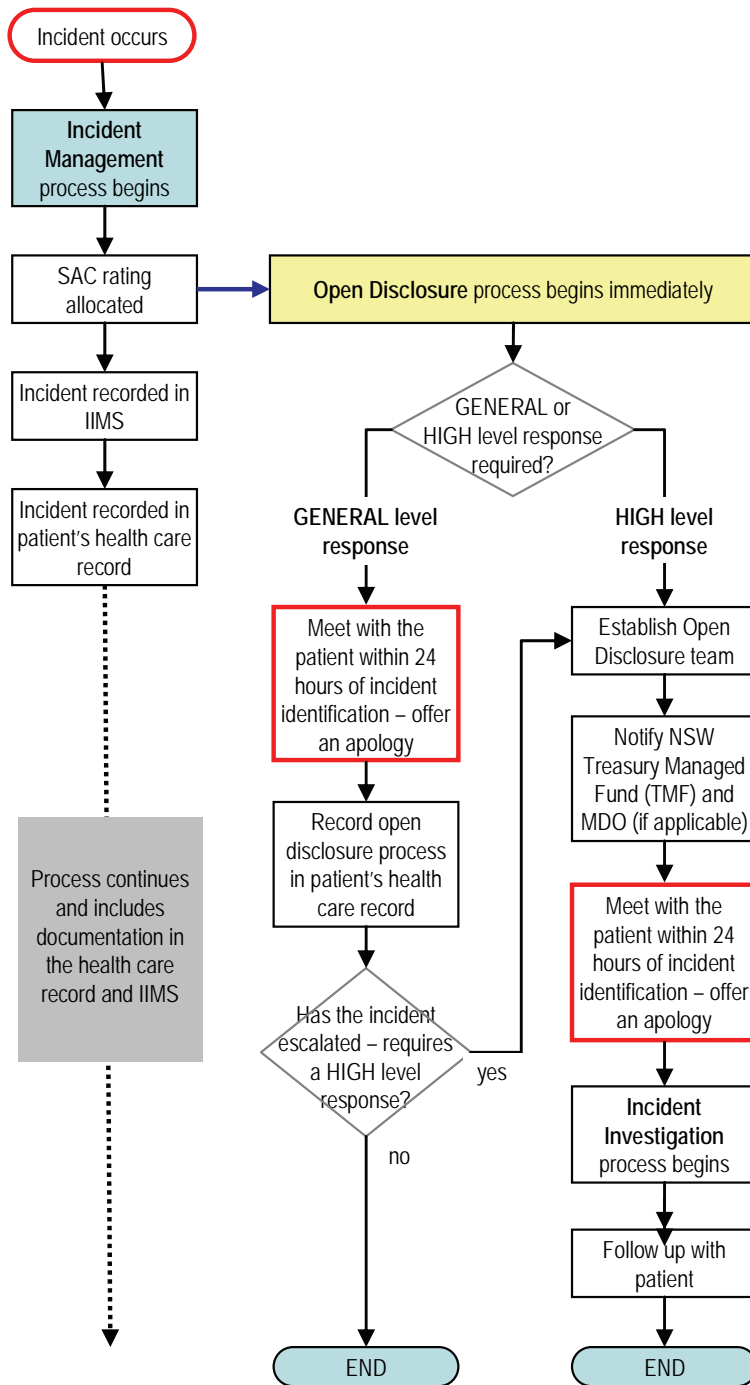
- 15.210 A guiding principle in incident management in NSW public hospitals is said to be open disclosure, which is:

"[The] process of providing an open, consistent approach to communicating with the patient and their support person following a patient related incident. This includes expressing regret for what has happened, keeping the patient informed, and providing feedback on investigations, including the steps taken to prevent a similar incident occurring in the future. It is also about providing any information arising from the incident or its investigation relevant to changing systems of care in order to improve patient safety."²⁶⁵

- 15.211 The open exchange of timely and appropriate information regarding adverse events is vital to drive and support improvements in the safety and quality of health care. A key step in this process is encouraging greater openness in response to adverse events. Open disclosure also has the potential to preserve and develop the relationship between the patient and health professional.

- 15.212 During the course of the Inquiry, it became clear to me that patients and their carers have a need to know and understand what happened following an avoidable adverse incident. They also often want to feel there is genuine regret on the part of the health professionals involved and that steps will be taken to minimise the risk of similar events occurring again.

- 15.213 NSW Health acknowledges that an important aspect to all incident management is communication with patients and their families.²⁶⁶ NSW has commenced state-wide implementation of the National Open Disclosure Standard, developed by the Australian Commission on Safety and Quality in Health Care.²⁶⁷ NSW has issued an Open Disclosure policy,²⁶⁸ guidelines²⁶⁹ and an education program for staff.²⁷⁰ Under the NSW Health process, as soon as an incident is identified, a Severity Assessment Code (**SAC**) is allocated. An open disclosure response is graded as a general level response (usually SAC 3 or SAC 4) or a high level response (usually SAC 1 or SAC 2). A diagram of the NSW Health open disclosure process is below.²⁷¹



15.214 There is obviously a tension between open disclosure and the desire of clinicians and hospitals to protect themselves from criticism, disciplinary action or litigation. The evidence I heard suggested open disclosure is observed about half of the time.

15.215 As submitted by Mr Cook who works in quality and safety improvement at John Hunter Hospital:

"If people are on the defensive, they're less likely to open up and want to improve. They might just see it as a personal attack or otherwise. So I suppose it is about creating a culture of openness and improvement and wanting to improve, each person wanting to improve their work performance."²⁷²

15.216 The Council of Social Service of NSW submitted that:

"Whilst some hospitals and health care facilities have shown a commitment to open disclosure ... this approach needs to be implemented on a systemic basis, including monitoring to ensure compliance."²⁷³

15.217 During the 2 day expert panel convened during the Inquiry, Professor David Mayer discussed processes that had been introduced at the University of Illinois, Medical Centre Chicago following an adverse event. He explained, that, upon the occurrence of an unexpected adverse event:

"We connect with the patient and the family literally within 24 hours, sometimes within minutes; there are teams on 24/7...We go through the disclosure with the family. We talk to them about everything we know - was it preventable, and if it was preventable, we have a rapid programme where we start engaging them, we tell them to get attorneys, to get legal counsel, but our goal is ... "benevolent justice"²⁷⁴: We want to provide the right things for the patient and bring closure to it and answer their questions and treat them properly and humanistically."²⁷⁵

15.218 Professor Mayer indicated that sometimes the health provider, who was involved in the medical error, wishes to leave his or her profession altogether:

"However if you do the right thing and allow the provider to apologise to the patient, the provider heals also, and the culture generated through that for us has been totally uplifting and dramatic. It has improved employee morale, our nursing retention rates are the highest they have ever been. You talk about a positive culture change - people really are proud to be in that environment."²⁷⁶

15.219 Professor Mayer emphasised that there was a difference between "disclosure" and "transparency." It is one thing to say you made an error. It is another to fully open up and "share and get down in the dirt, so to speak, and allow the patients and the families to really see what went on"²⁷⁷.

15.220 To my observation the NSW Health system may practise open disclosure, but it does not appear to practise transparency.

15.221 I heard evidence about several instances where a patient died unexpectedly or for unclear reasons. In such cases, their family were understandably desperate for information about what had happened to the patient. Witnesses gave evidence that their dealings with health professionals after adverse events were sometimes unsatisfactory and upsetting.

Case Study 1: Murray Family

Rebecca Murray presented at 5 am to the birth suite of Bathurst Base Hospital on 24 June 2007 in the late stages of labour.²⁷⁸ It was determined that an emergency caesarean section was required due to the baby being in breech presentation.²⁷⁹ A caesarean section was performed by the locum obstetrician at 7am and a healthy baby girl was delivered.²⁸⁰ Following the caesarean section, the recovery nurse found that Rebecca had lost a great deal of blood and, despite aggressive management, bleeding was unable to be controlled.²⁸¹ A hysterectomy was performed.²⁸² Rebecca sustained a cardiac arrest post-operatively at 11:10am.²⁸³ The Medical Retrieval Unit had transferred her to Nepean Hospital by 4:10pm on 24 Jun 2007.²⁸⁴ Her metabolic and neurological functions continued to decline from the time of her admission into the intensive care unit, as did her blood pressure.²⁸⁵ Rebecca was declared deceased at 4:52pm on 25 June 2007.²⁸⁶

While Mrs Murray was in the recovery room following the hysterectomy, her husband and parents were not allowed into the room; they were left outside the room for 3½ hours without any information in relation to Rebecca's condition.²⁸⁷

Rebecca's family's experience was that communication between themselves and the hospital did not improve in the subsequent weeks and months. I was told that following Mrs Murray's death, no one from the Bathurst Base Hospital contacted her husband.²⁸⁸ Three weeks after Mrs Murray's death, Mr Murray telephoned the hospital.²⁸⁹ He said that a social worker from the hospital promised to help him, in particular to provide assistance with his 3 children, but that no assistance eventuated. He said that he was not visited by anyone on behalf of the hospital.²⁹⁰

Mr Murray told me that when he telephoned the hospital, he was told that a Root Cause Analysis was being undertaken. Mr Murray told me that he recalls insensitive remarks being made to him.²⁹¹ The hospital held a meeting with Mr Murray, his baby daughter and his wife's parents after the Root Cause Analysis had been completed which the General Manager of the hospital, an anaesthetist, and the director of nursing attended.²⁹² He said that the meeting commenced with a statement to the family that the Root Cause Analysis was a "flawed process and will not tell you what happened".²⁹³ Mr Murray told me that he formed the impression that none of the staff present had read the report or his wife's clinical notes. He said that he did not feel that they were aware of the details of the events surrounding his wife's death.²⁹⁴ Mr Murray said that he feels that he has been left on his own.²⁹⁵

Mr Murray told me that he wanted the doctors to tell him the truth and for someone to apologise.²⁹⁶ Mr Murray's view is that entire process needs to be more personal.²⁹⁷

Case Study 2: Anderson Family

Vanessa Anderson died at Royal North Shore Hospital after being admitted with a head injury inflicted by a golf ball. The coroner found that, during Vanessa's treatment, almost every conceivable error or omission occurred and continued to build on top of one another, leading to Vanessa's death.²⁹⁸

Following Vanessa's death, the Anderson family have encountered a series of difficulties in their dealings with Royal North Shore Hospital. They have complained to the Health Care Complaints Commission regarding this issue and the Commission has investigated their complaint. Mr Anderson has told me that he feels no family should have to endure what they have endured.²⁹⁹ He felt that it took 2 ½ years to fight a system until a formal finding regarding Vanessa's death was made by the coroner.³⁰⁰

There was an initial meeting with the hospital after Vanessa's death.³⁰¹ Vanessa's parents told me that:

at that meeting, everything was in medical language and the family did not understand the explanations given;³⁰²

some of the hospital representatives at the meeting were not adequately prepared, and no minutes were made by the hospital;³⁰³

at other times, they were treated insensitively, for instance when a hospital representative telephoned them from a car phone to speak to them.³⁰⁴

The Andersons said to me that whilst initially the hospital offered them counselling at home, Mrs Anderson was later told that the hospital didn't provide this. They said that they were reluctant to attend counselling at the hospital where Vanessa had died. Mrs Anderson tried to arrange counselling through Hornsby Hospital but was told that this was not possible because

it was outside their catchment area.³⁰⁵ There was no outreach service and the Andersons did not obtain counselling through the hospital.³⁰⁶

Mr and Mrs Anderson suggested that when they eventually had a meeting with the hospital to review the findings of the Root Cause Analysis, they were told that one of the doctors could "squeeze" the meeting in with them.³⁰⁷ They said that a hospital representative fell asleep during the meeting, the Director of Medical Services' phone rang twice, and the meeting was unceremoniously finished when the next person who had booked the room barged in.³⁰⁸

In their view, open disclosure did not occur.

- 15.222 A number of other witnesses complained to me about the inadequate or insensitive dealings they have with the NSW health system and its representatives following the death of a loved one³⁰⁹ or following complaints about their own treatment.³¹⁰
- 15.223 I was told about a number of instances in which complaints made to hospitals were not followed up. Witnesses expressed frustration that they were unaware of what had become of their complaints.³¹¹ Some said that their complaint was acknowledged but dealt with inadequately on the basis that they were placed in contact with a junior doctor rather than the consultant who had been responsible for the care of the patient.³¹² Other witnesses felt that the hospital in question was simply not willing to be open and transparent.³¹³
- 15.224 Some patients and their families had more acceptable experiences with the hospital following an adverse event. The documents provided to me by the Griffey family seem to be a good example of how a hospital might communicate with a family after a mistake has occurred, which in this case led to their daughter, Belinda, being in a post-coma unresponsive state. Belinda has subsequently died.
- 15.225 A conference with the Griffey family and relevant hospital staff occurred and the family were provided with minutes of that conference.³¹⁴ The minutes indicate that hospital staff acknowledged that there clearly had been a mistake in relation to Belinda's care.³¹⁵ The Root Cause Analysis process was explained.³¹⁶ An information sheet in respect of Root Cause Analysis was given to the family.³¹⁷ Counselling was offered at the hospital's expense.³¹⁸ The family's input into the Root Cause Analysis was said to be invaluable.³¹⁹ A sincere apology was made.³²⁰ A frank assessment of Belinda's condition was given.³²¹ A client liaison officer spoke to the family.³²² A letter was sent 3 weeks after the meeting, providing an update on the progress of the Root Cause Analysis.³²³ An apology was again made.³²⁴ Three months later, a letter was sent by Nepean Hospital to the family providing a copy of the final Root Cause Analysis report prior to a conference being held with the family to discuss it.³²⁵
- 15.226 However, the Griffey family's experience with the hospital has not been without difficulty. For example, Mr Griffey expressed dissatisfaction that it took 2½ years for Mr Griffey to find out whether the recommendations of the Root Cause Analysis had been implemented.³²⁶
- 15.227 I heard evidence that patients from small communities are reluctant to make complaints.
- "...when you live in a small rural town, you cannot afford to put anyone offside. You cannot go and make a complaint because you never know down the track when you will need those people's services, as much as you don't want their services, but you would need them, and you cannot afford to have them offside. You have to just go with the flow."³²⁷*

- 15.228 From the evidence I heard, families appear to me to want the following:
- (a) when a patient dies unexpectedly, the hospital to automatically follow-up with the next of kin in a timely manner rather than requiring the family to initiate contact themselves;³²⁸
 - (b) information about what happened, or if it is unclear what happened, to be told that that is the case;
 - (c) timely provision of further information as it comes to hand;
 - (d) inclusion in meetings which occur at the hospital regarding the incident;
 - (e) if what happened occurred due to an error on the part of a health professional, a frank acknowledgement of this at the outset and a suitable expression of regret;
 - (f) the ongoing support of a social worker or counsellor provided by the hospital. The social workers or counsellors must have flexibility to be able to provide genuine and practical assistance (for example, assistance with arranging childcare or home help in situations like those of Mr Murray,³²⁹ or counselling that takes place at a location specified by the family);
 - (g) to deal with health professionals and managers who are trained and able to deal sensitively and appropriately with them;
 - (h) an assurance that genuine efforts will be made to ensure that the error that led to the adverse incident or outcome will not happen again. That is, evidence that some effort has been made to improve the system.
- 15.229 Health professionals, on the other hand, are often reluctant to provide these things to families for various reasons, including that:
- (a) the health professional's focus is on treating the patient, not dealing with the patient's family in the event of the patient's demise;
 - (b) discomfort in dealing with a family's reaction to an adverse event, including irrationality, expressions of grief, a lack of understanding of medical processes and a readiness to blame the health professional for what may, in fact, be an inevitable outcome; and
 - (c) a fear that, by acknowledging any responsibility for the adverse outcome, the health professional or hospital will be regarded as having admitted liability in any subsequent claim of professional negligence.
- 15.230 A health professional may also, for human reasons, find it difficult to provide immediate open disclosure because of feelings of guilt or of uncertainty surrounding the sequence of events which has occurred.
- 15.231 A health professional's training may not adequately equip them to communicate with patients and their families and this should be remedied. The NSW Branch of the Australian Medical Association and the Australian Salaried Medical Officers' Federation submitted that it is necessary for doctors to develop skills of empathic communication with patients and their families.³³⁰ It was submitted that the Clinical Excellence Commission be tasked to promulgate clear guidelines to govern communications with patients and their families (including consulting with colleges regarding training in communications).³³¹
- 15.232 The Deans of the Medical Schools of NSW and the Australian Capital Territory, in a combined submission, recommended that all hospitals ensure that all interns, residents and registrars are educated about the principles and practice of full disclosure of information to patients or families in the event of an adverse event.³³² The Deans noted

that often patient safety and formal teaching programs exclude junior doctors, because they cannot be spared from the ward activities associated with patient care.³³³

15.233 I have no doubt that dealing with a patient's family or carers following an adverse event which has led to a death is extremely difficult. A senior representative of NSW Health made the point to me that in many instances, patient's families will not be grateful because information is being openly disclosed to them. In fact, they will be angry that something has gone wrong.³³⁴ Further, health professionals are making disclosures regarding the treatment administered in a situation of extreme, and often, unresolved grief.³³⁵ NSW Health acknowledged that the system is yet to think through what needs to be done to better manage that grief.³³⁶

15.234 Whilst the patient or family can become involved during or shortly after the Root Cause Analysis process, the Root Cause Analysis process is not designed to be a vehicle for meeting the patient or family's need for information. It is therefore not able to meet many of the expectations of patients and their families. The Root Cause Analysis process takes several months and is concentrated on systemic issues. Many times, the family is looking for a person to hold responsible.³³⁷ Establishing the expectations about the process is as much a problem as the process itself.³³⁸ It is apparent to me that the gap between families' and carers' expectations and what a Root Cause Analysis is designed to achieve has not always been handled well. I discuss more fully the Root Cause Analysis process and make recommendations for improvement in Chapter 16.

15.235 It seems to me that, if a family's concerns are dealt with sensitively and appropriately from the outset, less formal complaints will be made. Open disclosure works best if it is done immediately. As a senior representative of NSW Health put it, the ideal is:

"If something goes wrong, you go straight to the patient - "Yes, this shouldn't have happened. This is why it has happened. Now let's fix it." [This] hopefully predates the [Root Cause Analysis] process if the problems are identified."³³⁹

15.236 Health professionals need to be trained to ensure that this occurs. In their submission, Professors Slade and Iedema³⁴⁰ drew my attention to a recent evaluation of a national Open Disclosure pilot.³⁴¹ Among the recommendations of that evaluation (which was national in scope) were that:

"Open Disclosure training [should be] provided to health care staff across Australia to ensure that

a. clinical staff do not remain exposed (as they are now) to the risk of their and/or their colleagues' inadequate approaches to disclosing adverse events

b. clinical staff become competent in inducting colleagues and junior staff into Open Disclosure to equip them also for disclosure of adverse events and make them equally attentive to patients' experiences, needs and feelings."³⁴²

15.237 I agree with the substance of these recommendations.

Uniforms and name badges

15.238 Finally, in this chapter I wish to make recommendations about the wearing of uniforms and name badges by health professionals.

- 15.239 A key piece of **visual** communication between health professionals and patients is missing in most hospitals. That is, health professionals are not clearly identifiable as being doctors, nurses, physiotherapists and so on. Patients and their relatives find it difficult to identify what role each person plays and who might be in charge.
- 15.240 I heard consistent evidence of the confusion and stress this causes to patients and their families. Whilst the problem can be worse in the Emergency Department³⁴³ (often because people are there for shorter periods of time, are more anxious and there is a greater amount of activity), it is also a problem in intensive care³⁴⁴ and on the wards.
- 15.241 Mr and Mrs Anderson told me that when they accompanied Vanessa to the Emergency Department at Royal North Shore Hospital it was very difficult to know who was a doctor.³⁴⁵ No one wore uniforms or identification badges.³⁴⁶ They said that the difficulty identifying who each person was continued once Vanessa was transferred to the ward. Mr Anderson found that whenever he or his wife sought to speak to someone who they thought was a nurse at the nurse's desk, they were simply told that the person was not a nurse.³⁴⁷
- 15.242 The parent's of Belinda Griffey conveyed to me a similar experience. Mr Griffey said that when he arrived in the Nepean Emergency Department, the staff all looked the same. He had difficulty identifying who was who:
- "It is such a huge area and there are people everywhere, and casually clothed people... Anyone with a stethoscope was a doctor to me."³⁴⁸
- 15.243 Mr Griffey found that the problems with identifying staff continued on the wards.
- "Doctors are generally casually dressed, but with a stethoscope. Everyone walks around with an identification card. Sometimes the card is turned over. On one side the card is blank, on the other side there is a picture, and you virtually can't read whether they are a doctor or a nurse or a physiotherapist."³⁴⁹
- 15.244 The Griffey family found that it was difficult to identify the level of authority of members of the nursing and medical staff, making it difficult to find a staff member in a position of authority to speak to.³⁵⁰
- 15.245 One relative of a patient submitted to me that:
- "Medical and nursing staff should be readily identifiable from other people in the hospital (for example, consistent uniforms or white coats) and should have their name tags clearly visible at shoulder level. The anonymity that seems to exist at present seems to encourage an avoidance of responsibility and accountability..."³⁵¹
- 15.246 On my many visits to hospitals throughout the State, I found similar difficulties in identifying the roles of staff. In some Emergency Departments, staff wear scrubs of different colours to signify their differing roles. Whilst this is a good start, the difficulty from the patient's perspective is that they do not know which colour designates which role, because there are no wall charts to explain the code. As well, not everyone wears scrubs. Doctors particularly seem to dress in outfits ranging from scrubs, through denim jeans and t-shirts, to more formal wear such as suits.
- 15.247 Interestingly, the most easily identified designation which I saw in an Emergency Department were the ambulance paramedics, who were dressed in distinctly blue

coloured overalls with a white description "Paramedic" across the back of their shoulders.

15.248 I agree with the evidence given by the patients and relatives of patients regarding the difficulty of identifying the name or position of hospital staff. For myself, I found that the name tags attached to lanyards are often turned to the blank side, and in any event have type too small to read from any distance.

15.249 In their joint submission, the NSW Branch of the Australian Medical Association and the Australian Salaried Medical Officers' Federation shared the concern expressed by patients and relatives:

"Staff are often not identified properly, do not introduce themselves clearly, or are otherwise distracted because of pressures of work and fail to appreciate the fact that patients are not familiar with hospital routines and the different roles of the various members of the medical team."³⁵²

15.250 They suggested that NSW Health require the wearing of a prominently displayed and legible name tag by medical staff.³⁵³

15.251 A senior representative of NSW Health acknowledged that:

"The problem is that the patients don't know who we are any more. We also don't wear the badges that we used to wear that made it quite clear who we were...the patients don't have a clue who is looking after them."³⁵⁴

15.252 There is no single state-wide NSW Health policy relating to the wearing of uniforms by staff.³⁵⁵ Any policies relating to the wearing of uniforms are issued at an area health service or facility level.³⁵⁶ There was, to my observation, a range of practices in relation to uniforms, not only hospital by hospital, but ward by ward.

15.253 Some hospitals I visited had either introduced, or were in the process of introducing uniforms for at least some of their staff, particularly in the Emergency Department.³⁵⁷

15.254 Physiotherapists at Prince of Wales Hospital wear red uniforms with the word "physio" on them.³⁵⁸ Ms Batty submitted to me that clear uniforms were particularly important for elderly patients suffering from dementia.³⁵⁹ The staff can ask "has the person in red been to see you yet?"³⁶⁰ Staff in the Paediatric Unit at Mount Druitt Hospital have designed their own uniform, which is brightly coloured and has clearly embroidered on it the person's role (eg "nurse").³⁶¹ At Muswellbrook Hospital, midwives wore shirts which were violet.

15.255 The mere introduction of uniforms, without consistent policy and practice in place, is not a sufficient solution. At Bankstown Hospital, the hospital does not supply uniforms to the Emergency Department doctors.³⁶² I was told that the area health service had provided a range of uniforms, however, they had not designated a particular colour or type of uniform for a particular profession. Also the selection changes every so often, so that there will be a range of uniforms worn by the nurses at that hospital.³⁶³ Agency staff wear different uniforms again.³⁶⁴ The result is that the ward clerk's uniform at one hospital can be the nurses' uniform at another hospital.³⁶⁵

15.256 The wearing of uniforms was supported by some health professionals³⁶⁶ but not others, particularly specialists. I was told, and accept, that uniforms may not be helpful in mental health facilities.³⁶⁷

- 15.257 There are admittedly some practical difficulties regarding the wearing of uniforms by hospital staff that will need to be overcome. For example, the matter of how to deal with specialists who visit a hospital or unit on an irregular basis or who attend a number of different hospitals. However, I am of the view that these practical difficulties can be solved. For example, as is standard practice at disaster sites, one possibility is for visitors to wear vests or tabards identifying them as a visitor, or as a specialist, etc. A robust policy is capable of dealing with the various contingencies.
- 15.258 In my view, existing policy should also be strengthened to require the wearing of name badges with the first name and position of the person prominently displayed and readable.
- 15.259 Security concerns are reportedly sometimes raised by staff in relation to the wearing of name badges.³⁶⁸ In some circumstances, it may be that those security concerns are justified and, if that is the case, the inclusion of the person's surname is not essential. However, each person's first name and their role should be prominently displayed, either embroidered on their uniform or on a name badge.
- 15.260 NSW Health has stated that:
- "Stipulating the type of uniform to be worn by any of the health professionals is influenced by a number of complex factors including award conditions, negotiations with industrial organisations and agreement across professional and occupational groups regarding the selection of the range to be worn. Uniforms are also a highly sensitive issue with staff, and the implementation of any procedure needs to be conducted at a local level where the views of staff can be adequately canvassed and managed."³⁶⁹
- 15.261 While I do not discount the complexities, I am confident that any difficulties can be overcome so as to ensure that this key piece of visual communication is introduced and the confusion and stress caused to patients and families, due to their inability to easily identify staff, is alleviated.

Recommendation 62: *Within 12 months, NSW Health implement a state-wide policy ensuring uniforms or vests are worn by each health professional, identifying in large print the role of the health professional. The state-wide policy should:*

- (a) designate a colour to each professional role and ensure that the colour is consistently adopted;*
- (b) include a requirement for posters to be prominently displayed throughout NSW Health facilities providing a chart to indicate which uniform or colour is assigned to which profession; and*
- (c) NSW Health amend existing policy or develop additional policy to require the wearing of name badges (or similar, but not cards on lanyards) by each type of health professional, bearing in large print the person's name and title or role.*

¹ Inquest into the death of Vanessa Anderson (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p.5.

- 2 Inquest into the death of Vanessa Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 5.
- 3 Inquest into the death of Vanessa Anderson, (Unreported, Westmead Coroners Court, Westmead File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 5-6.
- 4 NSW Health, *Patient Safety and Clinical Quality Program, Third report on incident management in the NSW public health system 2005–2006*, 2006, NSW Health, p. 15.
- 5 Clinical Excellence Commission, *Special Commission of Inquiry Presentations: Incident Management and Root Cause Analysis*, 22 May 2008, p. 5.
- 6 NSW Health, *Patient Safety and Clinical Quality Program, Third report on incident management in the NSW public health system 2005–2006*, 2006, NSW Health, p. 15.
- 7 NSW Health, *Patient Safety and Clinical Quality Program, Third report on incident management in the NSW public health system 2005–2006*, 2006, NSW Health, p. 17.
- 8 Clinical Excellence Commission, *Special Commission of Inquiry Presentations: Incident Management and Root Cause Analysis*, 22 May 2008, p. 6.
- 9 The Clinical Excellence Commission, *Quality Systems Assessment, Statewide Report, Summary of Findings from the Area Health Services and the Children's Hospital Westmead*, November 2008, The Clinical Excellence Commission, p. 14.
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- 11 Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 30.
- 12 NHS National Patient Safety Agency, *Recognising and responding appropriately to early signs of deterioration in hospitalised patients*, November 2007, NHS, p. 14.
- 13 The Clinical Excellence Commission, *Between the Flags Project – The Way Forward*, October 2008, The Clinical Excellence Commission, at pp. 6 and 12.
- 14 Confidential Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 4.29-32.
- 15 Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 19.42-47.
- 16 Inquest into the death of Vanessa Anderson, (Unreported, Westmead Coroners Court, Westmead, File 161/2007, Magistrate Milovanovich, 24 January 2008), p. 5.
- 17 Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2118.33-40.
- 18 Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2118.43-2119.1.
- 19 Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2119.2-12.
- 20 Submission of Medical Staff Council, Orange Base Hospital, 18 March 2008, SUBM.001.0242 at 243.
- 21 Submission of Dr Elizabeth McCusker, undated, SUBM.045.0031 at 32.
- 22 Confidential submission, undated, SUBM.016.0003 at 9.
- 23 Confidential submission, undated, SUBM.016.0003 at 9.
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- 25 Submission of Dr Rosemary Marley, 28 March 2008, SUBM.032.0133 at 134.
- 26 Meeting with Institute of Medical Education and Training, 3 April 2008, transcript 68.21-29.
- 27 Submission of Dr Stephen Barratt, 28 March 2008, SUBM.035.0088 at 91.
- 28 Submission of Dr Stephen Barratt, 28 March 2008, SUBM.035.0088 at 91.
- 29 Submission of Dr Stephen Barratt, 28 March 2008, SUBM.035.0088 at 90.
- 30 Submission of Australian Medical Association (NSW) Limited & Australian Salaried Medical Officers' Federation, 28 March 2008, SUBM.016.0015 at 57.
- 31 Confidential submission, undated, SUBM.016.0003 at 9.
- 32 Confidential Bankstown hearing, 13 May 2008, transcript 4.07-26; Karen Priest, Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 3139.41-3140.4; Doreen Dawson-Heywood, Dubbo hearing, 19 March 2008, transcript 677.12-38.
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- 39 Root Cause Analysis Report, provided as part of the submission of Kevin and Christine Griffey, 8 April 2008, SUBM.069.0115 at 118.
- 40 Submission of Dr Rosemary Marley, 28 March 2008, SUBM.032.0133 at 134-135.
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- 42 Emma Ramirez, Wollongong hearing, 14 April 2008, transcript 1637.40-45.
- 43 Dr Paul Moran, Coffs Harbour hearing, 27 March 2008, transcript 1006.44-46.
- 44 Emma Ramirez, Wollongong hearing, 14 April 2008, transcript 1635.5-24
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- 46 Scott Wagner, public hearing at the Inquiry's offices via video-link from Lismore, 30 May 2008, transcript 3278.45-3279.2.
- 47 Professor Richard Lindley, Westmead Hospital hearing, 10 April 2008, transcript 1586.37-43.
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- 49 Summary of Comments from Participants Attending the Recognition and Management of Patients with Acute Conditions Course – RAMPAC, provided with Submission of Associate Professor Theresa Jacques, 14 May 2008, SUBM.043.0017 at 19.
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- 51 Meeting with Institute of Medical Education and Training, 3 April 2008, transcript 92.25-27.
- 52 Dr Ruth Arnold, Orange hearing, 18 March 2008, transcript 601.39-602.12
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- 54 Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 24.45-25.29.
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- 56 Meeting with the Institute of Medical Education and Training, 3 April 2008, transcript 74.10 – 76.1; Submission of the Institute of Medical Education and Training, 2 April 2008, SUBM.002.0206 at 208.
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- 58 Meeting with the Institute of Medical Education and Training, 3 April 2008, transcript 74.10 – 76.1.
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- 63 Meeting with Warren and Michelle Anderson, 7 March 2008.
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- ⁶⁵ Submission of Medical Staff Council, Orange Base Hospital, 18 March 2008, SUBM.001.0242 at 242.
- ⁶⁶ Julia Weston, Royal North Shore Hospital hearing, 2 April 2008, transcript 1208.30-41.
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- ⁷⁰ Australian Medical Association, *Safe Handover, Safe Patients - Guidance on Clinical Handover for Clinicians and Managers*, 2006, Australian Medical Association, p. 7, <http://www.safetyandquality.org/internet/safety/publishing.nsf/Content/PriorityProgram-05> (4 October 2008).
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- ⁷² Submission of NSW Health, April 2008, SUBM.075.0002 at 101.
- ⁷³ Final RCA Report provided as part of Submission of Adrienne and Lewis Furner, 17 March 2008, SUBM.005.0248 at 251.
- ⁷⁴ Professor Anthony McLean, Nepean Hospital hearing, 8 April 2008, transcript 1463.1-5.
- ⁷⁵ Meeting with the Institute of Medical Education and Training, 3 April 2008, transcript, 66.30-35.
- ⁷⁶ Submission of Associate Professor Martin Jones, 17 April 2008, SUBM.024.0190 at 191
- ⁷⁷ Submission of NSW Health, April 2008, SUBM.075.0002 at 65.
- ⁷⁸ Information provided during visit to Liverpool Hospital on 26 February 2008; Marilyn Peg Hibbert, Hornsby hearing, 11 March 2008, transcript 192.4-11; Rose Hills, Royal North Shore hearing, 14 March 2008, transcript 288.31-34.
- ⁷⁹ Information provided during visit to Liverpool Hospital on 26 February 2008.
- ⁸⁰ Information provided during visit to Concord Repatriation General Hospital on 21 February 2008.
- ⁸¹ Karen Fernance, Bankstown hearing, 2828.34-44.
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- ⁸³ Dr Ruth Arnold, Orange hearing, 18 March 2008, transcript 597.44-598.43; Submission of Medical Staff Council, Orange Base Hospital, 18 March 2008, SUBM.001.0242 at 242.
- ⁸⁴ Anne Frew & Susan Tait, Wollongong hearing, 14 April 2008, transcript 1653.26-33, 1654.32-34.
- ⁸⁵ Kellie Thomas, Nepean Hospital hearing, 8 April 2008, transcript 1438.27-1439.10
- ⁸⁶ Rozlyn Norman, Tamworth hearing, 25 March 2008, transcript 798.29-45.
- ⁸⁷ Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 30.
- ⁸⁸ Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 30.
- ⁸⁹ Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 30.
- ⁹⁰ Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 30.
- ⁹¹ Dr Ronald Hawkesford, Armidale hearing, 26 March 2008, transcript 921.44-922.29.
- ⁹² Dr Ronald Hawkesford, Armidale hearing, 26 March 2008, transcript 921.44-922.29.
- ⁹³ Dr Robert Buist, Prince of Wales Hospital hearing, 1 May 2008, transcript 2528.36-44.

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- ⁹⁴ Submission of Associate Professor Martin Jones, 17 April 2008, SUBM.024.0190 at 191.
- ⁹⁵ Dr Ruth Arnold, Orange hearing, 18 March 2008, transcript 604.23-41.
- ⁹⁶ Root Cause Analysis Report, provided as part of the submission of Kevin and Christine Griffey, 8 April 2008, SUBM.069.0115 at 119.
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- ⁹⁹ Information provided during visit to Blacktown Hospital on 7 July 2008.
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- ¹⁰¹ Submission of Chris Dolan, 11 June 2008, SUBM.074.0025 at 25.
- ¹⁰² Sonya Jones & Kay Robins, Concord hearing, 24 April 2008, transcript 2165.17 - 2166.27.
- ¹⁰³ Sharne Hogan, NSW Health briefing, 8 October 2008, transcript 11-40.
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- ¹¹¹ Sonya Jones & Kay Robins, Concord hearing, 24 April 2008, transcript 2165.17 - 2166.27.
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- ¹¹³ Sydney West Area Health Service, *Westmead Hospital, Nursing Care and Handover and Model of Care Policy*, WMH-NP-001, November 2007, Westmead Hospital.
- ¹¹⁴ Confidential Westmead hearing, 10 April 2008, transcript 33.30-31.
- ¹¹⁵ Confidential Westmead hearing, 10 April 2008, transcript 33.31 -34.7
- ¹¹⁶ Divisions of Medicine and Surgery and Quality Department, Concord General Repatriation Hospital, *Clinical Directory Handover Booklet*, December 2007, Concord Repatriation General Hospital, SUBM.049.0030.
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- ¹²⁰ Divisions of Medicine and Surgery and Quality Department, Concord General Repatriation Hospital, *Clinical Directory Handover Booklet*, December 2007, Concord Repatriation General Hospital, SUBM.049.0030.
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- ¹²² Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2118.5-6.
- ¹²³ Dr Stephen Reddel, Concord hearing, 24 April 2008, transcript 2117.38-2118.17.
- ¹²⁴ Letter from NSW Health to Special Commission of Inquiry, 10 October 2008; NSW Health Briefing, 8 October 2008, transcript 2.38-44.
- ¹²⁵ Letter from NSW Health to Special Commission of Inquiry, 10 October 2008, p. 4.
- ¹²⁶ Letter from NSW Health to Special Commission of Inquiry, 10 October 2008; NSW Health, *Special Commission of Inquiry Presentation: P Vital and Clinical Handover*, 8 October 2008, p. 4.
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- 180 Submission of the Board of Directors of the North West Slopes Division of General Practice, 28 March 2008, SUBM.009.0230 at 232.
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- 182 Dr John Death, Gosford hearing, 10 March 2008, transcript 158.24-27.
- 183 Submission of Dr Brian Morton, 26 March 2008, SUBM.016.0160 at 160.
- 184 Dr Margarie Brodie-Cross, Queanbeyan hearing, 15 April 2008, transcript 1750.9-1752.20.
- 185 Dr Susan Kurrle, Hornsby hearing, 11 March 2008, transcript 265.38-45.
- 186 Dr Susan Kurrle, Hornsby hearing, 11 March 2008, transcript 266.16-29.
- 187 Dr Susan Kurrle, Hornsby hearing, 11 March 2008, transcript 266.24-41.
- 188 Submission of the Board of Directors of the North West Slopes Division of General Practice, 28 March 2008, SUBM.009.0230 at 230.
- 189 Privacy obligations in NSW arise under the *Privacy and Personal Information Protection Act 1998* (NSW), which regulates personal information in the public sector and the *Health*

Records and Information Privacy Act 2002 (NSW), which regulates personal health information in the public sector. The Health Privacy Principles (or HPPs), contained in the *Health Records and Information Privacy Act 2002* (NSW), establish 15 rules for the management of information. HPP 11 sets out the limits on disclosure of personal health information and relevantly provides:

“11 Limits on disclosure of health information

(1) An organisation that holds health information must not disclose the information for a purpose (a secondary purpose) other than the purpose (the primary purpose) for which it was collected unless:

(a) Consent

the individual to whom the information relates has consented to the disclosure of the information for that secondary purpose, or

(b) Direct relation

the secondary purpose is directly related to the primary purpose and the individual would reasonably expect the organisation to disclose the information for the secondary purpose, or ...

Note. For example, if information is collected in order to provide a health service to the individual, the disclosure of the information to provide a further health service to the individual is a secondary purpose directly related to the primary purpose.

...”

¹⁹⁰ The *Privacy Act 1988* (Cth) regulates the Commonwealth public sector and private sector health providers (such as individual medical practitioners and private hospitals) in NSW. The Commonwealth legislation includes National Privacy Principle 2 which mirrors the principles enshrined in the NSW legislation quoted above.

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¹⁹³ Dr Scott Whyte, Gosford hearing, 10 March 2008, transcript 108.36-45; Dr Suzanne Hodgkinson, Liverpool hearing, 17 April 2008, transcript 1860.4-7.

¹⁹⁴ Dr Suzanne Hodgkinson, Liverpool hearing, 17 April 2008, transcript 1860.7-11.

¹⁹⁵ Letter from NSW Health to Special Commission of Inquiry, 22 October 2008.

¹⁹⁶ Dr Rebecca Kozor, Hornsby hearing, 11 March 2008, transcript 180.20-25.

¹⁹⁷ Email from Office of Medical Education, University of NSW to the Special Commission of Inquiry, 17 October 2008; Email from Dean, Medical School, University of Western Sydney to Special Commission of Inquiry, 6 October 2008; Email from Faculty of Medicine, University of Sydney to Special Commission of Inquiry, 29 October 2008.

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¹⁹⁹ Email from Faculty of Medicine, University of Sydney to Special Commission of Inquiry, 29 October 2008.

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²⁰³ Letter from Professor Mark Brown, NSW Institute of Medical Education and Training to Special Commission of Inquiry, 22 October 2008.

²⁰⁴ Letter from Professor Mark Brown, NSW Institute of Medical Education and Training to Special Commission of Inquiry, 22 October 2008.

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Special Commission of Inquiry

Acute Care Services in NSW Public Hospitals

Part D

Patient Safety

16 Safety & Quality

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- 16.1 Safety and quality is, and should be, at the very heart of the NSW public health system. Safety and quality is an integral part of what everybody working in the public health system does every day with every patient. It is the central value in the culture of the system. Anything less than 100% safety of the system is unacceptable and ought not to be tolerated.
- 16.2 As James Reason stated in his book, *Managing the Risks of Organizational Accidents*:
- “If eternal vigilance is the price of liberty, then chronic unease is the price of safety.”¹
- 16.3 The quest for safety and quality permeates my entire report and many of my recommendations. In this chapter, I will look at the various mechanisms in operation in NSW public hospitals to ensure safety and quality, and how those mechanisms can be improved.
- 16.4 In particular, I will examine:
- (a) the organisations working within and alongside NSW public hospitals in the field of safety and quality, and how these organisations can work together more effectively;
 - (b) one of the best mechanisms for improving safety and quality, being the formulation and implementation of models of care across NSW public hospitals;
 - (c) how errors and incidents are presently reported and investigated in NSW public hospitals, and how this can be improved; and
 - (d) how information about performance and errors is being provided to patients, their families, clinicians and the public, and how this can be significantly improved.
- 16.5 There is an immense amount of Australian and international research and effort focused on improving safety and quality. I cannot do justice to this body of work in this report, in the time available to me, nor is it necessary to fulfil my Terms of Reference. I note that various organisations working within and alongside NSW Health, in particular, the Clinical Excellence Commission, spend a considerable amount of effort digesting this research and assimilating it into the delivery of medical services in NSW public hospitals.

Walker reforms

- 16.6 It is worth noting at the outset that, in recent years, considerable improvements have been made in respect of safety and quality in NSW public hospitals following recommendations made by the Special Commission of Inquiry into Campbelltown and Camden Hospitals conducted by Bret Walker SC (the **Walker Inquiry**), the final report of which was delivered on 30 July 2004:²
- (a) As a result of the recommendations made by the Walker Inquiry, new professional conduct & performance arrangements were introduced into the *Medical Practice Act 1992* (NSW) and the *Nurses and Midwives Act 1991* (NSW);
 - (b) As a result of the recommendations made by the Walker Inquiry, amendment was made to the *Health Care Complaints Act 1993* (NSW) (implemented 2005);
 - (c) Since the Walker Inquiry, NSW Health has amended its Open Disclosure Policy, introducing a new policy in June 2006;
 - (d) Since the Walker Inquiry, NSW Health has amended its revised policy regarding the management of complaints or concerns about clinicians;
 - (e) Since the Walker Inquiry, NSW Health has implemented a mandatory incident management policy; and
 - (f) The Clinical Excellence Commission has been established, to take over and expand on the work of the Institute of Clinical Excellence.
- 16.7 Many of these changes form part of the *NSW Patient Safety and Clinical Quality Program* launched in May 2005,³ the key components of that program being:
- Systematic management of incidents and risks.
 - A new Incident Information Management System.
 - Clinical Governance Units in each Area Health Service.
 - A Quality Assessment Program for all public health organisations.
 - The establishment of the Clinical Excellence Commission.
- 16.8 Various aspects of that program are discussed in more detail below.
- 16.9 As a result of the changes that have been made following the Walker Inquiry, my task in this chapter is much easier than it might otherwise have been. Many of the necessary organisations and processes to facilitate safety and quality now exist in NSW public hospitals.
- 16.10 However, in my view, adjustments can and should be made to these organisations and processes to enable them to work more effectively to improve safety and quality in NSW public hospitals. The challenge remains as to how to implement such change throughout the system.

Prevalence of error in NSW public hospitals

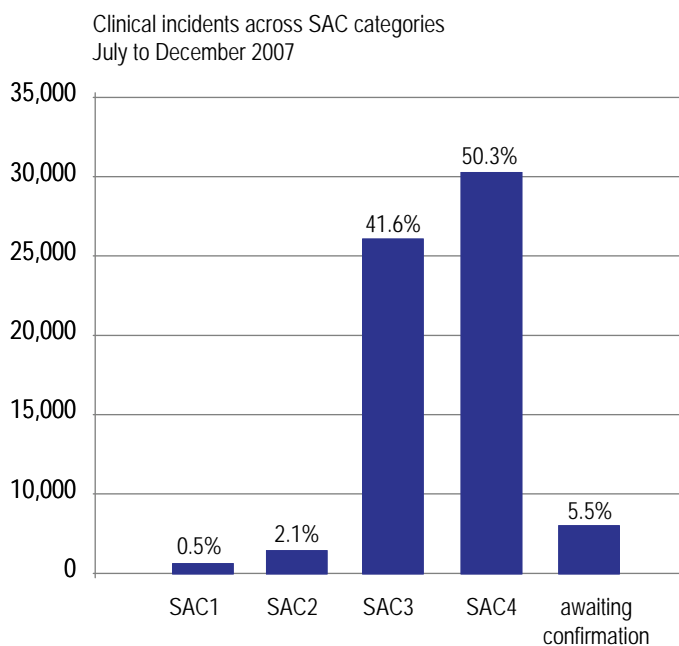
- 16.11 Safety and quality of health care has been defined by the Australian Institute of Health and Welfare as follows (footnotes removed):⁴

"The **safety** of the health care system has been defined by the National Health Performance Committee as relating to the avoidance or reduction to acceptable limits of actual or potential harm from health care management or the environment in which health care is delivered. Similar definitions are in wide use in Australia. For instance, the former Australian Council for Safety and Quality in

Health Care, replaced by the Australian Commission for Safety and Quality in Health Care, defined safety as the degree to which potential risk and unintended results are avoided or minimised.

Quality is a multi-faceted concept which can be defined in different ways. At a broad level, quality reflects the extent to which a health care service or product produces a desired outcome. At a more detailed level, the National Health Performance Framework views quality as a guiding principle in assessing how well the health system is performing in its mission to improve the health of Australians. The Framework's nine dimensions for the assessment of health system performance include appropriate, effective, responsive, continuous, sustainable, accessible and capable, all considered relevant (along with the safety dimension) to the quality of health care services. In its report *Charting the Safety and Quality of Health Care in Australia (2004)*, the former Australian Council for Safety and Quality in Health Care presented information relating to the dimensions of effectiveness, appropriateness, accessibility and responsiveness as relevant to the quality of health care in Australia. Complementing the information on those dimensions was information on safety, and also on equity, or the degree to which all Australians could benefit equally from health care service provision."

- 16.12 In the 6 month period between July 1 and December 31, 2007, there were 753,938 admissions to hospitals and other health facilities in NSW, 1,348,265 operations performed, 969,887 emergency department attendances, and 10,662,490 interactions with patients who were not admitted (out-patient and other services).⁵ During that period 57,808 incidents were reported, of which 294 were classified as being in the most serious Severity Assessment Code (a "SAC1") (which includes incidents resulting in the patient's death). 1,214 of the incidents reported during that period were classified as Severity Assessment Code (a "SAC2") (being the second most serious classification which includes incidents relating to a major loss of function unrelated to the natural course of the illness the patient is suffering).⁶



- 16.13 As in any other work environment, errors are made in NSW public hospitals every day in the care of patients. Unlike most work environments, the consequences of error in NSW public hospitals can be fatal.

Value in pursuing quality & safety

- 16.14 Obviously enough, improvements in safety and quality reduce the risk of injury or death to patients. Beyond this, however, there are additional benefits.
- 16.15 As quality is improved, the cost of health care is reduced. The National Health and Hospitals Reform Commission in their April report estimated that adverse events and mistakes cost the Australian health system \$2 billion per annum.⁷ Dr McGlynn of Sydney Children's Hospital submitted to my Inquiry:

"...as you improve the quality of the work you are doing, the cost of delivering it comes down... the best health system or the best health sites in particular are not necessarily those with the biggest budgets - in fact, frequently it's the reverse. It is those with smaller budgets that often have the better outcomes. So there's no direct correlation between the size of your budget and the outcomes of your system. It is really the clinical practices and pathways and the efficiencies of your clinical systems that create the quality and the cost savings. I think you see that in surgery in general."⁸

- 16.16 During the 2 day expert panel convened during the Inquiry, Professor David Mayer discussed processes that had been introduced at University of Illinois, Medical Centre Chicago for identifying error and the associated reduction in costs:

"We have done root cause analysis ... and come up with 150 process improvements. We have significantly good and hard data that shows that this did catch or trap many errors that could have occurred. Take, for example, retained foreign bodies, we have caught eight in the last four years because the data shows that if you do 5,000 surgical cases a year, you will have one retained foreign body. The literature is out there on identifying risk... In the last four years since we have done a system change to our care, we have caught eight foreign bodies that were identified and taken out before the patient was woken up in the operating room. We estimate that saved us about \$4 million. When you track the previous 10 years of 20 cases per year we were seeing, each one of them ended up costing us on average about \$500,000 to defend, to settle, to go through the process, and that doesn't even include suffering and pain and all the issues that the patients go through and the cost of that."⁹

- 16.17 Another example from the United States of America of quality and safety improvements that have led to a reduction in the cost of the provision of care is the adoption of the checklist developed by Professor Pronovost for the insertion of central-lines at John Hopkins Hospital. The checklist led to significant decreases in the number of central-line bloodstream infections.¹⁰ Within one year of the introduction of the checklist, the 10 day line-infection rate at that hospital went from 11% per cent to zero.¹¹ Within 2 ½ years of the introduction of the checklist, only 2 line infections had occurred in the hospital. It was calculated that the use of the checklist had prevented 43 infections, 8 deaths and saved US\$2 million dollars in costs.¹²
- 16.18 However, driving down cost must not be the aim sole of safety and quality measures.

- 16.19 As the Independent Pricing and Regulatory Tribunal of NSW (**IPART**) noted in its recent report, *Framework for performance improvement in health*, having strong systems in place to measure, report and reward safety and quality performance ensures that improvements in other aspects of health service provision are not at the expense of safety and quality.¹³

Models of Care

- 16.20 One of the main ways of improving patient safety in NSW public hospitals is to standardise the way in which patients are treated. One way of doing this is by adopting “models of care”.
- 16.21 The second term of reference requires me to identify models of patient care used in the delivery of acute care services in NSW public hospitals, recommend changes to these models to improve the quality and safety of patient care, identify impediments to the implementation of these changes and how these impediments might be overcome.
- 16.22 During my inquiry, the term “models of care” has been used to refer to various concepts.
- 16.23 It has been used to describe the way health services are delivered. NSW Health state that:

“[A] model of care is a description of how care is managed and organised.”¹⁴

...

the model of care provides the clinical and organisational framework for the service.”¹⁵

- 16.24 An example of this use of the term “model of care” is the use of Emergency Medical Units (**EMU**) in the Emergency Department, being short stay beds for Emergency Department patients who do not require inpatient admission, or the “Fast Track” initiative, which provides access to timely care for those with a minor injury or illness.¹⁶ The term “model of care” extends to the use of particular clinicians to undertake care: for example, the use of an Emergency Nurse Practitioner to diagnose and discharge patients within the Emergency Department, is also captured by the term “model of care”.¹⁷
- 16.25 A model of care is also described as a consensus developed by a group of informed clinicians about how medical care should be provided in their particular domain of activity: for example, the steps to be taken in the diagnosis and treatment of a patient who presents with symptoms of stroke. According to the Greater Metropolitan Clinical Taskforce, a model of care:
- (a) has to be consensual;
 - (b) has to be based on evidence;
 - (c) has to have a plan attached to it; and
 - (d) has to have an outcome capable of being assessed.¹⁸
- 16.26 The term “model of care” has also been used during my Inquiry to refer to what could also be described as a clinical protocol or clinical pathway. A clinical protocol is a best evidence based practice used at the ward level to reduce unacceptable variation in patient care and deliver high quality, safe and cost effective treatment to patients.¹⁹ For

example, a nurse or junior doctor delivers care to a patient according to a clinical protocol and is not empowered to depart from the steps set out there-in.

- 16.27 I do not intend to be overly pedantic in my interpretation regarding the term “model of care”. The discussion immediately below focuses on models of care as the clinical and organisational framework for providing health services. In many ways, however, the ideas relating to standardisation and the method in which models of care should be developed apply with equal force to the development of clinical protocols.

The role of models of care

- 16.28 Dr Helen Bevan, the Director of Service Transformation at the UK National Health Service Institute for Innovation and Improvement, expressed the view that to achieve good quality care across an entire health system, massive standardisation is required, as well as a commitment by all of those working in the health system to that standardisation.²⁰

- 16.29 A similar view was conveyed to me by a senior NSW Health official, namely that to operate safely and effectively, the health system should be based on common operating systems. I was told that the individualism of clinicians often impedes the achievement of this goal (although clinicians, whilst resistant to top-down direction, are responsive to evidence-based redesign).²¹ I was told that most models of care are developed from observed clinical practice, but there is considerable variation between hospitals.²²

- 16.30 NSW Health told me that variations in treatment represent a significant challenge to the safety and quality of health care, as do the lack of evidence about the quality of different treatments and the failure to translate evidence into practice.²³

- 16.31 I was told that having a clearly defined and articulated model of care helps to ensure that clinicians are:

“‘viewing the same picture’, working towards a common set of goals and, more importantly, are able to evaluate performance on an agreed basis”.²⁴

- 16.32 I should make it clear from the outset that I understand that the various experts who point to the benefit of standardised models of care do not suggest that they will be followed mindlessly, in every case, regardless of variants. But they do say that there is such a thing as best practice, to be identified from the literature and the approach taken by clinical leaders supported by evidence. Further, clinicians who depart from best practice should have good, and not merely idiosyncratic, reasons for doing so.

Applying models of care

- 16.33 There are differing views as to how extensively models of care can be applied to the treatment of patients.

- 16.34 For example, it was submitted by a senior NSW Health representative that:

“... there is a growing recognition that healthcare delivery models can be standardised for [more than] 80% of patients who have a common condition. There are internationally well respected organisations [for example] Map of Medicine, Milliman, that have developed best practice pathways based on published evidence and with wide clinical consultation. These standard pathways for patient journeys mean it is much easier for staff to know what is expected to happen for a particular patient, [and patients] can be tracked for variance especially if

computer based and the outcomes [are] reported to clinicians."²⁵

16.35 The Mater Private Hospital in Brisbane has introduced care guidelines researched and developed by the US company, Milliman. Milliman have developed care guidelines for 60% of diagnosis-related groups (DRGs).²⁶ The Mater Private Hospital reports that each time they have applied a care guideline, the results have consistently shown a reduction of length of stay, improved patient outcomes and increased patient satisfaction.²⁷

16.36 Some areas of clinical practices have not completely embraced the adoption of standardised models of care. NSW Health submitted to me that:

"...clinicians worldwide still place great emphasis on clinical freedom and resist what some clinicians have derided as 'cookbook medicine', despite the evidence that standardised clinical best practice is safer, more effective and better for patients."²⁸

16.37 Dr Keegan, the immediate past President of the NSW branch of the Australian Medical Association and Consultant Gastroenterologist/Hepatologist at Nepean Hospital, explained to me the difficulties sometimes experienced by physicians regarding the adoption of standardised pathways of care :

"...the model [of articulating fairly precise protocols or pathways for care] seems to have provided benefits in surgery [which] is usually more predictable than medicine. ...[T]o apply [the model to medicine], would require you to have the evidence available in terms of making predictions as to what would happen in a certain clinical circumstance if you did a certain thing. ... If you try to build an evidence-based approach to something... you actually need that evidence. Unfortunately, in much of what we do in medicine, the evidence is not available.

So the predictability of what happens in medicine is a lot more difficult [than surgery]. The other thing is that the subdivision of the types of patients that you have is more difficult, and, on top of that, the multiple variance that you need to consider is difficult as well, so if you get a patient coming in with one condition, in a medical circumstance they are likely to have half a dozen others as well. So the predictability is difficult.

That doesn't mean you shouldn't try to do this, and it doesn't mean that you shouldn't try to apply all the evidence that you have available - you most definitely should - but trying to predict is more problematic."²⁹

16.38 Ms Wickham, a Nurse Manager of acute interventional medicine and cardiology at Nepean Hospital told me that there are no "clear-cut" pathways in medicine.

"...medicine ... is one of the areas in which the clinicians practice probably their own way a lot of the time... There is an opportunity for some common ground, and I think that would be along the lines of simple things like patients having Warfarin management, patients having airway management, as in asthmas, and pneumonias is another one that probably could... At the moment, it sort of varies according to the clinician and how they practice ... It has always been very difficult to try to get pathways up and running in medicine. We have tried many times."³⁰

16.39 There are several advantages to having models of care applied uniformly across NSW hospitals. Protocol-based care means that a predictable journey can be provided to patients. Clinical staff become accustomed to it and to observing a team approach.

16.40 Dr Brydon, the Director of Clinical Operations at Sydney Children's Hospital, submitted that increase in the standardisation of common practices and processes across NSW Health means that:

"... staff and patients can and will be able to move between regions and expect more similarities than differences in the way they work or are treated. This reduction in variance is a core principle of many high quality systems, and New South Wales is well along the way to getting the infrastructure in place to support such a change."³¹

16.41 I reject the argument that evidence-based standardised models of care are in some way contrary to the spirit and obligations of practitioners given the improvements in safety and quality which are proved to flow from their professional use.

16.42 There are several elements to a successful model of care.

Need for clinician consultation

16.43 A recurring theme in evidence and submissions on this topic was that, unless clinicians are involved in the design of a model of care, the prospects of successfully introducing the model of care locally or on a state-wide basis is negligible. The experience of the senior representatives of the Greater Metropolitan Clinical Taskforce is that models of care developed by the clinical networks are likely to find greater acceptance with the clinical community than guidelines prepared by NSW Health without consultation.³² This is also the experience of the Clinical Excellence Commission:

"The successful development and implementation of effective protocols is more likely to occur when involved clinicians are effectively engaged in the process. ... Helen Bevan has highlighted ... that the lessons learned from the UK Modernisation Agency are that the failure to obtain strong clinician engagement early in projects and to maintain this throughout represents the greatest weakness in improving the quality and safety of patient care."³³

16.44 The NSW Branch of the Australian Medical Association and the Association of Salaried Medical Officers' Federation submitted to the Inquiry that:

"... protocols or clinical guidelines lay down principles regarding desirable models of care. They are not prescriptions set in stone and it would defeat the purpose of developing and promulgating such protocols and guidelines if they were to become ossified. It is important therefore that models of care which are developed, are developed with maximum clinician engagement. They must be clinically, not bureaucratically, driven."³⁴

16.45 NSW Health acknowledged that it encounters difficulties when models of care are mandated that have not been developed with the substantial involvement of clinicians. In those circumstances, it must go to a great deal of effort to convince clinicians at the "front line" to adopt the model.³⁵

16.46 Dr Karplus, a vascular medicine specialist at Concord Repatriation General Hospital, conveyed to me his experience of models of care which are mandated by NSW Health:

"The Department of Health has a bad public relations image with clinicians. This is in part due to poor communication of our policy decisions. In general, health employees don't know how policies are arrived at or who makes the policy decisions and don't feel any sense of ownership about many of the policies, which seemingly appear in a random manner and demand mandatory compliance within a short period of time. Now, it is obvious that there are key working parties and committees that are dealing with these things, but the communication to the average clinician I think is lacking ... More communication from the department about policies needs to be done and more engagement in the formulation of policies ... I might mention the Medical Assessment Units as an example ... The first that a lot of the clinicians at public hospitals heard about this was when the policy was announced and it had a very short time line before it was set to be introduced. This tends to alienate people to a great extent... The idea may be laudable - in fact, it's actually worse if the idea is good and the implementation from a policy point of view is bad."³⁶

- 16.47 Many clinicians expressed the view to me that models of care designed through the clinical network process have a much better rate of success. Professor Tony Dodds, Director of Haematology at St Vincent's Hospital and the co-chair of the New South Wales Bone Marrow Transplant Network said that the process enables the clinicians to come up with agreed joint protocols and it is possible to build on the expertise of the different clinicians, and have them all working together rather than in competition with each other.³⁷
- 16.48 I agree that clinical networks play an important role in the development, improvement and enhancement of models of care and set out later in this chapter my recommendations relating to the future of the GMCT.
- 16.49 I have discussed later in this chapter the importance of providing clinicians with data on their particular ward or hospital, to incentivise them to change and improve. Providing evidence to clinicians that patient safety and clinical quality is improved by reason of the adoption of a particular practice is essential for motivating clinicians to adopt improved practices. During the course of the Inquiry a number of clinicians have emphasised to me that the availability of clinically relevant data has a powerful impact for the successful implementation of new models of care.
- 16.50 There is a need to be able to implement a model of care once the consultation process has been completed, even if individual clinicians would prefer to continue to treat patients as they previously did. The desire for professional independence may clash with the need for a managed system.³⁸
- 16.51 Resistance by clinicians to standardised models of care may not always be on valid grounds. The system needs to have mechanisms to deal with this type of resistance. In the United States of America, a clinician might be refused insurance due to their failure to follow specified guidelines.³⁹ In NSW, one possible sanction, for specialists, is the refusal of accreditation or visiting rights.⁴⁰ For employees, the employment contract might require the clinician to follow certain procedures. However, a senior NSW Health representative acknowledged that directives are not the most effective way of implementing change:

"clinicians don't like directives. If you give a directive, you are guaranteed that they will not like it."⁴¹

- 16.52 In this regard, clinical leaders and clinical champions are vital to the successful implementation of models of care.⁴²
- 16.53 The Clinical Excellence Commission submitted to me that:
- “The successful implementation of strategies for improving the quality and safety of patient care requires clinical leadership. This is essential to ensure that best practice is applied consistently by all clinicians working in clinical teams.”⁴³
- 16.54 Clinical leaders need to be supported by management in order to be able to lead and motivate staff.⁴⁴ I have discussed the importance of clinical leaders in Chapter 7 and made recommendations to expand and strengthen existing clinical leadership programs and enhance the support provided to those in clinical leadership roles elsewhere in my report.

Understandable

- 16.55 Models of care need to be clearly and succinctly expressed. Where appropriate, they need to be captured in a simplified policy model easy for managers to implement and staff to comply with.
- 16.56 This has not historically been the case for much of NSW Health policy, as senior officials from NSW Health acknowledged:
- “We have recognised that the way we put policies out is quite confusing. It is not easy for managers to know how to implement them. There are probably hundreds of policies that go out from the department.”⁴⁵
- “A lot of our policies at the moment require either an area health service, a hospital or a clinical unit to reinterpret that document and then to come up with their own procedures. We are trying to take all of that away and have a simple across-the-system process that can be implemented at the clinical interface.”⁴⁶
- 16.57 In its submission to the Inquiry, NSW Health identified the difficulties in introducing new policy in a complex system:
- “The dissemination and communication of all clinical policies is a challenge, given the volume of policies which exists (*sic*) and the number of staff to which they need to be communicated. While comprehensive policies can be developed state-wide, the cultural change to implement the policies is more problematic.
- ...
- Medical staff in the acute hospital setting...often selectively choose to implement, modify or ignore policy or may be unaware of policy. Accordingly, organisational compliance with policy becomes a significant challenge for management and becomes a source of tension between clinicians and management.”⁴⁷
- 16.58 For instance, in a recent review, NSW Health found it had 30 policies on infection control. I was told that NSW Health is in the process of developing a one page statement followed by a simple standard that sets out what staff are expected to know and to implement and then step by step implementation guide.⁴⁸ I have further discussed this issue elsewhere.

Accessible

- 16.59 Clinical policies and protocols need to be readily accessible to staff.
- 16.60 The Clinical Excellence Commission has identified that issues relating to policies and procedures were a factor contributing to 25% of serious incidents occurring between July 2005 and June 2006 in NSW hospitals.⁴⁹
- 16.61 The medical indemnity insurer, Avant, also identified in their submission issues relating to policy and procedure:

"... medical errors often occur not because of a lack of core knowledge and skills, but instead relevant local policies and procedures did not exist, were not known by staff and/or were not followed by staff. ...[P]olicy should provide clear, concise and unambiguous guidance to the end user. Such documents should be readily accessible to staff and the process of orientation and induction of new staff should include clear instructions about the availability and use of policy and procedure manuals."⁵⁰

- 16.62 One of the factors identified by the NSW Deputy State Coroner as contributing to Vanessa Anderson's death was:

"A failure by medical staff to be aware of general policies which require consultation with the treating Doctor in cases where constraints to the quantity and type of analgesia should have been known..."⁵¹

- 16.63 I was told by clinicians that there is a lack of readily accessible website and intranet resources for busy clinicians to access protocols or NSW Health policies. Dr Reddel, a neurologist at Concord Repatriation General Hospital, submitted that the hospital's intranet website is difficult to search. For example, protocols on how to use particular drugs may take 15 minutes to find, which is time a busy clinician does not have to spare.⁵² Protocols are rendered useless if not rapidly accessible to clinicians.⁵³
- 16.64 Dr Rankin, a haematologist and chair of the Lismore Base Hospital Medical Staff Council expressed his frustration that there is no means for a clinician to register an interest in a particular subject areas to allow a new policy to be sent directly to him or her. Dr Rankin finds that he has to keep going back to the NSW Health website to determine whether anything (of relevance) has recently been released.⁵⁴
- 16.65 Dr Clair Langford, a geriatrician at Wollongong Hospital, submitted that multiple new policies and protocols are put forward in large documents, without summaries of what is new compared to the previous policies and protocols. She said, and I accept, that it is a reality that documents are not read because of information overload.⁵⁵
- 16.66 On my visit to the Emergency Department at Hornsby and Ku-ring-gai Hospital, I was shown a set of 28 protocols which were in a laminated form and readily available on the counter-top of the central workstation. I was told that they were regularly consulted and used, because they were easily accessible.

Accountable

- 16.67 There is a need to hold clinicians and managers accountable if a model of care is not substantially followed.
- 16.68 It was submitted to me that this does not always occur:

"The culture in health at present is best described as one of persuasion, managers (or administrators) and clinical leaders currently try to persuade staff to deliver care in certain ways. If staff choose not to agree then there is no consequence.

...

In health we do not yet know how to embed systems that work reliably across the state and ensure compliance. In my view it needs a change of culture and use of techniques from other industries that are regularly faced with similar challenges.

The new culture should explicitly state that certain principles would underpin all that we do as an organisation, policies should be developed and disseminated in ways that make it easy for staff to know what is expected of them and then managers and staff must be held accountable for ensuring it happens.

Other industries have systems and strategies to achieve this, particularly large national and international corporations. In NSW Health, we rely on the old style government approach, viz: issue a policy (often a dense, large document) and simply expect it is successfully implemented. We put it on the web which is a very difficult site to search...

There are much better ways to disseminate policies and assess compliance ...Managers need to be accountable for working with their local team to monitor the efficacy of the policy. [NSW Health] needs to be accountable for having a system of issuing policies that makes it easy for managers and staff to comply. Measurement of outcomes must form part of the monitoring for compliance

...

There are currently no consequences for poor performance or non-adherence to policies or procedures for managers or staff... Staff who continually ignore policy or rules are left alone to continue in their non-cooperative ways." ⁵⁶

- 16.69 I was told that in Chicago recently, a hospital adopted the "three strikes and you're out" rule for hand washing. Staff were monitored at the ward level for hand washing, for a first time failure, a discussion was held, second time they were counselled and warned, third time they were suspended. Compliance rates lifted very rapidly.
- 16.70 I was provided with an example: At Wollongong Hospital, Ms Alexander and Ms Ramirez, both speech pathologists, told me that the New South Wales Stroke Guidelines, developed with the involvement of the Greater Metropolitan Clinical Taskforce, outline that all patients with a suspected stroke or neurological event should be kept nil by mouth prior to a speech pathology assessment.⁵⁷ This pathway was designed and developed to ensure that patients were treated in accordance with best practice and to minimise mortality and morbidity associated with stroke.⁵⁸ The Greater Metropolitan Clinical Taskforce told me that because of the increased use of speech pathologists at Wollongong Hospital to assess the swallowing of a stroke patients (including the introduction of an after-hours hours service), the aspiration pneumonia rate had been reduced from 24 % to 4 %.⁵⁹
- 16.71 Ms Alexander and Ms Ramirez told me that patients were frequently fed in the Emergency Department or in the stroke unit before being seen by a speech pathologist.

They said that about 15% of patients were not being kept nil by mouth.⁶⁰ There is no system to ensure compliance by the nursing or medical staff who choose not to keep patients nil by mouth. Safety and quality of patient care will only improve with a more formalised approach to accountability.⁶¹

- 16.72 This is a very thorny problem. On the evidence which I received I could not express any view as to how best to keep clinicians accountable in the absence of serious misconduct for their actions in treating patients. I tend to the view that the greatest force for good in NSW Health is the opinion of one's fellow clinicians when all are in possession of good information, evidence and data. Accordingly, I refrain from suggesting measures to force compliance. NSW Health may need to revise this in the years to come if my faith in professional responsibility and peer opinion proves to be misplaced.

Establishing Clinical protocols

- 16.73 At the present time, NSW and Australia, generally does not have a well developed system for ensuring adherence to clinical best practice in the treatment of patients in public hospitals. This is despite the growing evidence, as recorded in literature, that evidence-based protocols ensure higher quality outcomes. As a recent article stated:

"Medical literature provides growing evidence of the efficacy of particular diagnostic and therapeutic protocols that reduce morbidity and mortality. Health care facilities that follow established protocols get higher-quality outcomes. Hospitals with the highest adherence to evidence-based protocols for the treatment of pneumonia, for example, have 20 % fewer complications and 25 % fewer readmissions than hospitals with the lowest adherence. However, we found that health care providers in the countries we studied fail routinely to use the available protocols properly. In Germany, for instance, 35 % of diabetes patients in one survey reported that their annual check-up didn't include an examination for foot ulcers, one of the normal complications of chronic diabetes."⁶²

- 16.74 NSW Health acknowledged in its submission to the Inquiry that:

"The development of clinical policies and clinical models of care is not standardised. While a number of bodies and groups develop well thought-out policies, based on clinical best practice, and there are numerous international resources regularly reviewing and publishing clinical best practice, Australia does not currently have a systematic process to ensure that this clinical best practice is adopted."⁶³

- 16.75 The NSW Branch of the Australian Medical Association and the Association of Salaried Medical Officers' Federation would seem to support the development of clinical policies and clinical models of care under certain conditions. They submitted to me that:

"Unless the exodus of consultants from the public health system is stopped and reversed, registrars and junior medical officers will increasingly be reliant upon protocol and procedures - clinical guidelines - to guide their clinical decision making, where these are available.

Despite the looming need for system wide protocols and procedures (clinical guidelines) which reflect best practice and which can compensate to a degree for the shortage of specialist presence in the public system,

public health in NSW has no resource base equivalent to that provided in the United Kingdom by that country's National Institute for Health and Clinical Excellence. To take one significant example, in the important area of public hospital obstetric care, the Commission has received, and will receive, evidence that consultant obstetricians have left the system in droves. Training of Registrars has suffered and will continue to suffer as a result. Yet no initiatives have been taken at the level of NSW Health to fund and co-ordinate the production of common evidence based protocols and procedures (clinical guidelines) for obstetric care.

Nor are other specialities given the benefit of centrally promulgated Clinical Guidelines of the kind developed and published in the UK by the NICE. Our own Clinical Excellence Commission does not appear to be resourced to a level where it could fulfil this role."

- 16.76 The NSW Branch of the Australian Medical Association and the Association of Salaried Medical Officers' Federation suggested that Clinical Excellence Commission be resourced to develop and promulgate (in consultation with IMET and GMCT and clinicians) system wide clinical guidelines of the kind issued in the United Kingdom by the National Institute for Health and Clinical Excellence.⁶⁴
- 16.77 The Independent Pricing and Regulatory Tribunal of NSW (**IPART**) noted in its recent report, *Framework for performance improvement in health*, its support for an expansion of the range of clinical areas that have evidence-based clinical pathways.⁶⁵ IPART recommended that NSW Health, the Clinical Excellence Commission and relevant clinical groups work together to expand the range of clinical areas that have documented evidence-based clinical pathways.⁶⁶
- 16.78 I agree with the views to which I have just made reference as to the need to expand clinical pathways; however, in my view this should be undertaken by the new Clinical Innovation and Enhancement Agency, as reflected in my recommendations which are set out in this chapter below.

Organisations contributing to safety and quality in NSW public hospitals

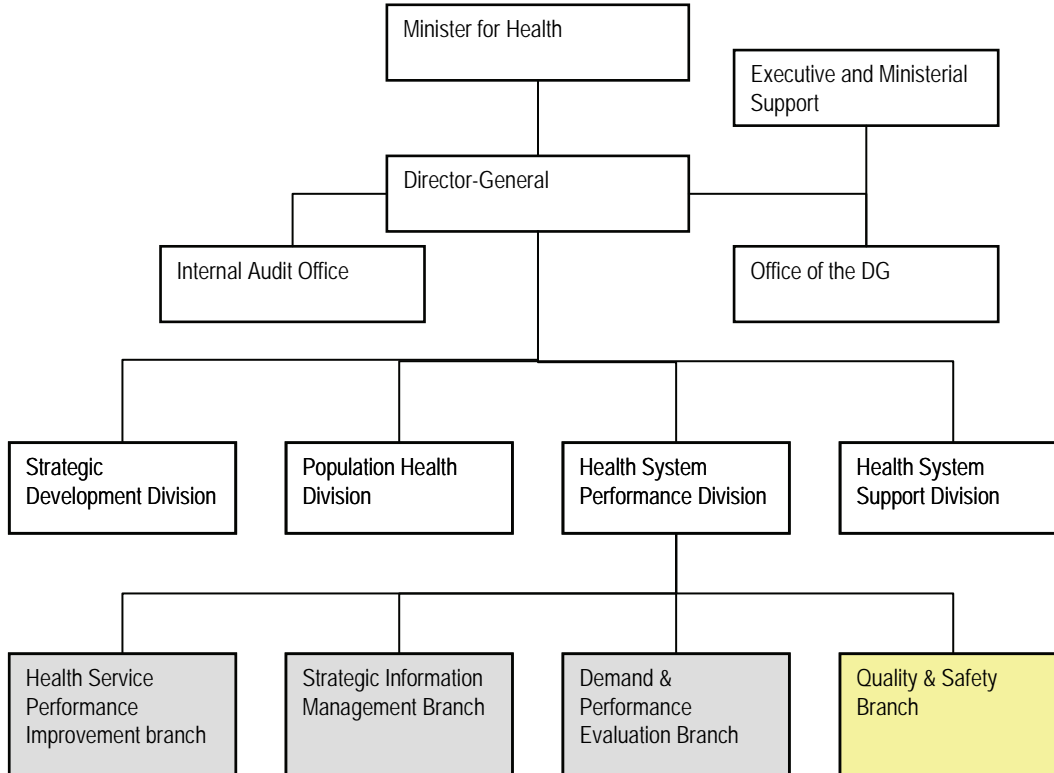
- 16.79 There are several organisations, both within and alongside NSW Health and its public hospitals, that are vital to improving safety and quality.

Organisations within NSW Health and its hospitals

- 16.80 As a general observation, it appeared to me that staff responsible for safety and quality in NSW public hospitals were generally regarded by other staff as being part of the administration and management of the hospital rather than having a vital clinical role. This perception needs to change.

NSW Health Quality and Safety Branch

16.81 The NSW Health's Quality and Safety Branch is one of four Branches that comprise the Health System Performance Division.



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16.82 The Quality and Safety Branch comprises 20 full time positions⁶⁷ and has an annual budget of just under \$2.9m.⁶⁸

16.83 The Quality and Safety Branch has primary carriage of day-to-day liaison with the Clinical Excellence Commission (CEC) at an officer level. NSW Health told me that:

"Regular meetings are held between the Quality and Safety Branch and the CEC to plan programs and strategies and to ensure there are clear lines of accountability and governance of quality and safety strategies. Co-operation of the two organisations as equal partners is essential for successful implementation of quality and safety strategies in NSW."⁶⁹

16.84 NSW Health informed me that the role of the Quality and Safety Branch is to provide leadership, direction and strategy for clinical quality and patient safety improvement in NSW and to coordinate and support the effective state-wide implementation of the NSW Patient Safety and Clinical Quality Program.⁷⁰ The Branch achieves this by: defining policies and standards that health services must implement, by providing expert strategic support to the area health services for the implementation of the policies and standards, and by contributing to future directions for service quality development.⁷¹

16.85 Broadly, the 4 functions of the Branch are to:⁷²

- (a) set standards and develop policy;

- (b) identify priority areas for improvement;
- (c) manage performance of the area health services against KPIs; and
- (d) manage and analyse SAC 1 clinical incidents.

16.86 I am informed by NSW Health that some of the recent and current projects undertaken by the Quality and Safety Branch of NSW Health include the following.⁷³

- (a) management and monitoring of the NSW Incident Information Management System (**IIMS**). Project teams within the Quality and Safety Branch and the Clinical Excellence Commission use the information contained in IIMS to inform the development of programs implemented across the healthcare system (including the 'Between the Flags' program, Health Care Associated Infection (**HAI**) prevention program and the Blood Watch program). Recently, the Quality and Safety Branch has focused on improving the performance of IIMS.
- (b) finalising NSW Health policies on Hand Hygiene, and Environmental Cleaning; and
- (c) development of the Complaint Management Policy and Guidelines; implementation of the mandatory Open Disclosure Policy and the Open Disclosure Guidelines; development of the policy directive and supporting guidelines on the Management of a Complaint or Concern about a Clinician; and development and revision of the Correct Patient, Correct Procedure, Correct Site Policy and the supporting safety toolkits;
- (d) Other projects include:
 - (i) The Quality and Safety Branch is working with the John Hunter Hospital to seek accreditation from the Therapeutic Goods Administration to reprocess single-use devices.
 - (ii) The Quality and Safety Branch was responsible for developing hospital falls injury performance indicators (falls in hospital resulting in deaths and serious harm following falls). The Branch is responsible for extracting falls data from the IIMS, and other NSW Health databases on a monthly basis and preparing relevant reports.
 - (iii) The Quality and Safety Branch has been involved in establishing the NSW Health Statewide Medication Safety Committee. In addition to providing secretariat support to the Committee, the Quality and Safety Branch monitors IIMS and Root Cause Analysis data and provides information to the system about risks in medication use, issuing policies and guidelines that improve the quality of medicine use, and developing tools and educational material for clinicians. The Quality and Safety Branch is also responsible for the review and maintenance of the National Inpatient Medication Chart in NSW and contributing to this program at a national level.
- (e) The Quality and Safety Branch provides the secretariat for the Reportable Incident Review Committee and Improving Communications in NSW Health Committee.

Committees related to safety and quality

16.87 There are a number of committees, some of which are long standing, that assist NSW Health in relation to issues of safety and quality. These include:

- (a) The Committee on Healthcare Associated Infection Prevention and Control, which advises the Chief Health Officer on all aspects of the strategic response to healthcare associated infections and infection control.⁷⁴

- (b) The NSW Mental Health Sentinel Events Review Committee. Mental health sentinel events are incidents involving serious injury to, or the death of a person, where a person suffering or reasonably believed to be suffering from a mental illness is involved. The Committee reviews all mental health sentinel events in circumstances where a public sector agency was involved in a sentinel event relating to the person's care, management or control. The Committee advises and reports directly to the Minister for Health.⁷⁵
- (c) The NSW Maternal and Perinatal Committee, which reviews and makes recommendations on maternal and perinatal morbidity and mortality in NSW, and advises NSW Health on matters relating to the health of mothers and newborn infants.⁷⁶
- (d) The Reportable Incident Review Committee, which examines and monitors serious clinical adverse events reported to NSW Health via reportable incident briefs and ensures appropriate action is taken. Identifies issues relating to morbidity and mortality that may have state-wide implications. The Committee provides advice on policy development to achieve healthcare system improvement.⁷⁷
- (e) The Special Committee Investigating Deaths Under Anaesthesia (SCIDUA),⁷⁸ the primary objective of which is to investigate deaths occurring under Section 12B(1)(e) of the *Coroners Act 1980* (NSW), that is, where a person died while under, or as a result of, or within 24 hours after the administration of, an anaesthetic administered in the course of a medical, surgical or dental operation or other procedure. SCIDUA was originally convened in 1960 in response to concerns about the number of deaths occurring during anaesthesia. SCIDUA was re-established under the *Health Administration Act 1982*.⁷⁹
- (f) The Special Committee Investigating Deaths Associated with Surgery (SCIDAWS),⁸⁰ which is informed by the State Coroner of deaths associated with the administration of an anaesthetic or other death in which the coroner considers that a surgical operation had been a contributory factor. SCIDAWS was established in 1994 in response to concerns about the number of deaths occurring in the peri-operative period, defined as within 30 days of a surgical procedure.⁸¹

Health Care Advisory Council and Health Priority Taskforces

- 16.88 The Minister for Health and the Director General of NSW Health receive advice from the Health Care Advisory Council. This Council is supported by 11 Health Priority Taskforces, including the Greater Metropolitan Clinical Taskforce:⁸²
- (a) Aboriginal Health Priority Taskforce
 - (b) Children and Young People's Health Priority Taskforce
 - (c) Chronic, Aged and Community Health Priority Taskforce
 - (d) Critical Care Health Priority Taskforce
 - (e) Information and Communication Technology Health Priority Taskforce
 - (f) Maternal and Perinatal Health Priority Taskforce
 - (g) Mental Health Priority Taskforce
 - (h) Population Health Priority Taskforce
 - (i) Rural Health Priority Taskforce

(j) Sustainable Access Health Priority Taskforce

- 16.89 The Health Priority Taskforces develop models of care which are submitted for consideration to the Health Care Advisory Council (which includes the Chairs of each of the other Taskforces). If the model of care has budgetary implications, then NSW Health may have further input into the model of care.⁸³

Clinical Services Redesign Program

- 16.90 The aim of this program is to redesign the processes used in delivering safe care of good quality for patients. The Clinical Services Redesign Program (**CSRP**) uses a process re-engineering methodology similar to that used in other industries to improve customer service, teamwork, safety and efficiency.⁸⁴ The broad phases of process redesign are diagnosis, solution and implementation.⁸⁵ In the diagnostic phase, the patient journey is mapped to identify the “disconnects” and facilitate a diagnosis of the problem.⁸⁶ That phase will usually point to a variety of solutions which have the potential to improve flow; increase safety and improve the quality of the processes.⁸⁷
- 16.91 NSW Health retained a panel of private consulting firms to provide advice on undertaking process re-engineering and to facilitate redesign working parties. The firms also assisted in coaching local hospital managers to give them the skills necessary to implement the solutions.⁸⁸
- 16.92 NSW Health piloted the Clinical Services Redesign Program in one hospital, John Hunter in Newcastle, in 2002 and implemented it in 10 Sydney hospitals (Westmead, Nepean, Prince of Wales, Liverpool, St George, Canterbury, Royal North Shore, Gosford, Campbelltown and Wollongong) in the financial year 2004-05. The NSW Government then funded a 3-year, state-wide program.⁸⁹
- 16.93 Over 85 projects have been undertaken by the Clinical Services Redesign Program in over 50 hospital in NSW, including projects in surgery, emergency care, acute care, integrated aged and chronic care services, cardiology, performance management development, patient flows and mental health in the emergency department.⁹⁰
- 16.94 I was told by NSW Health that the Clinical Services Redesign Program has reduced variation in performance between area health services.⁹¹
- 16.95 Criticisms of the Clinical Services Redesign Program I heard about included that it was expensive, intensive and lacked clinician engagement⁹² and that, while it had been effective in some areas, it has been challenging to move to system-wide results.⁹³
- 16.96 My intentions for the future of the Clinical Services Redesign Program are set out below.

Clinical Governance Units and other committees at area health services

- 16.97 From January 2005, under the NSW Patient Safety and Clinical Quality Program, each area health service was required to establish a Clinical Governance Unit. The Director of each Clinical Governance Unit is a member of the Area Health Service Executive with direct reporting responsibilities to the Chief Executive.⁹⁴
- 16.98 Key functions of the Clinical Governance Units include:⁹⁵
- (a) supporting implementation of the incident information management system;
 - (b) ensuring all deaths are reviewed and referred to the Coroner and other appropriate committees;

- (c) supporting staff in implementing quality policies and procedures;
 - (d) providing a senior complaints officer available 24 hours per day, seven days per week to ensure appropriate action is taken to resolve serious complaints;
 - (e) improving communication between clinicians and patients and their families; and
 - (f) developing area-specific policies associated with patient safety, ethical practice and management and complaints handling.
- 16.99 The Clinical Governance Units also work with the Clinical Excellence Commission to:⁹⁶
- (a) identify issues of a systemic nature that affect patient safety and clinical quality in the NSW health system, and develop and advise upon implementation strategies to address these issues; and
 - (b) provide the primary point of contact for the Clinical Excellence Commission for the Quality System Assessments and provide ongoing support for these assessments.
- 16.100 The number of full-time equivalent staff designated as being part of the Clinical Governance Units appear to vary greatly between area health services. For example, Hunter New England Area Health Service has 26.5 of full-time equivalent staff and Special Project staff of 4.4 full-time equivalent,⁹⁷ whereas South Eastern Sydney/Illawarra Area Health Service has 8.4 full-time equivalent staff.⁹⁸
- 16.101 There is a perception among some clinicians that Clinical Governance Units are not effective. Dr Rankin of Lismore Base Hospital submitted that:
- "Clinical Governance Units (CGUs) appear to be powerless to implement improvements, no matter how important, if the dollars in the budget are not there, or the CEO says no. These decisions (to not improve, quality or safety of patient care) are not communicated to medical staff or the public in a timely, transparent fashion. Are CGUs able to push harder for changes to improve patient care, or does their position in the AHS and as part of the DoH compromise their efficacy?
- For example, Lismore CGU would notify medical staff and the public that a recommendation to the CEO to improve patient care by appointing a Transfusion Nurse Consultant to the Area, as per Clinical Excellence Commission urgings, has not occurred, and why."⁹⁹
- 16.102 Dr Rankin suggested that the Clinical Governance Units should become a separate entity from NSW Health and the area health services, so as to become an impartial investigator and advocate. Dr Rankin said that this would allow for recommendations of Clinical Governance Units that are not implemented to be communicated to medical staff and the public, together with information as to why the area health service had not implemented the recommended changes.¹⁰⁰
- 16.103 Apart from the Clinical Governance Units, there are committees, units and positions that exist in area health services to address issues relating to clinical safety and quality. These vary between area health services. However, all areas have an Area Health Care Quality Committee (which may take various names such as Area Clinical Quality Council) and generally have a number of other committees, such as Drug Committees, Blood Products/Transfusion Committees, Incident Review Committees, Infection Control Committees and Falls Committees.¹⁰¹
- 16.104 The information provided to the Inquiry by NSW Health suggests that, outside of the Clinical Governance Units, the number of full-time positions specifically devoted to

safety and quality varies enormously, with some area health services having no positions at all.

- 16.105 It seems to me that the Clinical Governance Units serve a useful function, however, their effectiveness could be improved. I have made recommendations in Chapter 31 that each area health service have an Executive Clinical Director who is a qualified medical practitioner. The Clinical Governance Units should work with the Executive Clinical Director to improve safety and quality in the area health services.

At the hospital

- 16.106 NSW Health has no mandatory requirements for specific safety and quality committees, at a hospital or facility level. NSW Health told me that facilities are encouraged to establish committees to support the implementation of key patient safety and clinical quality programs. The size and type of committee will vary depending on the size and services provided at the facility.¹⁰²

- 16.107 The following provides examples of committees at a facility level.

- (a) In Sydney South West Area Health Service all facilities have executive committees that oversee clinical safety and quality. Each facility has its own unique structure to address safety and quality issues.
- (i) For example Campbelltown/Camden have the following committees: Clinical Review Committee Quality Committee; 13 specialty based mortality and morbidity review groups; an Infection Control Committee, a Drug & Therapeutic Committee, a Risks Management Committee, a Policy Committee and Working Parties in Patient Falls, Pressure Ulcers and Hand Hygiene.¹⁰³
- (ii) Concord Repatriation General Hospital has a Patient Care Committee which reports to the Hospital Governance Committee. The Patient Care Committee reviews individual problems that have occurred with patient care and systemic problems seen or perceived in to be a risk. I was told that the committee meets monthly. The committee comprises nursing, medical, allied health and administrative staff. The Morbidity & Mortality committees for each discipline may refer a case to the Patient Care Committee and the Patient Care Committee also reviews the minutes from those meetings.¹⁰⁴
- (b) In Greater Southern Area Health Service facility committees vary with the site and may include the following: clinical review committees, falls committee, drug committees, infection control committees.¹⁰⁵
- (c) In North Sydney Central Coast Area Health Service facility committees vary with the site. As an example, the North Shore Ryde Health Service committees include the following: Patient Safety and Clinical Quality Committee, Clinical Policies Committee, Falls Committee, Infection Control Committee, Blood and Blood Products Committee, Drug and Medication Safety Committee, Wound Care Committee Documentation Committee, Resuscitation and Emergency Committee, Correct Procedure, Correct Patient, Correct Site, Wound Care Committee.¹⁰⁶

- 16.108 Noting the variability of the structures at facility level, it is not surprising that I received evidence at some hospitals that the structures in place relating to ensuring safety and quality were not always sufficient. A clinician at Tamworth submitted to me:

"There's almost no serious system-wide looking at why people die and what's going on or things related to it.

We now do a death audit on every patient, but we have finance meetings; we don't have death audit meetings at the hospital. Their executive don't come and say, 'You had a lot of people die'."¹⁰⁷

- 16.109 Another witness submitted to me that mandatory morbidity and mortality meetings should occur monthly in every department and every ward.¹⁰⁸
- 16.110 The Patient Care Committee at the Concord Repatriation General Hospital appears to me to be an excellent model. In my view, all facilities, if they do not already have such a committee, should investigate setting up a patient care committee similar to that of the Concord Repatriation General Hospital and, in particular, have a patient care committee with the following features: monthly meetings, include nursing, medical, allied health and administrative staff, review all deaths in the facility, and review minutes of morbidity & mortality committee meetings and any other safety and quality committee meetings.

Recommendation 63: *NSW Health should encourage each facility to have a patient care committee which has, at least, the following features: monthly meetings; include nursing, medical, allied health and administrative staff; review all deaths in the facility; and review minutes of morbidity & mortality committee meetings and any other safety and quality committee meetings.*

Clinical Excellence Commission

- 16.111 The Clinical Excellence Commission (**CEC**) is a Board-governed, statutory health corporation established under the *Health Services Act 1997* (NSW).¹⁰⁹ The Clinical Excellence Commission was originally established as the Institute of Clinical Excellence (**ICE**) in December 2001. The primary role of the ICE was to improve the practices and systems that underpin the sound delivery of health care. In August 2004 the role and purpose of the ICE was expanded and it was renamed the Clinical Excellence Commission.¹¹⁰
- 16.112 The establishment of the Clinical Excellence Commission was one of the key components of the NSW Health Patient Safety and Clinical Quality Program (**PSCQP**), which was developed in response to issues of safety and quality arising from the Walker Inquiry.¹¹¹
- 16.113 The Clinical Excellence Commission reports directly to the Minister for Health through its Board, which is appointed by the Minister.¹¹² The Clinical Excellence Commission also liaises with the Director-General of NSW Health and, as noted above, regularly interacts with the Quality and Safety Branch of NSW Health.¹¹³
- 16.114 The functions of the Clinical Excellence Commission are to:¹¹⁴
- (a) Promote and support improvement in clinical and quality and safety in public and private health services;
 - (b) Monitor clinical quality and safety processes and performance of public health organisations and to report to the Minister about those matters;
 - (c) Identify, develop and disseminate information about safe practices in health care on a state wide basis, including (but not limited to):
 - (i) Developing, providing and promoting training and education programs.
 - (ii) Identifying priorities for and promoting the conduct of research about better practices in health care;

- (d) Consult broadly with health professionals and members of the community in performing its functions;
- (e) Provide advice to the Minister for Health and Director-General of NSW Health on issues arising out of its functions.

16.115 The Directions Statement of the Clinical Excellence Commission provides that its “core mission” is to identify issues of a systemic nature that affect patient safety and clinical quality in the NSW health system and develop and advise upon implementation strategies to address these issues.

16.116 The Clinical Excellence Commission articulated in its submission that its role:

“... is not in the realm of policy development or to direct the implementation of policies and practices within hospitals and area health services. This is the responsibility of the NSW Health Department, and implementation is the responsibility of area health services as overseen by the NSW Health Department.

The CEC is not funded to undertake policy development or authorised to direct implementation of the improvement activities in relation to the issues it identifies.

In performing its role, the CEC works closely in partnership with the NSW Department of Health, particularly the Quality and Safety Branch, in ensuring its programs and initiatives are in line with and complement the NSW Health Plan and strategic directions. Other close partners include area health services, particularly Clinical Governance Units, and other Health partners such as the Greater Metropolitan Clinical Taskforce (GMCT), Institute of Medical Education and Training (IMET), NSW Rural Institute and the Sax Institute.”¹¹⁵

16.117 The Clinical Excellence Commission has an annual operating budget of just under \$8m.¹¹⁶ The Clinical Excellence Commission employs just under 30 Full Time Equivalent staff.¹¹⁷

16.118 Since its inception in 2004, the Clinical Excellence Commission has undertaken a number of system-wide safety and quality projects.

16.119 Recent projects and their results undertaken by the Clinical Excellence Commission include:

- (a) **Clinical Leadership Program**, which I discuss in Chapter 7. I note that have elsewhere recommended that NSW Institute for Clinical Education and Training design, institute, conduct and evaluate leadership training for clinicians to enable clinicians to become clinical leaders and also health system leaders. I envisage that this would takeover from and build on the work the Clinical Excellence Commission has done in the Clinical Leadership Program.
- (b) **Special reviews or inquiries.** The Minister for Health or NSW Health Director-General may from time to time request the Clinical Excellence Commission to conduct special reviews or inquiries in relation to the safety and quality of health care or matters of public health. A recent review conducted by the Clinical Excellence Commission was the *Implantation Procedures for Permanent Pacemakers in Public Hospitals in NSW (2007)*, which reviewed the outcomes of different hospitals in respect of complications following the insertion of a pacemaker, and was able to identify particular hospitals and surgeons who were systematically making errors.¹¹⁸ I was told by Dr England, a consultant physician

and cardiologist that, during the Clinical Excellence Commission review, it was found that one hospital had significantly higher rates of complication. The Clinical Excellence Commission acted immediately and alerted the “chief executive officer” of the hospital. This resulted in a change in pattern of medical behaviour.¹¹⁹

- (c) **Patient Safety Program.** Analysis of state-wide clinical incident data from the Incident Information Management System (**IIMS**) forms an integral part of the program. Part of the program is publishing the bi-annual *Incident Management in the NSW Public Health System* report, which the Clinical Excellence Commission does in collaboration with the Quality and Safety Branch of NSW Health.¹²⁰
- (d) **Root Cause Analysis (RCA) Review Group.** The RCA Review Group was convened by the NSW Department of Health in mid-2007. The group’s role is to review and analyse RCA reports to identify themes and trends and highlight areas of concern to the Reportable Incidents Review Committee (**RIRC**). The Group functions as an advisory body to RIRC which has the mandate to act. The Group reviews RCA reports and classifies them according to a clinical management minimum data set which includes wrong procedure, missed diagnosis, wrong treatment, and unpreventable death.¹²¹
- (e) **Falls Prevention Program.** This is a state wide program to prevent falls and fall-related injury and admissions to hospital. Each area health service has appointed a Falls Co-ordinator and developed falls prevention plans. The Clinical Excellence Commission provides state wide leadership, co-ordination and support.¹²² The program commenced in June 2005 and is ongoing.¹²³
- (f) **Blood Watch.** The Clinical Excellence Commission initiated the Blood Watch program mid-2006, in collaboration with NSW Health.¹²⁴ The program’s primary goal is to improve the safety and quality of fresh blood product transfusions in all NSW Public Hospitals.¹²⁵ The Clinical Excellence Commission has funded 9 project officers for 12 months, to assist with program implementation in area health services.¹²⁶ The Clinical Excellence Commission reports that among the key reportable outcomes of the project has been evidence of a reduction in the issue of blood products reported by the NSW Australian Red Cross Blood Service for the 2007-08 financial year.¹²⁷ The project is scheduled to run until January 2009, however, additional funding may be granted to allow the project to extend for an additional 3 years.¹²⁸
- (g) **Central Line Associated Bacteraemia in Intensive Care Units (CLAB-ICU).** The project is being implemented in conjunction with the NSW Intensive Care Coordinating and Monitoring Unit (**ICCMU**). The project commenced in March 2007 and will run until June 2009.¹²⁹ Its aim is to improve patient outcomes by reducing central line associated blood stream infections, using a modified collaborative methodology to implement a standardised guideline for insertion and management of central lines in NSW intensive care units. I was told that all adult level 5 and 6 level intensive care units and the paediatric ICUs at Sydney Children’s Hospital and The Children’s Hospital at Westmead are currently participating.¹³⁰
- (h) **The Collaborating Hospitals' Audit of Surgical Mortality (CHASM).** CHASM is a systematic peer-review audit of deaths associated with surgical care. The CHASM program has the support of the NSW State Committee of the Royal Australasian College of Surgeons (RACS), the Clinical Excellence Commission and NSW Health. CHASM is an ongoing program that is being progressively rolled out across NSW and commenced with two Area Health Services – Sydney West and Hunter New England from 1 January 2008.¹³¹

- (i) **Hand Hygiene.** The Hand Hygiene campaign “Clean Hands Save Lives” ran from February 2006 to February 2007¹³² and aimed to minimise the risk to patient safety by improving compliance with hand hygiene practices.¹³³
- (j) **‘Between the Flags’.** The trial program was conducted between November 2007 and July 2008.¹³⁴ A state-wide implementation has been recommended for a 5 year timeframe.¹³⁵ The program seeks improvement in the recognition and management of the deteriorating patient in the acute inpatient hospital ward setting.¹³⁶
- (k) **Performance Indicators and Medication Safety (PIMS).** This project ran between late 2005 and late 2007,¹³⁷ and was a joint project between the Clinical Excellence Commission and NSW Therapeutic Advisory Group (**TAG**) to improve medication safety and the quality use of medicines in NSW through the implementation of two Medication Safety Self Assessment (**MSSA**) tools, and the revision of “Indicators for Drug Use” in Australian hospitals. The system is voluntary and as at 30 November 2007, 89 facilities (excluding multi purpose services) had completed the audit.¹³⁸
- (l) **Paediatric Emergency Care Guidelines.** The Children's Emergency Care Project (**CECP**) was a joint initiative of the Clinical Excellence Commission, NSW Health and the NSW Child Health Networks. It aimed to develop a model for guideline implementation by integrating clinical practice improvement methodologies and evidence based practice to enable clinicians to embed best practice routinely in paediatric emergency care.¹³⁹
- (m) **Safer Systems, Saving Lives (SSSL).** SSSL was a 12-month project running from February 2006 involving 39 teams across 5 states initiated by the Australian Council (now Commission) for Safety and Quality in Health Care. Ten NSW teams were funded to participate in the national project, with a coordinator at the Clinical Excellence Commission providing project leadership for the NSW teams. The project was based on the USA's Institute for Health Care Improvement 100,000 LivesCampaign, which sought to reduce harm to patients in hospitals by implementing six ‘bundle of care’ clinical interventions in the following clinical areas: 1. Prevention of Ventilator Associated Complications (VAC); 2. Prevention of Central Venous Catheter-related Blood Stream Infections (CVC); 3. Prevention of Surgical Site Infections (SSI); 4. Implementation of Rapid Response Systems (RRS); 5. Prevention of Adverse Drug Events (ADE); and 6. Improved Care for Patients with Acute Myocardial Infarction (AMI).¹⁴⁰

16.120 Some of these Clinical Excellence Commission projects have also been discussed in further detail elsewhere in my report:

- (a) the Clinical Leadership program;
- (b) the “Clean Hands Saves Lives”; and
- (c) the Between the Flags project.

16.121 One of the major system-wide projects undertaken by the Clinical Excellence Commission has been the Quality Systems Assessment.

Quality Systems Assessment

16.122 In 2007, the Clinical Excellence Commission commenced a Quality Systems Assessment (**QSA**) across NSW Health including the NSW Ambulance Service. The QSA involves an annual review which assesses the systems and processes that health services have in place:

- (a) to support safety and quality of clinical care; and
- (b) to manage risks that are acknowledged to have a significant impact on patient safety and the quality of care.¹⁴¹

16.123 There are four components of the QSA. These are:¹⁴²

- (a) Completion of a self-assessment survey at three levels of the organisation (the “activity statement”). The three levels of the organisation are the area health service level, the facility level and the unit level (“the respondents”).
- (b) Verification of the activity statements.
- (c) Feedback and reporting to respondents, NSW Health and the community.
- (d) Development of improvement plans at each level of the organisation which respond to the issues identified in the self-assessment process. The improvement plan will be subject to review in subsequent QSA assessments.

16.124 For the initial QSA, over 1250 activity statements were sent out in October 2007 to the 8 area health services and the Children’s Hospital at Westmead. The response rate is set out in the table below.¹⁴³

Level of Assessment	Surveys sent	Total returned	Response rate %
Area health service	9	9	100%
Network/cluster	27	22	85%
Facility	99	96	97%
Clinical unit/department	1050	846	80%

16.125 The initial assessment in 2007/08 provides a baseline measure of patient safety and clinical quality activities in the NSW system. Assessment of safety and quality systems via the QSA will occur on an annual basis. Future annual surveys will have a thematic approach to targeted areas of assessment.¹⁴⁴ The data from the first survey providing the baseline measure will be reassessed every 5 to 7 years.¹⁴⁵

16.126 Qualitative analysis of the data extracted by the Clinical Excellence Commission from the Quality Systems Assessments indicates 12 problem areas where patient safety is at risk as the quality of care may be sub-standard:

- (a) Staffing, including: skill mix of medical and nursing team, staff to patient ratio; recruitment and retention, dependence on medical locums, limited care due to inadequate staffing, inadequate consultant coverage, (particularly after hours), junior nursing and medical workforce shortages; and poor after hours medical and nursing cover.¹⁴⁶
- (b) Communication and documentation, including: poor standard of documentation, including errors in documentation, inadequate clinical handover, miscommunication between nursing and surgical/medical colleagues, often no centralised point of accountability, and duplication of diagnostic procedures often due to poor history taking and documentation.¹⁴⁷
- (c) Patient identification, including: wrong site or procedure, incorrect surgical site, incorrect procedure performed, and incorrect identification of patient.¹⁴⁸
- (d) Clinical management, including: recognition and management of the deteriorating/critically ill patient, delays in treatment; incorrect management, missed diagnosis; inadequate monitoring of patients on high risk medications, fluid balance errors; occurrence and lack of recognition of

malnutrition/dehydration, recognition and management of the confused patient; inappropriate early discharge, and manual handling of patients.¹⁴⁹

- (e) Technical performance and procedures, including: inaccurate labelling of specimens, instrument tracking system faults or lack of availability, break in asepsis technique, particularly relevant to cannula infection, inadequate management of preoperative anticoagulant therapy, transfusion reaction due to a technical error, compliance with correct handling and administration of medications, infection control breaches; cross infection from endoscopes, and MRSA cross-infection.¹⁵⁰
- (f) Medications, including: problems with prescribing, dispensing, administration; and adverse side effects.¹⁵¹
- (g) Falls.¹⁵²
- (h) Skin care and tissue breakdown in the elderly.¹⁵³
- (i) Patient factors, including: assault by patients to staff and other patients; anxiety/stress on staff; self harm suicide; and patient co-morbidities unable to be adequately managed.¹⁵⁴ (These are noted to be particularly common, but not confined to, patients with mental health, drug & alcohol problems).¹⁵⁵
- (j) Access, including: prolonged Accident & Emergency stay for mental health patients awaiting admission, access to inpatient beds, limited access to specialty services, appointments not available when required, and pressure to meet triage category times.¹⁵⁶
- (k) Adverse events, including: body fluid exposure, adverse reaction to immunosuppressive agents, and post-operative complications.¹⁵⁷
- (l) Maternity units, including: anxiety and stress of going home early, domestic violence risks, low birth weight, patients capacity to self harm, maternal harm to baby and other siblings, and patient co-morbidities.¹⁵⁸

16.127 Contributing factors to these risks to patient safety identified in the analysis of the Quality Systems Assessment data were.¹⁵⁹

- (a) Lack of clinical leadership especially in taking responsibility for clinical issues and problems in communication.
- (b) Lack of clinical ownership in relation to recognition of the deteriorating patient, missed diagnosis and medication errors.
- (c) Training and retention of staff with appropriate skills - exacerbated in the provision of cover after hours.
- (d) The tendency for protocols and policies about patient care to be abrogated by medical and nursing clinicians.
- (e) The multiplicity of programs with little evidence that their effectiveness has been measured - particularly in relation to falls prevention and skin care of the elderly patient
- (f) Variation between area health services and the need to apply ideas which work in one area health services or clinical unit more broadly across others.
- (g) Some disparity between what area health services indicate as major issues and what the clinical units identify as major issues.

16.128 I whole heartedly endorse the Quality Systems Assessment undertaken by the Clinical Excellence Commission. NSW Health, area health services and individuals clinicians

should support the Clinical Excellence Commission to continue and augment the Quality Systems Assessment.

16.129 In the Quality Systems Assessment Report, the Clinical Excellence Commission set out its expectations for outcomes.¹⁶⁰ (I note that the Clinical Excellence Commission has no power to direct implementation of its recommendations.) The Clinical Excellence Commission notes that it has developed a state-wide report, an area health service report and a database which contains all data collected from the Quality Systems Assessment. The Clinical Excellence Commission has said that it expects that these resources will be used by the area health services to identify areas of greatest risk and vulnerability, and develop improvement plans to address them.¹⁶¹ For example, one of the predominant key themes identified in the QSA relates to the lack of skill mix of both medical and nursing staff, particularly in areas of complex care needs such as Accident & Emergency, intensive care units and maternity services. The Clinical Excellence Commission notes that it is expected that the area health services will need to work at each level to address this complex issue.¹⁶²

16.130 The Clinical Excellence Commission states that its expectation is that each area health service will introduce improvement plans as follows ("the improvement plan process"):¹⁶³

(a) "Develop an improvement plan which relates to the information obtained from the QSA. This includes:

- Statewide recommendations
- Areas of performance less than the state average.
- Area wide themes identified in the risks to patient safety.
- Develop the improvement plan with involvement of the area senior executive, clinicians and department heads.
- Address the key themes that specifically relate to your AHS, facilities and department/clinical units in the improvement plan.
- Regularly monitor and report on the progress of the development and implementation of the improvement plan to the areas' peak Quality Committee and the CEC.
- Ensure individual facilities and departments review their own responses to the QSA. If they have identified patient safety risks not included in the area improvement plan they need to put in place actions to minimise these risks.
- Send an initial copy of the improvement plan to the CEC three (3) months following the release of this report.

The improvement plans will be reviewed as part of the onsite verification program and a formal written report will be provide to the CEC at 12 months on the progress on implementation of the improvement plan."

16.131 NSW Health and the area health services should make every effort to meet these expectations of the Clinical Excellence Commission.

Recommendation 64: *The improvement plan process set out by the Clinical Excellence Commission in the Quality Systems Assessment Statewide Report be implemented by all area health services within the time frames specified by the Clinical Excellence Commission.*

Interaction between hospitals, area health services and NSW Health

16.132 The evidence received by the Inquiry indicates that the Clinical Excellence Commission enjoys very high reputation throughout NSW public hospitals, area health services and NSW Health. This is no small achievement, and points to the quality of its work.

16.133 Nonetheless, I received submissions expressing the view that the work of the Clinical Excellence Commission has been piecemeal and has not gone far enough to solve the quality and safety issues faced by the NSW health system.¹⁶⁴ The Clinical Excellence Commission can provide feedback to clinicians and encourage improvement, but it does not have the authority to implement its recommendations or direct change. For example, whilst the Clinical Excellence Commission was able to achieve improvements in hand hygiene during its program, compliance has fallen off since the program ended.

16.134 The Clinical Excellence Commission submitted to the Inquiry that it faces the following key challenges:¹⁶⁵

* Variation in the level of executive sponsorship and clinician engagement for quality and safety projects at an area health service level, particularly in a context of conflicting priority areas, increased patient acuity, staff turnover, workforce shortages and resource constraints.

* Securing the ongoing resourcing and sustainability of quality and safety projects, where projects are often unable to be funded or continued beyond an initial (usually 1-2 years) timeframe.

* Ensuring sustainability and spreadability of CEC best practice guidelines/protocols, where protocols are in place and "known" but not practised.

* Ability to collect the data that will support implementation in a user-friendly and non-duplicated manner, and integrate with other relevant systems.

* Changes in health systems structure and personnel, through restructures, temporary appointments, secondments and turnover, affecting well-established relationships and networks.

* Major travel distances for health system staff affect relationships, reduce productivity and often require staff to work outside normal hours to travel to remote locations.

* It is typically difficult to gain traction for ideas and initiatives, when time and resources for implementation are commonly under-estimated within the health system."

16.135 If I were to sum up a very complex issue, the Clinical Excellence Commission faces a stark challenge as to how best to embed a culture of safety and quality standards in the NSW public hospital system when it has no power to compel hospitals and clinicians to remove known risks to patients lives. My recommendations below seek to address some of the difficulties experienced by the Clinical Excellence Commission.

- 16.136 I have recommended that if the Clinical Excellence Commission identifies that the quality and safety processes or performance of a public health organisation or facility are inadequate, the Clinical Excellence Commission notify the general manager of the facility, the chief executive officer of the area health service and the Director General of NSW Health. The notification is to specify:
- (a) the quality and safety processes or performance which the Clinical Excellence Commission has identified as being inadequate;
 - (b) what action, in the opinion of the Clinical Excellence Commission, should be taken by the facility, area health service and/or NSW Health to rectify the inadequacy;
 - (c) the time frame in which the action should be taken; and
 - (d) a date after which the Clinical Excellence Commission will again inspect or review the a public health organisation or facility to monitor improvement.
- 16.137 The Clinical Excellence Commission should then make a later inspection or review and if it identifies that action has not been taken within an appropriate time frame it should be able to report to the Minister for Health with a recommendation as to the action the Minister for Health should take.

Greater Metropolitan Clinical Taskforce

- 16.138 In 2000, the *Report of the NSW Health Council 03/2000 - A Better Health System for NSW*,¹⁶⁶ highlighted the need for more local engagement in the development of clinical service policy and frameworks.¹⁶⁷ As a result, the then Health Minister convened the Greater Metropolitan Services Implementation Group (**GMSIG**) to seek advice from clinicians and health care consumers. In June 2001, the GMSIG released a report identifying 162 recommendations for NSW health services. In November 2001, the Greater Metropolitan Transition Taskforce (**GMTT**) was established to implement the GMSIG recommendations.¹⁶⁸ The GMTT aimed at providing clinician-led responsibility for the development of clinical networks and plans for clinical services.¹⁶⁹
- 16.139 In July 2004 the Greater Metropolitan Clinical Taskforce (**GMCT**) was established to carry forward the work of the GMTT. One vital element in the setting up of the GMTT is the central role of clinicians (doctors, nurses and allied health professionals) and patient advocates in the various networks.
- 16.140 The GMCT was given a mandate to continue to engage clinicians and consumers in health planning and implementation and to develop a cohesive plan for a number of specialised clinical services across the Sydney greater metropolitan region extending from the Hunter to the Illawarra and to the Blue Mountains.¹⁷⁰ Prior to the creation of the GMCT, clinical service plans were developed within area health services, who all worked individually with their own bureaucracies.¹⁷¹ The GMCT has developed clinical service plans relating to identified clinical areas or disease modalities for implementation across area health services.¹⁷²
- 16.141 Unlike its predecessor, the GMTT, the GMCT sits within NSW Health:

"The GMTT was established as a ministerial advisory committee with regular and direct access to the Minister. This had the dual effect of energising the clinicians and alienating a sizeable section of the health bureaucracy. It created parallel processes – a circumstance that was considered necessary for change, but not viable in the long term. Following the Phelan review,¹⁷³ it was agreed that the new GMCT should be integrated into the

department, with dual reporting to the Director General and the Minister. This carries the opportunity for sustained influence, but the threat of demotivating some clinicians.¹⁷⁴

- 16.142 The GMCT has an annual budget of approximately \$3.6m, largely used to fund its secretariat and staff of approximately 20 people.¹⁷⁵
- 16.143 In September 2007, the GMCT reporting mechanism was changed from the previous model of reporting directly to the Minister for Health, as well as to the Director General of NSW Health. Now the Taskforce reports to the Director General through the Deputy Director General of Health Systems Performance. The GMCT has also been made a Health Priority Taskforce. All Health Priority Taskforce 's report to the Health Care Advisory Council (**HCAC**), which reports to the Minister for Health.¹⁷⁶
- 16.144 The GMCT has developed 21 clinical networks which are chaired by clinicians.¹⁷⁷ The clinical networks identify how and where improvements can be made in the particular specialty and implement these changes in association with NSW Health and the area health services. These networks have annual recurrent funding with a full time or part time network manager.
- 16.145 The GMCT clinical networks are:¹⁷⁸
- (a) Aged Care
 - (b) Bone Marrow Transplantation
 - (c) Brain Injury Rehabilitation
 - (d) Burns
 - (e) Cardiac Services
 - (f) Endocrine (Diabetes)
 - (g) Gastroenterology
 - (h) Gynaecological Oncology
 - (i) Home Enteral Nutrition
 - (j) Metropolitan Hospitals
 - (k) Neurosurgery
 - (l) Nuclear Medicine
 - (m) Ophthalmology
 - (n) Orthopaedics
 - (o) Radiology
 - (p) Renal
 - (q) Respiratory Medicine
 - (r) Spinal
 - (s) Stroke
 - (t) Transition Care
 - (u) Urology
- 16.146 The GMCT has stated:

"The capacity of the clinical networks for inducing change in contemporary practice and championing its implementation at the clinical interface is unlimited if the clinical network has strong leadership, committed membership, supportive infrastructure and the ability to achieve outcomes within a tight timeframe.¹⁷⁹

16.147 The achievements of some of the networks include:

- (a) The Cardiac Services Network has standardised cardiac monitoring protocols and prepared guidelines on the use of drug eluting stents and implantable defibrillators. Previously, there were no guidelines around which patients should have this particular treatment.¹⁸⁰
- (b) The Home Enteral Nutrition Clinical Network has developed a register of patients and is developing guidelines to help with the treatment of those patients. Previous to these developments by the Network, each area health service had to provide home enteral nutrition, however, there was no co-ordination nor were there any relevant policies.¹⁸¹
- (c) The Respiratory Network established a Respiratory Infection Working Group, which developed an innovative proposal to improve respiratory services for patients with respiratory infection and chronic obstructive pulmonary disease. I was told that the proposal is based on the success of a working model at St George Hospital and has the potential to substantially reduce hospital admissions and the average length of stay for patients with these conditions.¹⁸²
- (d) In 2003, Stroke Services NSW was established as the result of a GMCT initiative. Results of the National Stroke Foundation's National Stroke Audit, which was conducted in 2007, indicate major achievements in stroke service delivery in NSW public hospitals as a result of the work done by this new organisation.¹⁸³
- (e) The Neurosurgery Network has designed a model of care for the use of deep brain stimulation on patients with movement disorders. It also prepared an accompanying Ministerial Brief that highlights unequal access to deep brain stimulation in public and private hospitals. Both the model of care and the Brief have been tabled for the Minister and Director-General for Health.¹⁸⁴

16.148 GMCT works by having a pool of project funding for which the networks to bid, with the securing of funding being dependant on the presentation of a sound business case with defined achievable outcomes and a realistic timeline for completion.¹⁸⁵ The GMCT Executive assesses and approves the business cases presented by the networks.¹⁸⁶

16.149 The GMCT indicated to me that, based on its present resources, it could develop around 4 new networks a year. Potential future Networks include: Pain Management, Gynaecology, Musculoskeletal (Rheumatology including autoimmune diseases, arthritis, osteoporosis), Neurology (Parkinson's Disease, muscular dystrophy, early onset dementia), Acute Medicine (recognition and management of the deteriorating patient in hospital, initial clinical assessment of inpatients, and management of patients with multiple co-morbidities), Infectious Disease, Dermatology, Plastic Surgery, Ear Nose and Throat, Haematology, Orthotics, Rehabilitation, Palliative Care.¹⁸⁷

16.150 One of the reasons for GMCT's success is that it is based on engaging clinicians. Importantly, the GMCT involves doctors, nurses, allied health and community representatives on its clinical networks.¹⁸⁸ GMCT work gains wide clinician support because it involves clinicians who are regarded as senior and knowledgeable practitioners in their fields.¹⁸⁹ It allows clinicians to speak to each other outside their individual "silos of services". As Professor Carol Pollock, Chair of the GMCT, told me:

"[I]f clinicians think somebody else has the jump on them doing it better or doing it more effectively, that is a real driver for people to change what they are doing. If you talk to your clinician colleagues and find that their outcomes might be better, it sort of embarrasses you into wanting to change ..."¹⁹⁰

16.151 However, the GMCT has also encountered a number of significant obstacles to its work.

- (a) Resistance of medical colleges. For example, the GMCT told me that it had encountered difficulties establishing an orthopaedic clinical network due to resistance within the national association.¹⁹¹ I was also told that negotiations with the Australasian College for Emergency Medicine regarding the formulation of models of care by GMCT have been difficult, with the College on occasion declining to attend meetings or participate in order to agree models of care.¹⁹²
- (b) "Turf wars" among various health professionals, particularly as the GMCT promotes the greater use of skilled nurses and allied health clinicians in broader multi-disciplinary roles.¹⁹³ For example, I understand that it took some time to reach agreement with anaesthetists on guidelines that would allow non-anaesthetist medical practitioners to provide sedation for gastrointestinal endoscopic procedures.¹⁹⁴
- (c) A lack of timely co-operation from NSW Health. The GMCT stated that:

"Some branches of NSW Health actively engage with the GMCT process and utilise the expertise of specific networks whilst other branches set up parallel processes and actively exclude GMCT networks in planning of clinical services. This is a cause of great frustration to the Executive and individual networks where this occurs frequently and creates unnecessary duplication of work."¹⁹⁵

The GMCT finds that the response from NSW Health to GMCT initiatives can be variable:

"Some reports and recommendations go through protracted periods of consideration and delayed feedback is a frustration for the clinicians responsible. Some are simply never acted upon or acknowledged. Attempts at cross-sector collaboration at the department of health are easily misinterpreted as 'take over' by competing department officers and the process of system improvement so retarded."¹⁹⁶

I was told by the GMCT that delayed feedback is a frustration for clinicians. The clinicians offer their time voluntarily to GMCT clinical networks:

"They are not paid for it, there is no other motivation in it but to improve practice, and if they see results, they keep coming back."¹⁹⁷

I heard that the clinical networks that are not as successful are not patronised, because they have not been able to produce results.

"The frustrations come when there are long delays in response to their proposals..."¹⁹⁸

An example I was given of this was the renal plan proposed by the Renal Clinical Network for dialysis across NSW. I was told that the adoption of the renal plan took more than 18 months and followed what were described as, a series of "very difficult" meetings with NSW Health. The policy was adopted by a "process of attrition".¹⁹⁹

- (d) A lack of formal channels to ensure implementation of recommended models of care in the area health services.²⁰⁰

"Implementation is currently dependant on clinician champions at facility level, individual and [area health service] Chief Executive 'buy-in' and/or a strong recommendation through the NSW Health Department..."²⁰¹

- 16.152 I accept that to maintain the participation of clinicians in systems improvement, they have to see some positive result. As a senior NSW Health representative acknowledged proposals need to be approved within a reasonable time frame, otherwise people become frustrated.²⁰²

- 16.153 Professor Peter Castaldi AO, the immediate past Chief Executive of the GMCT, suggested to me that the system needs clarity. There needs to be a clear indication of "who is responsible for what". It needs to be clearly stated what networks do and how they report. It also needs to be clearly stated that, if the report is appropriate, how it will be implemented.²⁰³

Extension of GMCT state-wide

- 16.154 As its name suggests , the work the GMCT is confined to the Sydney greater metropolitan area:

"...the clinical taskforce was only ever allowed to set up metropolitan clinical networks, with departmental officials actively repudiating metro clinical involvement in rural issues."²⁰⁴

- 16.155 The Rural Health Priority Taskforce was designated by NSW Health as the appropriate driver of rural health clinician engagement and development of best practice models of care through the Statewide Services Branch.²⁰⁵

- 16.156 The work of the GMCT and its network nonetheless influences work in remote and rural areas.²⁰⁶ Some networks (Spinal, Burn and Brain Injury) have an authorised state-wide perspective, others are restricted to metropolitan Sydney.²⁰⁷ Nevertheless, some GMCT networks have, over time:

"...crept across the boundaries of metropolitan Sydney and have attracted rural clinicians into network activities because these clinicians see great value to patient care in becoming involved with the GMCT clinician-led process."²⁰⁸

- 16.157 It is clear to me that the restriction of some networks to metropolitan Sydney leads to some unnecessary duplication. The Statewide Services Branch has a rural renal working group that is run in parallel with the GMCT's Renal Network, although the rural renal clinicians are members of and participate in the GMCT Renal Network.²⁰⁹

- 16.158 As well as the Rural Health Priority Taskforce and State-wide Services Branch duplicating the GMCT's work, I understand that the NSW Institute of Rural Clinical Services and Teaching (the "**Institute**") plays a similar role to the GMCT, but in rural areas. The Institute was formed in 2003. It aims to support rural clinicians across all stages of their careers and promote good practice in rural health service delivery. It is a "virtual institute" with staff working across NSW. The institute aims to:²¹⁰

- identify and share good practice in rural health service delivery;
- assist the development of networks between rural health staff and services within and between Area Health Services;

- act as a source of information for rural and remote stakeholders on rural health workforce and service issues;
- use its funds to create incentives for organisations to respond to perceived gaps in rural health service delivery; and
- provide a voice for rural health services and the rural health workforce, the issues they face and strategies to address those issues and facilitate dialogue between professional groups involved in rural health.

16.159 I note that the GMCT is keen to extend its role to the whole of NSW, however, has proposed that it continues to work in collaboration with the NSW Rural Institute of Clinical Services and Teaching. The Institute appears to duplicate the role of the GMCT in a rural context and, while I recognise that the Institute has played an important role alongside the GMCT, my view is that its role and aims could be appropriately accommodated within a single state-wide structure.

16.160 The GMCT has suggested a state-wide extension occur with a change name to the “NSW Institute of Clinical Networks”.²¹¹ The GMCT told me that the change of name:

“... would also signal the importance of formal inclusion of rural clinicians within our Clinical Networks and an acknowledgement that the principles of equity of access and outcome are as important for all patients requiring health care including those from rural NSW.”²¹²

16.161 I was given various reasons why the GMCT has been limited to metropolitan areas. Some attribute this to internal politics in NSW Health.²¹³ Another given by another senior representative of NSW Health was that rural clinicians were resistant to “being dictated” to by city clinicians.²¹⁴ There is no need for me to reach a final view on this issue which is now a matter of historical interest only.

16.162 The Inquiry received evidence from rural clinicians that they did not object to the expansion of the GMCT. For example, Dr Halloway, a clinician at Bathurst Hospital stated that he did not see a problem with models of care being imposed on a state-wide basis, provided that state-wide authority to do so is based on consultation with clinicians “at the coalface”, as well as others.²¹⁵ I am of the view that, provided rural clinicians are properly and appropriately engaged, the GMCT model is capable of encompassing them.

16.163 The work of the GMCT should be extended across NSW to include rural areas. My recommendations regarding this are set out below.

16.164 I propose that the role of the GMCT be strengthened and enhanced by becoming a board governed statutory health corporation pursuant to s.41 of the *Health Services Act 1997* (NSW), named the Clinical Innovation and Enhancement Agency.

16.165 The Board of the Clinical Innovation and Enhancement Agency is to include at least one member from each of the medical, the nursing and the allied health professions and a patient advocate. The board should also include one chief executive of an area health service.

16.166 The Clinical Innovation and Enhancement Agency is to:

- (a) establish new, or else incorporate within it, the already existing clinical networks, taskforces and other clinician practice groups as the operative networks by which it is to undertake its role;
- (b) establish within a central directorate of the Agency, a reservoir of the following skills:

- (i) change management;
- (ii) health economics expertise;
- (iii) business management; and
- (iv) project design and support;

which are to be provided as necessary to the clinical networks, together with such other administration support as is appropriate, to enable the efficient functioning of the clinical networks.

16.167 My expectation is that the clinical networks will pursue programs of clinical innovation which, before being presented to NSW Health and the area health services, has been fully costed and includes appropriate plans for implementation, including a measure of the key performance indicators that will measure the improvements made through the introduction of the innovation.

16.168 The Agency is to have, at least, the following principal purposes and functions:

- (a) By 1 July 2011, to identify, adopt, review and enhance or else to write protocols and guidelines for common surgical interventions, and disease or syndrome treatment modalities likely to be commonly encountered in NSW public hospitals;
- (b) To investigate, identify, design, cost and recommend for implementation changes in patient care by way of enhancements or improvements in clinical practice, including the content and method of such practice, in order to ensure, on an ongoing state-wide basis, better, safer, more efficient and more cost-effective patient care;
- (c) To provide advice to NSW Health, or any Area, or functional Health Service, on any matter relating to the enhancement or improvement of clinical practice.

16.169 NSW Health should incorporate into the Agency:

- (a) the Health Priority Taskforces or else devolve their tasks to existing clinical networks;
- (b) the Clinical Services Redesign Program;
- (c) the NSW Intensive Care Coordinating and Monitoring Unit; and
- (d) the NSW Institute of Rural Clinical Services and Teaching.

16.170 I envisage the costs and overheads associated with establishing this new Agency can be ameliorated to a significant extent if the Clinical Excellence Commission, the Clinical Innovation and Enhancement Agency and the NSW Institute for Clinical Education and Training are physically co-located, and “back-office” staff and functions share common facilities to the maximum extent possible.

16.171 A reader of this report will see that there is some overlap between the work presently being done by the Clinical Excellence Commission and the proposed Clinical Innovation and Enhancement Agency. To some extent, in a system which seeks to be a unified one, that will be inevitable. It is not, and ought not be, an impediment to action. The solution it seems to me is that both bodies need to work together to produce a Memorandum of Understanding which clarifies their relationship and which accepts the central tenet, that both organisations have as their mission the achievement of the best health care for the people of NSW.

- 16.172 The Agency should report directly to the Minister for Health and the Director-General of NSW Health and prepare an annual report to the Minister on the progress of clinical innovation and enhancement in the public hospital sector.
- 16.173 I have suggested that one member of the Board of this Agency ought be the Chief Executive of an area health service. This will enable a clear communication to the Agency of the obligations and circumstance of those bodies charged with delivering the health services. Equally, there needs to be a flow of information in the other direction. Improvements and enhancements which have the support of clinicians and which are cost effective need to be communicated to some levels of NSW Health to obtain their support. Accordingly, in my view, the chief executive officer of the Agency should be included on, and attend the meetings of, NSW Health senior management committees.

Re-shaping these organisations

- 16.174 Whilst each of the NSW organisations referred to above contribute to the safety and quality in NSW public hospitals, the way in which these organisations operate and interact is far from optimal.
- 16.175 These organisations should be re-configured as follows.

Quality & Safety Branch

Recommendation 65: *NSW Health should review the functions, size and structure of the Quality & Safety Branch to determine if it has any functions which duplicate the work of, or else would more appropriately be undertaken by, the Clinical Excellence Commission. NSW Health needs to ensure that any duplication or unnecessary replication is eliminated with the intent that the Clinical Excellence Commission will become the body primarily responsible for safety and quality within NSW Health.*

Clinical Excellence Commission

Recommendation 66: *If the Clinical Excellence Commission identifies that the quality and safety processes or performance of an area health service, statutory health corporation or facility are inadequate, the Clinical Excellence Commission must:*

- (a) Immediately notify the general manager of the facility, the chief executive of the area health service and the Director General of NSW Health.*
- (b) The notification must specify:*
 - (i) the quality and safety processes or performance which the Clinical Excellence Commission has identified as being inadequate;*
 - (ii) what action, in the opinion of the Clinical Excellence Commission, should be taken by the facility, area health service and/or NSW Health to rectify the inadequacy;*
 - (iii) the time frame in which the action should be taken; and*

- (iv) *a date after which the Clinical Excellence Commission will again inspect or review the area health service, statutory health corporation or facility to monitor improvement.*
- (c) *The Clinical Excellence Commission is to inspect or review the health service, statutory health corporation or facility after the date specified in the notification.*
- (d) *If, following the inspection or review by the Clinical Excellence Commission, the action specified in the Clinical Excellence Commissions notification has not been taken, the Clinical Excellence Commission is to notify the Minister for Health with a recommendation as to what action the Minister for Health should take.*

Greater Metropolitan Clinical Taskforce

Recommendation 67: *Within 12 months, NSW Health is to establish a board governed statutory health corporation pursuant to s.41 of the Health Services Act 1997 known as the Clinical Innovation and Enhancement Agency.*

The Agency is to undertake its role according to these guidelines:

- (a) *establish new, or else incorporate within it the already existing-clinical networks, taskforces and other clinician practice groups as the operative networks by which it is to undertake its role;*
- (b) *establish within a central directorate of the Agency, a reservoir of the following skills:*
 - (i) *change management;*
 - (ii) *health economics expertise;*
 - (iii) *business management; and*
 - (iv) *project design and support*

to be provided as necessary to the clinical networks, together with such other administration support as is appropriate, to enable the efficient functioning of the clinical networks;
- (c) *use the existing clinical network model to involve clinicians and patient representations in continuous clinical redesign to deliver safer and better patient care.*

The Agency is to have, at least, the following principal purposes and functions:

- (d) *to identify, review and enhance or else to research and prepare standard evidence based protocols or models of care guidelines for every unexceptional surgical intervention, and the common disease or syndrome treatment modalities encountered in NSW public hospitals;*
- (e) *To investigate, identify, design, cost and recommend for implementation changes in patient care by way of enhancements or improvements in clinical practice, including the content and method of such practice, in order to ensure, on an ongoing state-wide basis, better, safer, more efficient and more cost-effective patient care;*

- (i) *To provide advice to NSW Health, or any Area, or functional Health Service, on any matter relating to the enhancement or improvement of clinical practice.*
- (ii) *To liaise with change managers from the private sector retained to assist in the introduction of clinical re-design at the Area, hospital and unit levels and provide the point of contact between change managers and NSW Health.*

The Agency is to report directly to the Minister for Health and the Director-General of NSW Health and is to prepare an annual report to the Minister on the progress of clinical innovation and enhancement in the public hospital sector.

Recommendation 68: *Each of the chief executives of the public health organisations is to report every six months to the Clinical Innovation and Enhancement Agency and the Director-General of NSW Health on the progress of implementation of all endorsed innovation and enhancement programs, and if any program has not been implemented the explanation for such failure.*

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16.176 NSW Health should incorporate into the Agency:

- (a) the Health Priority Taskforces or their tasks;
- (b) the Clinical Services Redesign unit or its tasks;
- (c) the Essentials of Care Program.

Recommendation 69: *The Clinical Excellence Commission, the Clinical Innovation and Enhancement Agency and the NSW Institute for Clinical Education and Training should jointly explore whether it would be more efficient and cost effective for their operations:*

- (a) *to be physically co-located;*
- (b) *to share common facilities;*
- (c) *to share corporate support functions and support staff.*

NSW Health's incident management system

16.177 The principles of the NSW incident management system are to:²¹⁶

- (a) ensure a consistent and coordinated approach to the identification, notification, investigation, analysis of incidents with appropriate action on all incidents;
- (b) allow early identification of issues and implementation of local and NSW Health wide corrective actions;
- (c) allow for lessons learned to be shared across the whole health system.

16.178 Whilst the principles of the NSW incident management system are sound, the implementation of these principles is not always successful, to my observation, and remains somewhat aspirational.

16.179 The specific tools used for incident management in NSW Health are:²¹⁷

- (a) A single state-wide electronic Incident Information Management System (**IIMS**);
- (b) Severity Assessment Code (**SAC**) matrix;
- (c) Root Cause Analysis (**RCA**) investigation methodology;
- (d) Reportable Incident Brief (**RIB**), which is a formal briefing process for severe cases to provide information to NSW Health so that it can be disseminated appropriately; and
- (e) a state level Reportable Incident Review Committee (**RIRC**), which works with the Clinical Excellence Commission to bring together all the information to identify systemic patterns as to how these events are occurring.

16.180 I will examine each in turn.

Incident Information Management System (IIMS)

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- 16.181 In December 2004 NSW Health introduced a state-wide electronic Incident Information Management System (**IIMS**).²¹⁸ The IIMS system was available across the whole of NSW during the course of 2005.²¹⁹ IIMS allows clinicians, managers and other healthcare workers across the NSW public health system to record all incidents.
- 16.182 IIMS is an electronic system that:
- (a) records all healthcare incidents – both adverse events and incidents that did not result in adverse outcomes, but might have – in 4 categories: clinical, complaints, property security and hazards, and staff visitor and contractor;
 - (b) assists managers to deal with incidents in their areas;
 - (c) records the results of reviews and investigations of incidents; and
 - (d) provides reports on all incidents recorded in the system.²²⁰
- 16.183 Incidents entered into IIMS are rated against a Severity Assessment Code (**SAC**) that plots the consequence of the incident against the risk of it happening again. There are 4 SAC ratings, with SAC1 being the most serious. Details regarding Severity Assessment Codes are set out below.
- 16.184 IIMS also stores information on factors contributing to incidents.²²¹ I was told that gathering information on contributing factors assists analysis and provides insights into themes. For instance, lack of communication may not be rated as the first and foremost contributor in every incident, but if it is seen as a contributing factor across a range of incidents, it can be identified as a very important theme to address overall.²²²
- 16.185 Project teams within the Quality and Safety Branch and the Clinical Excellence Commission utilise the information contained within IIMS to inform the development of programs implemented across the healthcare system including, for example, the 'Between the Flags' program, Health Care Associated Infection prevention program and the Blood Watch program.²²³
- 16.186 IIMS data is collated and analysed in the (now bi-annual) *Incident Management in the NSW Public Health System* reports produced by NSW Health and the Clinical Excellence Commission.
- 16.187 111,625 incidents were reported on IIMS in 2007.²²⁴ The principal incident types were (in descending order):²²⁵
- (a) falls;

- (b) medication incidents;
- (c) clinical management;
- (d) aggression;
- (e) behaviour;
- (f) documentation;
- (g) pressure ulcers;
- (h) accident/occupation health and safety;
- (i) organisation management; and
- (j) medical device/equipment/property.

16.188 NSW Health considers the level of reporting to be high, and the data provided to be valid.²²⁶ There are approximately 14,000 IIMS reports made per month, which is 8 times the reporting rate in the UK public health system.²²⁷ It is important to emphasise a higher reporting rate of adverse incidents does not necessarily mean that NSW Health is less safe or has more incidents than public health systems elsewhere. Given the magnitude of differences in the reported incident rate, but the comparability of many other indicia between NSW and the United Kingdom health service, the strong likelihood is that NSW is better at the discipline of incident reporting than the United Kingdom which is a feature to be celebrated and not deprecated.

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16.189 The Clinical Excellence Commission provided the following assessment of IIMS to the Inquiry:

"The optimal use of [IIMS] requires an effective safety culture which enables open and transparent acknowledgment and reporting of incidents that result in harm or injury to patients.

Increasing notification rates since IIMS was fully rolled out in 2005 indicate this safety culture is slowly materialising. However notification levels particularly amongst medical staff are not optimal and the quality of the data is variable."²²⁸

16.190 The Clinical Excellence Commission informed me that the number of notifications has increased since implementation, with monthly averages now around 13,000 across the state. It considers that such increases reflect a more transparent and trusting culture, rather than an increase in the number of adverse events occurring in the system. Significantly, the percentage of SAC 1 (highest severity) incidents has not increased during this time and remains under one percent.

16.191 The Clinical Excellence Commission reported that in 2006/2007, 82 per cent of IIMS reports were made by nursing staff and only 3 per cent by medical staff.²²⁹

16.192 An evaluation of IIMS in 2006 by the Centre for Clinical Governance Research in Health (UNSW) identified the following challenges:

- Improving reporting levels, especially medical reporting;
- Providing feedback to notifiers at various levels in the health system;
- Improving software capabilities;
- Refining and improving data and its management over time;
- Linking data to specific improvement programs within NSW Health and the Clinical Excellence Commission in a robust way;

- Using IIMS effectively to reach the end point of reducing adverse events, errors, iatrogenic harm and recurrences of error and near misses;
 - Intelligent use of IIMS data, providing feedback to participants to engage them in systems improvement and patient safety enhancements at local levels.
- 16.193 The Clinical Excellence Commission told me that the evaluation measured the program when it was still relatively new and focused on the implementation aspects of IIMS rather than broader issues, such as how IIMS is being used to increase safety and quality of patient care, its value, or how it is being fully utilised at the ground level.
- 16.194 Other elements needing to be addressed include:
- More timely and relevant feedback to clinicians
 - increased involvement and reporting by medical practitioners
 - more effective surveillance of narrative data
 - complications to be reported in the system as a matter of routine discussion of incidents at clinical department level.”²³⁰
- 16.195 The Clinical Excellence Commission is of the view that ongoing training in IIMS notification and data extracts is required, to enhance the quality of reporting, and the identification and monitoring of relevant issues. It is also of the view that IIMS data and reports should be reviewed by all clinical units on a regular basis.²³¹
- 16.196 The Inquiry received evidence of resistance by clinicians to reporting incidents on IIMS and that it is viewed to be a burden.²³²
- 16.197 It was submitted that IIMS fails to capture many significant incidents because staff under report due to the perception that there will be no useful outcome.²³³ I was told that the capacity of managers to down-grade the SAC rating allocated to incidents logged on the system by individuals, results in fewer incidents being adequately investigated.²³⁴ Some witnesses expressed concerns that incidents are not adequately investigated.²³⁵
- 16.198 The Health Care Complaints Commission observed that clinicians have a propensity not to report near misses. This is perceived to be a culture problem, although it is improving.²³⁶ The 2006 evaluation of IIMS by the Centre for Clinical Governance Research in Health suggested reasons for under reporting by medical staff:
- “Medical staff under-report for several key reasons, over and above the common issues of time and workload. Firstly, there is medical culture, including viewing reporting on their colleagues or superiors as a violation of protocol. Secondly, it appears that medical staff view incidents in a different way from other groups. Specifically, potentially predictable events (such as the development of deep vein thrombosis (DVT) after a procedure) are considered a known risk factor and therefore not an incident. Thirdly, some medical staff feel disengaged from the health system and are believed to be mistrustful of the bureaucratization of health care. As a result they feel that they have not yet been shown any clinical evidence (as opposed to being presented with bureaucratic requirements) that improvement in quality and safety of care will be realised as a result of incident monitoring. A final reason for not reporting is that some staff, particularly doctors, remain unaware of reporting mechanisms and processes, including whose responsibility it is to report.”

16.199 Further, I heard numerous complaints from clinicians about the difficulties using IIMS system, and its inadequacies. They said:

- (a) The software is extremely cumbersome. It is said to be neither user-friendly for the recording of incidents nor for the extracting of information.²³⁷ The poor design of the system at the data entry stage was said to make the process “bewildering and painstaking” and for some this was an insurmountable barrier.²³⁸ This is said to result in under-reporting,²³⁹ particularly of complicated incidents.²⁴⁰ I was told that if a mistake is made while an entry is being made, it is difficult to go back and correct it.²⁴¹ NSW Health acknowledged to me that the system was regarded at the coalface as a burden²⁴² (particularly by nurses who enter the vast majority of incidents).²⁴³ NSW Health also told me that IIMS was not originally designed to cope with a system as large as the NSW public health system.²⁴⁴
- (b) IIMS does not provide feedback to clinicians in respect of the reported incident. I was told that there is little positive feedback of changes implemented because of reported incidents.²⁴⁵ I was told that the failure to feedback information leads to health professionals losing faith in the system and ceasing to report incidents.²⁴⁶ I was told that information was particularly poor regarding recommendations and the implementation of recommendations.²⁴⁷ It was suggested to me by one witness that if there was some feedback as to the effect of an error, the person may internalise that fact and want to do better next time.²⁴⁸

Some say that the information is used only for bureaucratic or political purposes, with “no follow through” in terms of improving safety and quality. Dr David Mackie of Prince of Wales Hospital stated:

“When [IIMS] came in I thought it was a wonderful thing and I thought we were going to do a lot to help patients with this reporting system.

... we've looked at lots of incidents and we've looked at the enthusiasm with which staff report incidents and we have a system which still years on allows predominantly the Department of Health to, for largely political reasons, extract information from the hospital without giving back anything that allows us to fix the system.

...

The system is not designed to, for instance, send an email back to the person who reported the incident when it is finally closed off: a very simple thing. The reward for people entering information into that system is that this system is improved and we don't tell them or the system doesn't tell them, the individual managers do undoubtedly, but as a system we don't tell people what we've done to try and help that situation or if we couldn't help it, because we don't have resources, that we couldn't do anything with it.”²⁴⁹

- (c) IIMS does not provide feedback to clinicians in respect of how the unit or hospital is performing against other units or hospitals. A senior representative of NSW Health acknowledged to me that this was an issue:

“... if I work on a ward or a unit, I don't really get a report back on my ward or unit. Not only that, I don't get the benchmark data, so I don't know how another ward or unit like mine is going. ...[The] challenge for us is to get this information into the places where the change will get created. That is currently the missing link ... in this process. Certainly the biggest complaint that is raised with me is, “Can I get some information on my ward? Thanks for these fantastic reports. They are

interesting, but I actually want to know what's happening with my patients."²⁵⁰

Dr Sammut of Canterbury Hospital submitted to me that the IIMS process only offers a mechanism for recording concerns but no mechanism for actually doing something about the concerns raised.²⁵¹ The consequence of the clinicians entering the data, but not getting any feedback is a disjunction between the policies advanced by NSW Health and what is happening on the ground.²⁵² The Macarthur Health Service Medical Staff Council submitted to me that:

"The [IIMS] has resulted in enormous amounts of data being generated without any real ability to determine whether action is being taken to address the causes of adverse events. Medical staff remain largely disengaged from this process and consider the system too cumbersome to effect quality improvement at a local level."²⁵³

In its *Quality Systems Assessment* report, the Clinical Excellence Commission states that:

"It is of some concern that only 64 per cent of clinical units who responded indicated that they almost always fed-back information to staff regarding the outcomes of death review, RCAs and analysis of incidents. Less than half of the SAC 3 and SAC 4 reports are almost always fed back to the unit. The response of clinical units to these questions provides an opportunity to review and improve current processes about the feedback of information on incidents. This information is of value only to the degree to which it is used to improve the safety and quality of patient care."²⁵⁴

The Clinical Excellence Commission goes on to recommend that:

"Area health services must ensure that the findings of any review of critical incidents, for example, death review, root cause analysis, Health Care Complaints Commission/Coroner findings is fed back to the relevant clinical teams in a prompt manner."²⁵⁵

- (d) IIMS does not readily enable analysis of data entered across the system. Although I note the Clinical Excellence Commission and NSW Health are now producing bi-annual incident management reports,²⁵⁶ which rely on IIMS data.

- 16.200 In addition, I was told that there are technical limitations on changing IIMS.²⁵⁷
- 16.201 In its recent report, IPART noted the same issues as I have noted above about the user unfriendliness of the electronic interface.²⁵⁸
- 16.202 Part of NSW Health's unfunded future information technology program is an upgrade to the Incident Information Management System. This is projected to be completed in 2014 and cost \$18.5 million.²⁵⁹ I have recommended elsewhere that this upgrade occur considerably earlier.
- 16.203 In addition to this upgrade of IIMS, I am of the view there should be more regularly feeding of IIMS data back to clinicians and also keeping individual clinicians informed of the progress and outcomes of the IIMS incidents they report. Whether this is best done by the Clinical Excellence Commission or NSW Health is a matter I will leave to be determined by those bodies.

Recommendation 70: *NSW Health is to ensure that quarterly reports for each unit and each facility containing the following information:*

- (a) Data regarding the IIMS reports made by the facility during the period;*
- (b) Data regarding the IIMS reports made by the unit during the period;*
- (c) Data comparing the IIMS data for that facility and for that unit to the performance of the rest of the NSW health system,*

are prepared and distributed.

Recommendation 71: *NSW Health should develop a process which ensures that upon the finalisation of each IIMS report, the results of the IIMS report are immediately reported back, by email where possible, to the person who made the initial report and their manager. If the IIMS report takes longer than one month to finalise, a monthly report regarding progress is to be provided to the reporter of the incident and their manager until the IIMS report is finalised.*

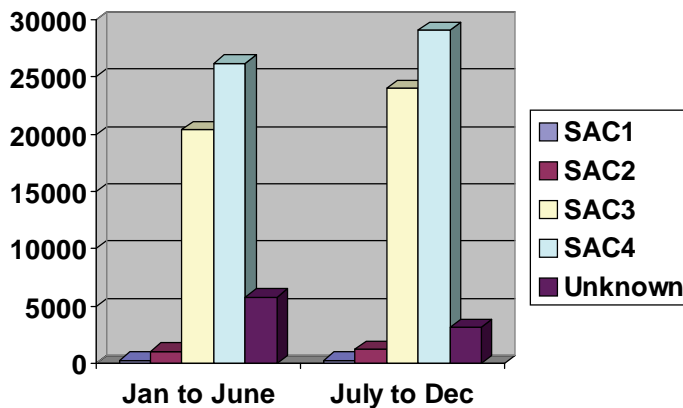
Severity Assessment Code matrix

- 16.204 As noted about, incidents entered into IIMS are rated against a Severity Assessment Code (**SAC**). IIMS requires the notifier of the incident to undertake an initial assessment of severity of the incident using the SAC Matrix.²⁶⁰ The manager reviews the IIMS notification, completes the IIMS management screen, and either allocates or confirms the SAC score.²⁶¹ The SAC is a matrix that takes into account both the consequences of the incident (or near miss), and the likelihood of recurrence of the incident (or near miss) to apply a numerical rating.²⁶² The SAC score guides the level of investigation and the need for additional notification.
- 16.205 The SAC matrix is the method by which the SAC score is derived. The steps are:
- Step 1: determine the consequence or outcome of the incident
 - Step 2: determine the likelihood of recurrence of this incident. This analysis will require knowledge of the facility or health service in which the incident occurred
 - Step 3: allocate a SAC score to the incident.
 - Step 4: determine the appropriate action to be taken.
- 16.206 The NSW Department of Health uses a very broad definition for SAC1 incidents to ensure that the most serious incidents are appropriately captured and investigated. SAC1 incidents include incidents leading to patient death or major permanent loss of function.²⁶³ SAC1 notifications also include incidents that do not result in patient harm, but which indicate the possibility of a systems error that could result in serious harm.²⁶⁴ SAC3 and SAC4 categories capture events and situations where there has been minimal or no harm to the patient, but where the staff member identified risk.²⁶⁵

16.207 In 2007, the incidents reported in IIMS were as follows:²⁶⁶

January 1 to June 30, 2007 53,817 clinical incident notifications
 July 1 to December 31, 2007 57,808 clinical incident notifications

2007	Jan to June	July to Dec
SAC1	0.5% 269	0.5% 289
SAC2	2.0% 1,076	2.1% 1,214
SAC3	38.0% 20,451	41.6% 24,048
SAC4	48.7% 26,209	50.3% 29,077
Unknown	10.8% 5,812	5.5% 3,180
Totals	53,817	57,808



16.208 SACs are dealt with as follows.²⁶⁷

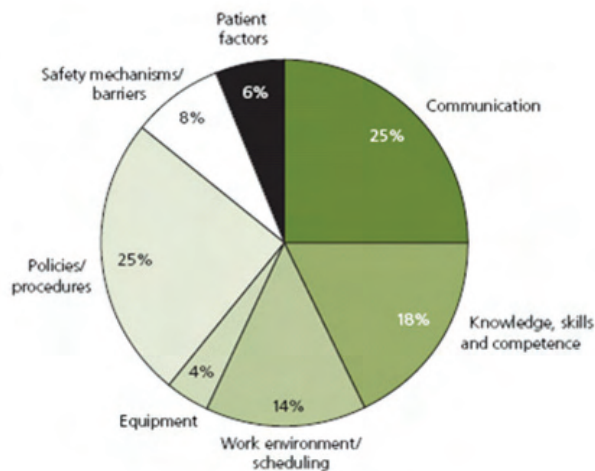
- (a) All SAC1s are reported to the Department of Health via a Reportable Incident Brief. All clinical²⁶⁸ SAC1s are investigated using the Root Cause Analysis methodology.
- (b) All SAC2s are reported to Area Health Service Executive for in-depth review.
- (c) All SAC3s and 4s are reported to appropriate local management for review.

16.209 NSW Health conveyed to me the view that review of IIMS incidents at the local level promotes learning and immediate improvement.²⁶⁹ Trend analysis by NSW Health does not replace the need for detailed review of each incident at the local clinical level.

16.210 There are on average 48 SAC1 per month across the state which equates with one or two a day.²⁷⁰ Each Area Health Service has a relatively small number of SAC1s each month (approximately 5).²⁷¹ In order to pick up trends, it is crucial that this information is analysed centrally.²⁷² But it is equally crucial that the content of the analysis be fed back to all area health services.

16.211 In 2007, the categories of SAC1 incidents notified to the Department were, in order of importance, clinical management, suspected suicide, incorrect procedures, maternal and perinatal, falls, retained instrument/material, inpatients suspected suicide, medication/IV fluid incidents, blood products.²⁷³

16.212 The following factors have been identified by the Clinical Excellence Commission and NSW Health as contributing to serious incidents:²⁷⁴



- 16.213 The chief executives of the area health services are responsible for each SAC reported in their area health service, and have to sign off every SAC report.²⁷⁵
- 16.214 The credibility and effectiveness of the investigation and report back process for SAC 1 incidents depends upon the accuracy of the reporting and in particular the appropriateness of the allocation of a SAC 1 or SAC 2 rating. The system will not be effective if there is underreporting of the severity of incidents (or near misses). Accordingly it is important that the Clinical Excellence Commission regularly audit the accuracy of the data and the appropriateness of the allocation of severity codes.

Recommendation 72: *The Clinical Excellence Commission to conduct regular audits of the accuracy of the data and the appropriateness of the SAC categories applied to the various incidents by reporting clinicians.*

Root Cause Analyses

- 16.215 In December 2003, NSW Health introduced the Root Cause Analysis (**RCA**) process into NSW public hospitals.²⁷⁶ The analysis uses techniques that came from engineering, and had been modified for use in health care by the Veterans' Health Administration in the United States. I was told that the Veterans' Health Administration found that Root Cause Analysis led to a shift away from individual blame towards identification of systemic causes.²⁷⁷ The aim of a Root Cause Analysis is to understand how and why an event occurred.²⁷⁸ NSW Health identified it as a useful tool to convert a non-reporting culture to a reporting culture.²⁷⁹
- 16.216 A senior representative of NSW Health described to me the introduction of the Root Cause Analysis process and the intention behind it:

"We taught 2,500 people out of the 100,000 in NSW Health the rudiments of root cause analysis ... and within a year we had a 30-fold increase in reporting. The aim was to get people to understand the systems nature...[the] chain of underlying latent errors built into the system. Getting people to understand the underlying systems component allowed them to feel free to report. So we were getting an enormous amount more information

...

Yes, some people would interpret that as saying, "I'm not to blame; it's all the system," but that is not the purpose of the process. The process was there to

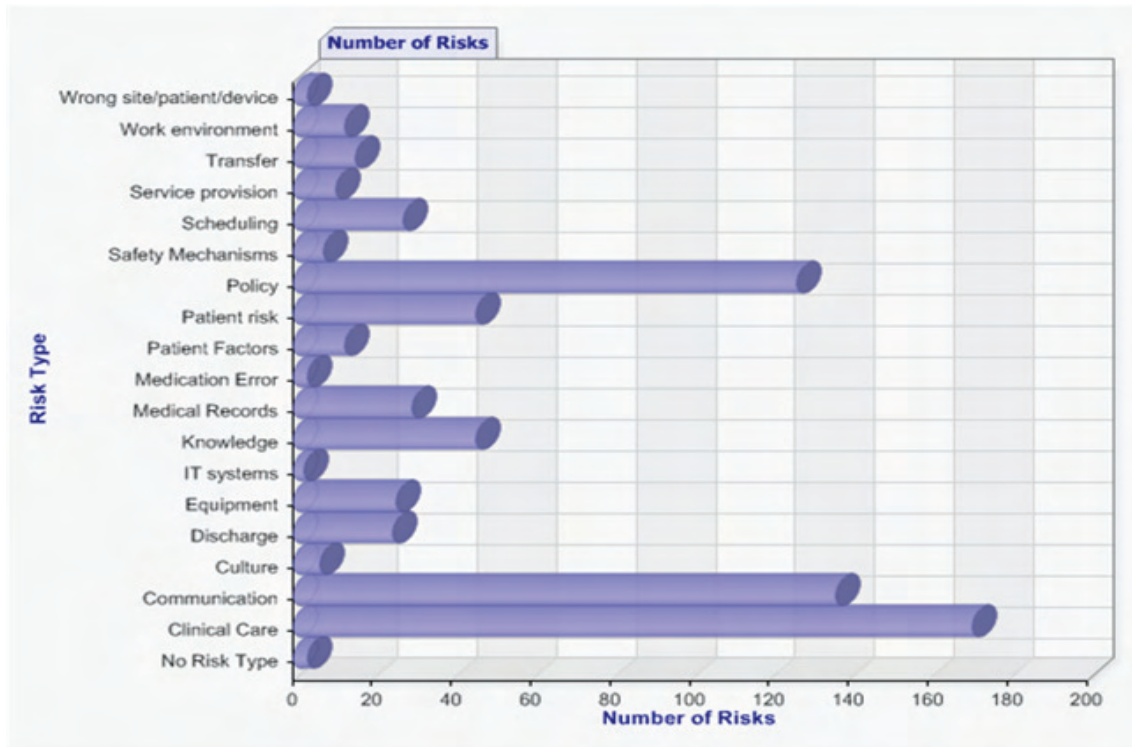
encourage reporting, and it did, and it provides our window into the system, but it doesn't absolve people of their own personal responsibility."²⁸⁰

- 16.217 All clinical SAC 1 incidents under Division 6C of the *Health Administration Act 1982* require an RCA.²⁸¹
- 16.218 NSW Health's incident management policy sets out 6 key steps in undertaking an RCA.²⁸²
- (a) Simple flow charting – a process to determine what the team knows about the sequence of events and what they don't know and need to find out;
 - (b) Final flow charting – identification of relevant actions and/or inactions and the most significant points where barriers might interrupt the flow of events;
 - (c) Cause and effect – where the team defines the problem statement and identifies in sequence the elements that led to the incident;
 - (d) Causation statements – a description of the causal chain as a statement from the root cause to the incident;
 - (e) Barriers and recommendations – from the causal statements identify the barriers that would most likely prevent or mitigate the problem – then determining appropriate recommendations;
 - (f) Reporting to the Director of Clinical Governance, chief executive of the area health service and the NSW Health.
- 16.219 NSW Health gave to the Inquiry some examples of system-wide practice change following RCAs:
- (a) The time at which the drug warfarin was dispensed was changed. Traditionally, the warfarin dosing time was at around 9 pm in the evening. The time was changed to 4 pm so that the team caring for the patient can use the relevant blood pathology result to determine by careful titration the appropriate dose of warfarin, rather than leaving this task to after-hours staff.²⁸³
 - (b) The "Murray Cod" is a retractor which is used to keep the bowel out of the way when doing difficult deep operations in the abdomen:

"It is soft and silastic, so it melds and doesn't hurt the bowel, but it's also hard to feel. It was white. When it got a bit of blood on it, it looked a bit yellowish, a bit like the fat in the abdomen. It had no radio-opaque marker. So it couldn't be seen on X-ray and it had no long tags, so there was nothing to suggest it was there. We had nine of those left in situ in the space of around about three months - again one in each area, two in one area. It was completely overlooked by the people on the ground. They said, 'That was bad luck. We had better count them better the next time.' But it wasn't being counted either. ..So we flagged that with the clinicians and also the manufacturer, and the design was changed. A long tag was placed on the end of it with the radio-opaque marker... and we put it in the count. So it is now counted in and counted out. We have not had one of those problems since with the same device."²⁸⁴
 - (c) Vincristine, a medicine commonly used in the treatment of leukaemia and lymphoma, is neurotoxic and must only be administered intravenously. In NSW a near miss involving an intravenous chemotherapy agent was reported. The drug was almost injected intrathecally, however, implementation of local policy averted

this error. A system-wide practice change was designed to reduce the risk of inappropriate intrathecal injections of Vincristine.²⁸⁵

- 16.220 The following graph shows the risks identified in a 2006 review of RCA causal statements. The most commonly identified risks were clinical care, communication and policy:²⁸⁶



- 16.221 The requirement that the RCA process be completed within 70 days is now a key performance indicator, which I was told has ensured compliance with this timeframe.²⁸⁷ Other countries have different timeframes, including in Chicago where the mandated turnaround time is 48 hours.²⁸⁸ NSW Health indicated that they are looking into whether this is a practical solution in NSW.²⁸⁹ Whilst I do not presently expect that the whole RCA process can be completed within 48 hours from report, having regard to the availability of current resources, it is no doubt a very laudable aim. What would be most useful to clinicians is the preparation, delivery and dissemination of a “48 hour” report. To my thinking a 48 hour report is a summary and necessarily interim report which will be capable of providing quick information as to the likely principal causes of an incident, which can then inform communication with the patient (or their family or carers), staff involved and the public generally. It can also provide early warning of possible serious systemic issues.
- 16.222 RCAs are completed by clinicians who are appointed by the chief executive of the area health service.²⁹⁰ NSW Health policy states that members of the RCA Team should have fundamental knowledge about the care processes in the area where the incident occurred, but are not to have been directly involved in the incident.²⁹¹ Whilst these clinicians are given support by the Clinical Governance Units and Patient Safety Officers,²⁹² I was told that in practice, this support is somewhat illusory.²⁹³
- 16.223 RCA teams must prepare a final report. (This final report is not protected by statutory privilege).²⁹⁴ The final report must contain:²⁹⁵

- (a) a description of the reportable incident;
 - (b) a causation statement that indicates the reasons why the RCA team considers the incident occurred; and
 - (c) any recommendations by the RCA team as to the need for changes or improvements in relation to a procedure or practice arising out of the incident.
- 16.224 The RCA report is “signed off” by the chief executive of the area health service. NSW Health policy provides that, when completed, the RCA Team must provide a copy of their final Report to the chief executive, who:²⁹⁶
- (a) reviews the recommendations for consideration and endorsement before the Report is submitted to NSW Health;
 - (b) seeks clarification from the RCA team if the rationale for any recommendation is unclear; and
 - (c) may add recommendations to the final report (this must be clearly documented.)
- 16.225 If the chief executive does not agree with any of the recommendations in the final report, this must be documented in the final report with reasons and the proposed alternative action.²⁹⁷
- 16.226 I was told that one of the purposes is to ensure that the chief executive is accountable for what is happening in their area health service.²⁹⁸ One area health service chief executive told me that it was their practice to endorse RCA reports without question, as they do not consider themselves to have the personal knowledge or expertise to question the recommendations.²⁹⁹ I was told that the only time the chief executive might carefully examine the recommendations is if it is a very resource intensive recommendation.³⁰⁰ Other chief executives may take a more hands-on approach.³⁰¹
- 16.227 The Clinical Governance Units of the area health services monitor implementation of recommendations made in the RCA report. The form used by NSW Health for RCA’s includes a section to indicate the “position of the person responsible for the implementation of the recommendations”. However, this is not a specific requirement of the *Health Administration Act 1982* (NSW).³⁰²
- 16.228 Since January 2008, all Root Cause Analyses are reviewed by an RCA Review Committee.³⁰³ This Committee was established by the Quality and Safety Branch of NSW Health and the Clinical Excellence Commission.³⁰⁴ The group meets fortnightly and is chaired alternatively by the Clinical Excellence Commission or NSW Health, with input from the Clinical Excellence Commission, Quality Service Branch, Nursing & Midwifery Office, Clinical Governance Units of area health services and the GMCT.³⁰⁵ The RCA Review Committee does a collaborative review of RCAs, excluding mental health and obstetrics (which are reviewed elsewhere). It reviews 15 to 20 RCAs per meeting and provides a report.³⁰⁶ I see no reason why there should be any sharing of this function. Logically, it ought be the responsibility of the Clinical Excellence Commission to undertake this process.

RCAs not well suited for needs of patients and families

- 16.229 RCAs are not particularly well-suited to the needs of patients or family for information about what happened, as I have discussed in Chapter 15.
- 16.230 NSW Health acknowledged that because the RCA process is focussed on system issues, this can sometimes lead to the patient and their family feeling that their concerns have not been addressed. The RCA is a narrow vehicle principally designed for system

improvement and the complaint made by the patient or the family can spread much wider than its focus.³⁰⁷

16.231 Establishing expectations about the process is as much a problem as the process itself.³⁰⁸ Families need to understand that the RCA looks at the system. The does not appear to be always well communicated.

16.232 I heard evidence about a number of problems with how patients and families are treated during RCA process.

(a) Contrary to the idea of open disclosure, some family members spoke of a lack of openness with patients and families during the RCA process.

For example, Bryce Keenan's parents expressed to me extreme concern that the investigation process within the hospital made it difficult for the public to gain a benefit from the tragic death of their son. To the Keenans, the process seemed to be more of a "protective exercise".³⁰⁹ While they acknowledged some positives came out of the internal systemic review, Keenan found there to be a "general apathy" to come clear on things.³¹⁰ They also described a "lack of openness".³¹¹

"...[t]he first thing I believe to fix the system up is that they need to acknowledge all of the errors and incompetencies and negligence that is there. They need to recognise them openly and then start fixing them up. But to keep hiding them, you will never fix the system."³¹²

(b) Some families were not informed about progress in the implementation of the recommendations of the RCA in a timely manner, or at all. For example, Mr Griffey expressed dissatisfaction that it took 2½ years for him to find out whether the recommendations of the RCA regarding poor treatment received by his daughter had been implemented.³¹³

(c) Some families felt that there had been a lack of independence in those conducting the RCA, in that the clinicians who were thought to have been involved in the event participated in the RCA.³¹⁴ I note that this is against express NSW Policy.³¹⁵

(d) There can be variability in the quality of Root Cause Analyses conducted.³¹⁶

16.233 The RCA process is also limited in that it does not address performance problems of individual staff, but focuses on any system problems. An RCA must be decommissioned where the RCA team identifies individual performance issues such as professional misconduct or unsatisfactory professional conduct that may be responsible for the incident and that there are no readily identifiable systems issues to consider.³¹⁷ The chief executive officer of the area health service is notified and will consider appropriate action.³¹⁸

16.234 I was told by NSW Health that the RCA process was deliberately designed to ensure that professionals would be confident to engage in the process.³¹⁹ The RCA process is not particularly suitable where the error occurred due to individual performance issues.³²⁰

Privilege

16.235 Following the recommendations of the Walker Inquiry, the *Health Administration Act 1982* (NSW) was amended on 1 August 2005 to introduce Division 6C, to give statutory privilege to teams conducting Root Cause Analysis investigations.

- 16.236 RCA reports were excluded from the privilege.³²¹
- 16.237 Section 20U of the *Health Administration Act 1982* provides for a review of Division 6C to commence in August 2008 with a report to Parliament to be provided by August 2009. I understand that it is likely that this review will cover, among other things, the apparent contradiction between the privilege and the principles of open disclosure.
- 16.238 As this review intends to consider in detail the privilege attaching to RCAs, I do not intend to further comment on this issue.

Improvement of RCA process

- 16.239 I observed there to be a number of defects in the present RCA process.
- (a) Because RCA reports must be approved by the chief executive of the area health service, there is a prospect that the RCA recommendations may be tempered by the author or, indeed, the chief executive.
- (b) RCA recommendations are not well implemented outside the hospital in which the incident occurred, and I have discussed this further below.

Recommendation 73: *Within 3 months, the Clinical Excellence Commission to consider and advise the Director General of NSW Health whether the involvement by the chief executive in the approval of the Root Cause Analysis process requires amendment and if so in what respects.*

Implementation of changes

- 16.240 NSW Health conceded that the system for implementing changes indicated by errors is not effective. As a senior health bureaucrat stated:

"One of the problems is that we are not getting penetration of these lessons and changes to behaviour down to every one of the frontline staff for whom it's relevant. If we do, then we are having trouble in sustaining those changes in behaviours for a long time so that 12 months later it doesn't happen again."³²²

- 16.241 Another said to me:

"...at least there is a culture of reporting now, but I think to this point the resources have been almost entirely applied to the reporting side and not to the implementation side. The implementation, unfortunately, is very, very expensive."³²³

- 16.242 Of particular concern to me is that the results of RCAs, SAC1s, coronial inquests and the like are not readily accessible or searchable by clinicians. In my view, every system must be able to learn from its mistakes and I would expect that this information should be readily available. After all, it is ultimately the clinicians who are the participants in the system who need to do the learning.
- 16.243 Professor Hughes of the Clinical Excellence Commission submitted that there is a need to establish a database for RCA reports with appropriate classification of reports to enable objective analysis.³²⁴ I would add to that purpose, also for the purpose of learning and broader education.
- 16.244 Dr Rankin of Lismore Base Hospital submitted that

"If there are root-cause analyses into major incidents - and I've been involved in several of them - I've not seen anything from a root-cause analysis which has ever been disseminated throughout the hospital where the incident occurred, let alone the network, let alone the area health service, let alone the state... there is no process for clinical staff to be informed of relevant problems from other hospitals or health services, full stop. That includes coroners' reports, medical defence incidents, root-cause analyses."³²⁵

- 16.245 Patients and relatives of patients have an expectation that when a root cause analysis is conducted, the findings and recommendations will have a wider dissemination than the clinical unit in which the adverse incident occurred.³²⁶ I wish to make a recommendation about this.

Recommendation 74: *Within 12 months the Clinical Excellence Commission to establish searchable intranet accessible to all NSW Health staff which contains all RCAs.*

Feedback and disclosure

- 16.246 In my view, to enhance safety and quality, there is a need to:
- provide information to the patient and families about what occurred in respect of a particular incident;
 - provide feedback to the clinicians involved in a particular incident as to the outcome of the incident and any investigations;
 - provide information to other clinicians in relation to incidents, to improve medical treatment elsewhere in NSW hospitals; and
 - inform the public about the performance of NSW public hospitals in terms of safety and quality.
- 16.247 As well, information is critical to the process of driving innovation in, and reform of, clinical practice. It is of the essence of the typical marketplace that improvements in safety, quality and cost, as well as sensible innovations, are all driven by commercial, profit-driven competition. In the NSW Health system, what will drive improvements in safety, quality and cost, as well as encouraging innovations, is not commercial profit-driven competition but information about performance and patient care. In other words, competition for excellence is achievement driven by transparency of performance. To me, complete transparency involves publicly available, timely, and up-to-date information.

- 16.248 The patient and family's entitlement to information is self-evident.

Feedback to clinicians

- 16.249 In terms of feedback to clinicians, data feedback encourages change and improves performance.
- 16.250 I was told that clinicians tend to be competitive and so will change their practice if comparative data shows their peers are getting better results. The use of publicly available comparative data to drive change is very powerful.³²⁷

16.251 A senior clinician stated that:

"It is really quite definite from the world literature that if you feed back reliable information to folk working at the clinical coalface, or people managing people working at the clinical coalface, realistic and appropriate information, they will take action."³²⁸

16.252 Dr Miskell, Director of Medical Services at Royal North Shore Hospital submitted to me that:

"We have almost normalised deviance, we are desensitised to error. We haven't, I don't think, really embraced the fact that we do cause harm, and importantly until that occurs, I don't think we can meaningfully address the problem."³²⁹

16.253 Dr Miskell agreed that one of the keys to solving this difficulty is by making relevant appropriate information and data available.³³⁰

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16.254 During the 2 day expert panel convened during the Inquiry, a number of attendees emphasised the role of data in driving change and improving performance.

(a) Professor Pollock spoke strongly in favour of the use of data to drive reform at the clinical unit level.³³¹

(b) Professor Paddy Phillips stated that:

"You can't change what you can't measure. Without knowing whether something is better or worse, you will not be able to keep going to it and that is really important. One of the things that worries a lot of clinicians about change is that they are concerned about being stuck with something worse than they had."³³²

(c) Dr Bernard Lawless was of the view that data and incentivisation provide the key drivers for change:

"If we are going to effect any change I think there are 2 fundamental ways to do it and that is by reflecting back data to show people their performance and also incentives such as funding - either receiving funding or having funding taken away."³³³

16.255 Unfortunately, many of the databases established by NSW Health are not directed to collecting data, or feeding data back to clinicians, at all, let alone in respect of safety and quality safety considerations. As one witness put it:

"...the computer system is run by bureaucrats and not clinicians and the data that comes out of it is for bureaucratic purposes and it doesn't tell you anything useful necessarily as a clinician."³³⁴

16.256 NSW Health told me that while the IIMS system, for example, does allow managers at unit level to extract their own incident data and report, this is extremely time consuming.³³⁵ The issue is also providing units with information about the performance of their particular units such as infection rates. At the moment NSW Health only provides an indicator, which a senior representative of NSW Health acknowledged, is not helpful.³³⁶

16.257 A senior representative of NSW Health acknowledged that:

"One of the issues for us is that we don't measure outcomes of care. We're very good at measuring the patients as they come through, counting the numbers, how

quickly we process them, how we need to process more of them even more quickly, but we're not very good, in a system-wide sense, of measuring outcomes. ...As a system, I can point and tell you about life expectancy and other things, but we don't measure the outcomes. This is a major, major issue."³³⁷

- 16.258 This problem is not confined to NSW. A review undertaken on behalf of the Internal Medicine Society of Australia and New Zealand analysing the underlying factors responsible for poor quality and unsafe care noted the following regarding information gathering and dissemination:

"Clinical databases and audit systems that allow prospective collecting and reporting of clinical performance data remain severely underdeveloped. Constant peer review and self-review informed by such data may identify and remedy poor performance more effectively than delayed, ad hoc retrospective sentinel reporting and chart review. Routine administrative data, traditionally used to measure output efficiency (length of stay, costs and utilization rates), could, using appropriately validated techniques, be transformed into useful, real-time quality and safety measures. Linkage of pharmacy, laboratory and patient databases could flag drug-result and drug-patient scenarios with potential for adverse events. Systematic individual-based linkage of hospital-episode statistics, death registries and clinical databases would allow longitudinal relations between process and outcomes of care to be more easily ascertained. Multi-hospital, data-driven collaborations aimed at improving care in specific clinical areas have potential to shift routine care significantly towards best practice standards in relatively short timeframes."³³⁸

- 16.259 The review formulated a 20-point action plan to improve quality and safety of hospital care, one of which was:

"Action 19: implement data-driven performance monitoring systems. All hospital departments should measure, analyse and report a set of specialty-specific process-of-care and outcome clinical indicators and a set of hospital-wide (or generic) safety indicators."³³⁹

- 16.260 The Clinical Excellence Commission submitted to me that:

"... there is a wealth of data in the health system. What is lacking are the kinds of robust indicators of quality that would indicate the highest level risks and the variation from best practice for health interventions at the level of hospital, clinical department and individual clinician, and that are routinely available to clinicians and administrators in a timely fashion.

Gorman et al (2007) consider quality measures to be central to health service reform. They recommend a greater emphasis be placed on proactive monitoring of health systems to identify those conditions that probably lead to error or violation.

In the United States the State Scorecard provides data across key dimensions of health system performance: access, quality, avoidable hospital use and costs, equity and healthy lives. The data indicates the level of variation between States and identifies areas where performance improvement is required (Commonwealth Fund, 2007). An example of the kind of data that is included

in the Scorecard is the percentage of patients who received recommended care for conditions such as acute myocardial infarction, congestive heart failure and pneumonia, and the percentage of surgical patients who received appropriate timing of antibiotics to prevent infections.

Scott has identified a number of evidence based safety practices and the monitoring of compliance with these practices could represent a substantial step in improving patient safety in NSW (Scott et al, 2008). These include: clinical workforce, teamwork, patient participation in care decisions, indications for health care interventions, clinical governance and information systems.”³⁴⁰

- 16.261 My recommendations below seek to address how to best collect and disseminate data to clinicians.

Publication of data to the general public

- 16.262 Opinions differ as to whether publishing healthcare-related data so that it is available to the general public is a good idea. Some say it would drive quality and improve performance.
- 16.263 Those clinicians who were supportive of the idea made it clear to me that the data must be of an appropriate standard and that it must be explained to the public and appropriately used. Dr Collett of Liverpool Hospital was of the view that, provided you were comparing hospitals which were dealing with patients of similar acuity levels, information on the safety and quality of surgical units could be published in the public domain.³⁴¹
- 16.264 The debate regarding whether public reporting improves quality and safety has been usefully summarised in IPART’s September 2008 report, *Framework for performance improvement in health*:

“Some experts consider that providing information to the public is an effective method for improving safety and quality performance.

..

It is generally suggested that public reporting improves safety and quality in two ways. First, it changes consumer behaviour, so that better-informed consumers demand quality health care and poor performers are disciplined by the market. Second, it helps poor performers to identify problems with their processes and improve their performance. However, a recent systematic review of the link between publicly reporting performance data and improving quality of care indicated that the evidence was scant. It noted that this could be because there was little rigorous examination of the major public reporting systems.

..

Aside from questions about the evidentiary link between public reporting and quality improvements, there are concerns about increasing public reporting. Some experts think that public reporting is not an effective safety and quality initiative, possibly based on the idea that the public is ill-equipped to deal appropriately with this information.”³⁴²

16.265 Noting the conflicting opinions IPART concluded:

"IPART supports the Department of Health increasing public reporting of hospital performance as a way of encouraging hospitals to improve their performance against clinical process indicators and clinical outcome indicators. For example, increased transparency may motivate clinicians to comply with clinical pathways.

The focus of this increased reporting should be on improving systems, rather than attributing blame to individuals.³⁴³

16.266 IPART recommended that NSW Health increase public reporting of hospital performance against clinical process indicators and clinical outcome indicators.³⁴⁴

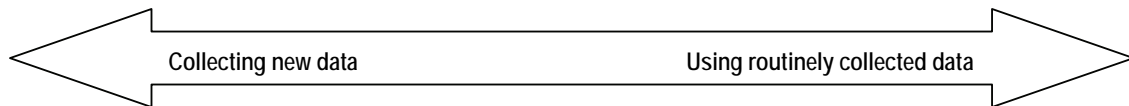
16.267 Based on all of the evidence which I have seen, the research which I have undertaken and the thoughtful advice provided to me in the course of my conferences with leading world experts in health systems, I am firmly convinced that the public reporting of information about the health system and hospital performance is essential for the future of NSW Health. At the least it improves patient choice and encourages improvement in all services. But it does a lot more. It is the single most important driver (or lever) for the creation of public confidence in the health system, engagement of clinicians, improvement and enhancement of clinical practice and cost efficiency.

16.268 My recommendations seek to improve data collection and publication by establishing a wholly independent Bureau of Health Information which will use existing data collections to analyse and publish health data. The functions of the Bureau would include: public reporting, performance monitoring, data access and supply, value-added analysis, evaluation and research.

16.269 In the course of my Inquiry, I asked Professor Sally Redman, the Chief Executive Officer of the Sax Institute to develop a possible model for the role and tasks of a Bureau of Health Information. She, together with Dr Louisa Jorm, produced an elegant model of how such a Bureau might be able to use data to improve the performance of the health system. I reproduce that model.³⁴⁵

Using data to improve the performance of the health system

Research	Evaluation	Value-added analysis	Ad-hoc data supply	Performance monitoring	Public reporting
Exploring causal pathways	Measuring the costs and effectiveness of new policies and programs	Detailed analysis of routinely collected data to explore specific issues	Analysing routinely collected data in response to user requests	Developing indicators	Developing indicators
Testing new interventions			Developing tools to allow users to interrogate routinely collected data (e.g. data cubes)	Developing methods and systems for analysis of routinely collected data	Producing and publishing regular reports
Developing new analytic methods				Benchmarking, reporting and feedback	Annual report to Parliament
				Providing advice re enhancement of routine data collections	



- 16.270 I support the model and commend it to NSW Health. One issue which may require further explanation, and is a matter of detail, is whether the Bureau would need to develop new indicators for public reporting and performance monitoring or whether it merely needs to identify those already in existence which may be appropriate. Perhaps it is a combination of the two.³⁴⁶
- 16.271 The Bureau should develop and publish patient care criteria which are adequate to enable measurement on a continuous basis of the performance in the provision of care to patients of each unit or ward, hospital, area (or functional) health service and NSW Health as a whole in the following areas:
- (a) Access: Access to and availability of hospital services including timeliness of the provision of services and proximity to patient's home or locality. Availability of alternative community or home based services in lieu of the hospital services;
 - (b) Clinical: Clinical performance including patient outcome, appropriateness of clinical treatment method, the variation, if any, from protocols and models of care, and identified benefits or detriments to the health and wellbeing of the patient;
 - (c) Safety and Quality: Safety and quality of the clinical care and the hospital attendance or admission;
 - (d) Cost: Cost of the clinical care including re-presentation or re-admission cost, and error cost (including provision of additional care, medication, diagnostic tests and/or counselling services and any financial settlement including litigation costs);
 - (e) Patient: Patient experience and satisfaction;
 - (f) Staff: Staff experience and satisfaction;

- (g) Sustainability: System impact and sustainability.
- 16.272 The Bureau is to share all data with NSW Health, the area health services, the Clinical Excellence Commission, the Clinical Innovation and Enhancement Agency and the NSW Institute for Clinical Education and Training.
- 16.273 By 1 January 2010, the Bureau is to start publishing quarterly reports, within 60 days of the end of the reporting period, which disclose the performance of each unit or ward, hospital, area (or functional) health service and NSW Health as a whole by reference to the patient care performance criteria.
- 16.274 By mid-2010, NSW Health is to review whether it is either necessary or appropriate to continue to measure hospital performance by the current key performance indicators or whether such measurement ought to be discontinued having regard to the quarterly reports of the Bureau of Health Information.

Recommendation 75: *Within 3 months, NSW Health is to establish a Bureau of Health Information, which has the following characteristics:*

- (a) *It is to be independent from and not part of the Department of Health;*
- (b) *It is to be established either as, or as a part of, a board governed statutory health corporation pursuant to s.41 of the Health Services Act 1997;*
- (c) *It is desirable that it be co-located with a research facility or else a body with expertise in the collection, analysis and use of complex data.*

Recommendation 76: *The functions of the Bureau are to include, but not be limited to,*

- (a) *Present routinely collected data sets:*
- (i) *Public Reporting:*
- Review and develop indicators of Health System Performance for the State as a whole, each Area Health Service (including functional Health Services), hospitals and units or wards;*
- Produce and publish regular and timely Reports of Health System Performance data according to relevant criteria;*
- Provide an Annual Report on the Patient Care Performance criteria, together any other relevant performance criteria to the NSW Parliament on NSW Health;*
- (ii) *Performance Monitoring:*
- Develop methods and systems for the analysis of routinely collected data;*
- Provide advice on the enhancement of routine data collections;*
- Identifying and undertaking benchmarking, reporting and feedback systems for all levels of NSW Health.*
- (iii) *Data Access and Supply:*
- Analysing routinely collected data in response to user requests;*

Developing and distributing tools to allow users to interrogate routinely collected data (e.g. data cubes).

(iv) Value-Added Analysis:

Undertaking analysis of routinely collected data sets to explore and report on specific issues.

(b) New data sets:

(i) Evaluation:

Undertaking, commissioning or advising upon the meaning of the cost and effectiveness of new policies and programs.

(ii) Research:

Commissioning research, as appropriate to support and renew its own functions;

Commissioning research into areas and issues, identified by or to it, concerning health system performance;

Commissioning or undertaking research for the developing of new analytic methods for both routinely collected data sets or else new data sets.

Recommendation 77: *Within 6 months, the Bureau of Health Information is to develop and publish patient care performance criteria which are adequate to enable measurement on a continuous basis of the performance in the provision of care to patients of each unit or ward, hospital, area (or functional) health service and NSW Health as a whole in the following areas:*

- (a) Access: Access to and availability of hospital services including timeliness of the provision of services and proximity to patient's home or locality. Availability of alternative community or home based services in lieu of the hospital services;*
- (b) Clinical: Clinical performance including patient outcome, appropriateness of clinical treatment method, the variation, if any, from protocols and models of care, and identified benefits or detriments to the health and wellbeing of the patient;*
- (c) Safety and Quality: Safety and quality of the clinical care and the hospital attendance or admission.*
- (d) Cost; Cost of the clinical care including re-presentation or re-admission cost, and error cost (including provision of additional care, medication, diagnostic tests and/or counselling services and any financial settlement including litigation costs);*
- (e) Patient: Patient experience and satisfaction;*
- (f) Staff: Staff experience and satisfaction;*
- (g) Sustainability: System impact and sustainability.*

Recommendation 78: *Within 12 months, the Bureau of Health Information is to start publishing quarterly reports, within 60 days of the end of the reporting*

period, which disclose the performance of each unit or ward, hospital, area (or functional) health service and NSW Health as a whole by reference to the patient care performance criteria.

Recommendation 79: *Within 24 months, NSW Health is to review whether it is either necessary or appropriate to continue to measure hospital performance by the current key performance indicators or whether such measurement ought to be discontinued having regard to the quarterly reports of the Bureau of Health Information.*

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 - ²⁰ Meeting with Dr Helen Bevan, National Health Service (United Kingdom), 14 March 2008.
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- ⁶⁸ Letter from NSW Health to Special Commission of Inquiry, 21 October 2008, p. 7. NSW Health have indicated that these figures are indicative only as the Quality and Safety Branch budget is yet to be finalised.
- ⁶⁹ Letter from NSW Health to Special Commission of Inquiry, 21 October 2008, p. 3.
- ⁷⁰ Letter from NSW Health to Special Commission of Inquiry, 21 October 2008, p.8.
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- ⁹⁶ Letter from NSW Health to Special Commission of Inquiry (Response to Request No. 77), 21 October 2008, pp.3-4.
- ⁹⁷ Letter from NSW Health to Special Commission of Inquiry (Response to Request No. 77), 21 October 2008, p.19.
- ⁹⁸ Letter from NSW Health to Special Commission of Inquiry (Response to Request No. 77), 21 October 2008, p.20 - although it is noted that information provided with by NSW Health indicates that South Eastern Sydney/Illawarra has a proportionally higher number of other positions devoted to safety and quality.
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- ¹²⁴ Submission of the Clinical Excellence Commission, 28 March 2008, SUBM.019.0003 at 70.
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17 Key performance indicators

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How are key performance indicators used?

- 17.1 NSW Health monitors the performance of health services against key performance indicators (**KPIs**).
- 17.2 KPIs have been a feature of the health system for some years. Considerable work is done at both State and federal level to develop and maintain a national performance measurement framework for the health system. This chapter is only concerned with the processing KPIs used to measure the performance of Emergency Departments, including ambulance off stretcher time, and surgery waiting lists in the NSW public hospital system. It is acknowledged that these KPIs sit within the broader national health information environment.
- 17.3 The chief executive of each area health service is held accountable for the overall performance of the area health service and for their individual performance¹. This includes accountability for performance against KPIs.
- 17.4 The contract of employment of each Chief Executive includes a performance agreement, which is developed annually, containing the criteria upon which his or her performance is reviewed. Those criteria link the Chief Executive's performance to the area health service's achievement of "Dashboard Indicators" (and any other identified strategic objectives). Dashboard indicators include surgery waiting times, and such KPIs as triage waiting times and access block. The performance of Chief Executives is reviewed, at least annually, by persons nominated by the Director General², against the agreed performance criteria for the position.
- 17.5 Emergency Department staff gave evidence to the Inquiry about having to prepare daily reports of their department's performance against KPIs and being scrutinised as to why benchmarks are not achieved³. Hospitals' performance with regard to KPIs is presented to the area health service executives on a regular basis. I had occasion to observe this during a area health service executive meeting which I attended⁴. The area health service regularly reports its performance against KPIs to NSW Health. This process requires the collection of a significant amount of data.

Emergency Department Key Performance Indicators

- 17.6 Emergency Departments, perhaps more than any other part of a hospital, are subject to performance scrutiny and this is largely against only 3 KPIs. These KPIs apply to all hospitals that have electronic information systems capable of capturing the required data. Currently in New South Wales (as at August 2008), there are 86 hospitals that meet this requirement, representing over 83% of the volume of presentations to Emergency Departments in New South Wales.⁵
- 17.7 Key performance indicators for the Emergency Department have traditionally focussed on operational characteristics.⁶ The KPIs for Emergency Departments are:
- (a) **Triage performance by Categories 1 to 5.** I discuss the KPIs for triage waiting times in Chapter 20.
 - (b) **Off-stretcher time:** this is the percentage of patients who are handed from the ambulance to Emergency Department clinicians within 30 minutes.⁷ About 80% of patients are dealt with in the required time frame, but this is less than the target set by NSW Health of 90%.⁸

(c) **Access block:** this relates to the inability of patients who have finished their emergency care but require admission to an inpatient hospital bed to leave the Emergency Department. The target of NSW Health is that 80% of patients who require admission to an inpatient bed from the Emergency Department will be transferred to a ward in less than 8 hours.⁹ The data indicates that in 2006-07 this target was largely met.¹⁰ Data shows that metropolitan area health services perform worse than rural area health services when it comes to access block.¹¹ I discuss access block more fully in Chapter 20.

17.8 The pressure on Emergency Department staff to meet KPI benchmarks is considerable. In my opinion, the pressure has now increased to an unrealistic level which is out of sensible proportion with the work which Emergency Departments do. This increased pressure can unfortunately lead to the manipulation of data and clinical care. The Inquiry investigated an instance of such manipulation, which has required me to make findings, which I set out in Appendix 8 to this report.

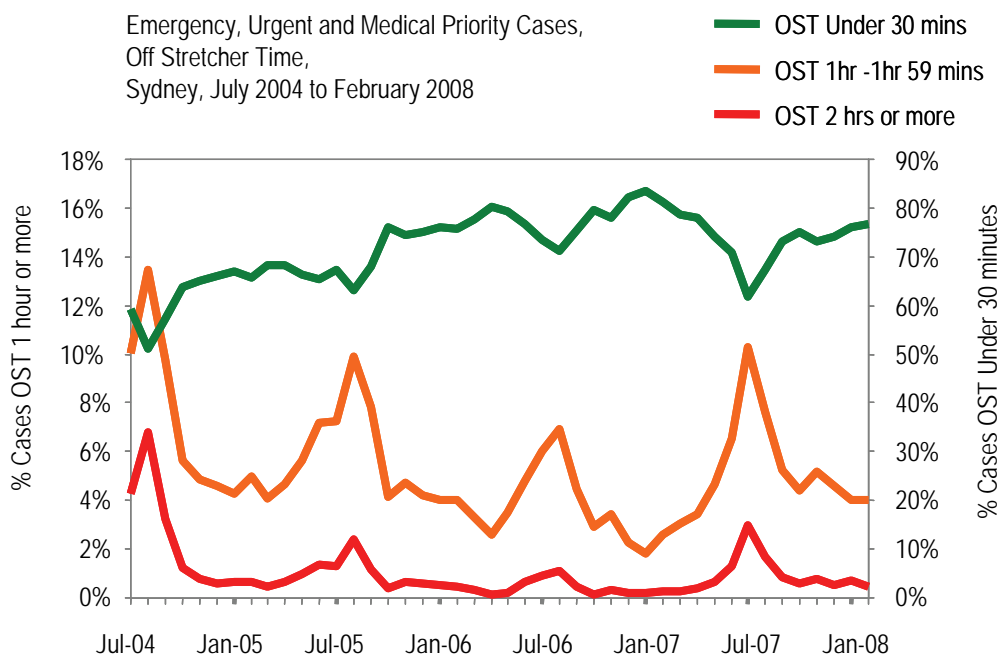
17.9 In my view, there are several problems with Emergency Department KPIs, which I discuss below.

Off-stretcher time

17.10 'Off-stretcher time' is the time between the arrival of a patient at hospital by ambulance and when the patient is physically taken off the ambulance stretcher and handed over to the care of Emergency Department staff.¹²

17.11 One of the key performance indicators of the Emergency Department is the percentage of patients whose 'off-stretcher time' is less than 30 minutes.¹³ About 80% of patients are dealt with in 30 minutes, but this is less than the target set by NSW Health of 90%.¹⁴

17.12 Data on trends in off-stretcher time show an improvement between July 2004 and January 2007, with a drop-off since that time.¹⁵



Problems with measurement

- 17.13 The time of the first arrival of the ambulance at the hospital is recorded as an ordinary part of the reportable data required for the management of the Ambulance Service. It is done electronically via the in vehicle equipment. Off-stretcher time is physically recorded through the process of an ambulance officer returning to their vehicle after handing over a patient and activating the “off-stretcher” function on their mobile data terminal in the ambulance.¹⁶ The time of that function activation is then recorded by, and held in, the NSW Ambulance Service’s computer-aided dispatch system.¹⁷ Hospital staff are not involved in this activation process and do not know when the activation occurs.
- 17.14 The NSW Ambulance Service’s Standard Operating Policy for the recording of off-stretch time mandates the timely activation of off-stretcher status in all cases.¹⁸ Despite this, there are clearly limitations to accurate recording due to a number of variables, such as the physical layout of the hospital, location of ambulance parking areas, and varying work practices of hospital staff and paramedics.¹⁹
- 17.15 The accuracy of ‘off stretcher’ time recording was challenged by many hospital staff I met, all of whom could recite an incident where an ambulance officer did not return to their vehicle immediately after delivering the patient but went for a coffee or a meal or to complete their paperwork somewhere within the hospital.²⁰ It was pointed out to me that Emergency Department staff have no control over its recording, but are judged by it.²¹
- “It involves independent recording of a dependent process step”²²
- 17.16 Despite the current limitations in accurate recording, the NSW Ambulance Service and NSW Health both view “off-stretcher time” as a useful tool for broad trend analysis.²³
- 17.17 The NSW Ambulance Service told me that it would welcome more accurate reporting and is currently exploring the use of a facility that enables confirmed hand-over times agreed with the Emergency Department staff, to be entered directly from a point within the Emergency Department.²⁴
- 17.18 Whilst I do not think that the tensions caused by the measurement of “off-stretcher time” are material in the efficient operation of the Emergency Department, it is a measurement which causes ill-feeling. I was told that there is no reason in principle why off-stretcher time cannot be jointly recorded by Emergency Department staff and ambulance officers.²⁵

Recommendation 80: *NSW Health, if it has not fully implemented the next recommendation, should within 18 months provide either by consensual arrangement or changed technology that ambulance officers and the Emergency Department agree and determine jointly off stretcher time.*

Delays in off-loading patients at hospitals

- 17.19 The real point of measuring ‘off-stretcher time’ is, it appears to me, to focus the minds of hospital and ambulance staff alike on getting patients off-loaded from ambulances onto beds in the Emergency Department as soon as possible, so that the ambulance can return to the task of retrieving other patients in urgent need of medical treatment.
- 17.20 A number of people conveyed to me an experience of witnessing ambulance officers waiting around the Emergency Department with low acuity patients, unoccupied for hours on end due to long waiting times. These people rightly expressed the view that it

seemed a waste of resources to have ambulance vehicles unavailable throughout this time for new emergencies.²⁶ During the shift which I spent travelling with an Ambulance and its crew, and also with a shift supervisor, this was something which I also personally witnessed.

- 17.21 Even where a person transported to the Emergency Department is given a relatively low triage category such as 4 or 5, and is capable of sitting upright in a chair (such as a patient who transports themselves to hospital would do in the existing waiting room), the ambulance officers will remain with the patient until hand over to the Emergency Department staff.
- 17.22 One solution currently implemented by the NSW Ambulance Service is, where waiting periods are lengthy, to send an ambulance release team with stretchers to look after transported patients waiting for extended periods to be seen at the Emergency Department.²⁷ Each release team is made up of 2 off-duty NSW Ambulance Service paramedics who are voluntarily rostered to shifts on an overtime basis. I was told that area health services pay the cost of deploying these teams.²⁸
- 17.23 Another possible solution, is to staff the waiting area used by ambulance patients with a clinical initiatives nurse in the same way as a busy waiting room ought be staffed. With that solution, ambulance officers can hand over the care of the patient shortly after arrival and there is then no need for ambulance officers to wait with a patient until a bed becomes available. The benefit of this option is that the paramedic crew and the ambulance are then released promptly to return to the task for which they are best suited. It would also mean that the off-stretcher time KPI would largely cease to be the cause of discontent which it now is.
- 17.24 In my view, the practice whereby ambulance officers remain with patients in the Emergency Department of hospitals until the patient has their definitive treatment commenced ought be abolished. The consequence of this is that once a patient is delivered to the hospital that the patient becomes the responsibility of the staff of the hospital, whether in the Emergency Department, or the Primary Care Centre. Where necessary, additional staff (such as a clinical initiative nurse) will need to be deployed by the hospital for that purpose.

Recommendation 81: *Within 18 months, the practice whereby ambulance officers remain with patients in the Emergency Department of hospitals until the patient has their definitive treatment commenced ought be abolished.*

Surgical Key Performance Indicators

- 17.25 As is discussed further in Chapter 23, waiting times for planned surgery (or so-called elective surgery) is a performance indicator monitored across the Australia. Waiting times are measured by reference to clinical urgency category.

Manipulation of data

- 17.26 Pressure to meet performance indicators may lead to manipulation of the data in some hospitals.

"elective surgery is the easiest service for health administrators to manipulate to meet budget imperatives and to manage demand pressures."²⁹

17.27 In the view of one nurse manager, the problem is that reporting is not carried out the same way across the whole system³⁰. Calculation of waiting time starts from the date on which the patient is added to the hospital's waiting list. This is called the listing date. Upon receipt of a 'Recommended for Admission Form' from the patient's referring doctor, the hospital is required, by NSW Health policy³¹, to stamp the form immediately and place the patient on the waiting list within 3 days (unless the form is incomplete). This task is carried out by clerical staff. I was told that it is not uncommon for clerical staff to wait until a date for surgery has been set before entering the patient on the waiting list. In these circumstances, it appears that the hospital is performing better than it actually is with regard to waiting list timeframes. However if the data is accurately and honestly entered and auditing is appropriately carried out, then the hospital may appear to perform badly.³² One witness said:

"I think it is unrealistic for people to expect us to be a zero every month for all of those categories without manipulating the system in some way."³³

17.28 If the data is accurate and honest, hospital or area health service managers then ask why the performance standards have not been met. The staff then feel that their reputations are being affected for managing the wait list honestly and the temptation to manipulate the data entry:

"...that's unfair, because we are managing it appropriately. It's the resources and the time constraints that are the problem. We can't do any more than we are doing. It makes it really difficult."³⁴

17.29 I heard of various other ways in which the waiting lists are manipulated:

- the referring doctor requests a surgery date from the hospital and does not send the Recommended for Admission Form to the hospital until a date is allocated³⁵;
- patients are offered surgery at another hospital or at short notice and if they refuse the offer, they are termed 'Not Ready for Care' and taken off the waiting list³⁶;
- patients are prevented from being placed on the waiting list by limiting their access to the specialist clinics at the hospital³⁷;
- certain patients (such as endoscopy patients) are not placed on the list³⁸;
- doctors are informed that no further patients will be placed on the waiting lists until the waiting list is reduced³⁹; and
- the clinical priority of patients determined by doctors is changed by administrative staff.⁴⁰

17.30 NSW Health policy provides that patients who refuse a reasonable and genuine offer to transfer to another doctor or hospital list to minimise their waiting time must be classified as "Ready for Care Patient Choice to Wait". They then remain on their original list in the same queue position.⁴¹ In other words, they should not be categorised as "Not Ready for Care", as such periods are excluded in determining waiting time⁴². NSW Health policy clearly states that⁴³:

"Not Ready for Care status is not intended as a method for managing waiting times to meet targets

Hospitals are required to actively manage Not Ready for Care patients to ensure they become Ready for Care or are removed from the waiting list"

17.31 I was told by a doctor, who refers patients for surgery, that the administrators control the waiting list, rather than the clinicians. It is possible that the category that the clinician has assigned for a particular patient will be changed, either because the administrator

does not understand the medical terms, or “because the government says that the categories are not right.”⁴⁴ In this doctor’s opinion, administrators should not second-guess a doctor’s opinion about the correct waiting list. He gave evidence⁴⁵:

“I have written on a medical referral form the medical word "dysphasia", and I have written "progressive dysphasia". ... as a clinician, you think of cancer. Because it didn't come in the words on the secretary's form she said "This is not appropriate, it's a category 2". The bed manager looked at it and said "Yes, it should be a category 2", because they don't understand the medical phrases. I am happy to write the normal lay terms on the form if they want it. It is going to take more time for me to do... This is a team effort and team response, but the patient sees me in the rooms. I have the right to determine what I think is appropriate for that patient to wait, because at the end of the day, I take the legal responsibility for that patient.”

- 17.32 NSW Health policy sets out a process for assigning a different priority rating from the initial category⁴⁶. This involves a clinical review by an appropriate clinician. The policy does not permit the hospital's administrative staff unilaterally to change categories assigned by the referring doctor. It requires any reclassification to be made by an “authorised doctor”. This must be evidenced in writing and include the name and signature of the person making the change, the date and time of notification of the change and the reason for the change. “Authorised doctor” is not defined in the policy document.
- 17.33 There is no requirement that the referring doctor be informed of the reclassification of the patient’s clinical priority. In my view, this should occur in writing as soon as possible after the reclassification is made. A maximum of 7 days would seem to me to be a not unreasonable constraint of time within which this should occur.
- 17.34 I was also told that most of the manipulation occurs with respect to category 3 patients who are on a 12-month waiting list. I was told that patients are sometimes inappropriately placed on the “Not Ready for Care” waiting list.⁴⁷ However, the Surgical Services Taskforce informed the Inquiry that the available data and audit results suggest that there is no evidence of patients inappropriately being classified as Not Ready for Care.⁴⁸
- 17.35 NSW Health policy requires each hospital to identify a person responsible for the clerical audit of hospital waiting lists and to carry out such audits at least monthly. There is a requirement for the documentation to provide a clear audit trail of any changes that are made to the patient’s booking and to report the outcome of audits to “relevant management”.⁴⁹ There is no definition of relevant management.⁵⁰ In my view, audits ought be carried out by staff not associated with the hospital or area health service in question.

Recommendation 82: *NSW Health should institute an audit program of waiting lists kept for each hospital in NSW, conducted by staff who are not associated with the relevant area health service or the hospital. The audits should examine all paperwork that the hospital is required to maintain for the waiting lists including correspondence with referring doctor, and should include the auditing of any reclassification of patients’ clinical urgency category.*

Recommendation 83: *Any hospital which reclassifies the clinical urgency of a patient whose name is on, or is to be entered on, a surgical waiting list, is to inform the patient's referring doctor in writing within 7 days.*

- 17.36 Some surgeons complained that the political emphasis on reducing waiting lists distorts prioritisation of surgery according to clinical need. I was told by a number of orthopaedic surgeons that political pressure to comply with the waiting times for elective surgery means that non-elective cases, particularly orthopaedic trauma surgery (for example, broken legs or elderly patients with fractured hips), are accorded the last priority when it comes to operating theatre time, even though they are of greater clinical urgency. If this is so, then it raises a matter of real concern.
- 17.37 At Liverpool Hospital, I was told that orthopaedic surgeons have been agitating for some time for extra operating time for patients suffering orthopaedic trauma and fractures, but this has not been made available⁵¹. Orthopaedic trauma is traditionally managed on emergency lists and competes with every other specialty, leading to frequent cancellation of surgery and unsupervised after-hours care. I was told that the surgeons have been offered as much theatre time as required for completing non-urgent elective cases that involve minor operations in an effort to comply with the waiting times. This is seen to be an inappropriate prioritisation of resources given that orthopaedic patients suffering fractures and trauma are left to wait for their operations on the wards, sometimes for up to two weeks.⁵²
- 17.38 At the Children's Hospital at Westmead, I was told that they use a second emergency list on Fridays⁵³. The reason for this is that Friday is often the day to which surgery is moved if it has not been able to be completed on preceding days during the week. I was told that this minimises a "spilling over" of patients into Saturday and Sunday. I was told that the funding for this second list is not guaranteed and that it was due to terminate at the end of the financial year.⁵⁴
- 17.39 I heard from another orthopaedic surgeon who is concerned that decisions are made on a short-term 12 to 18-month basis in an effort to relieve media pressure about waiting lists and without any long-term planning on the best way to prioritise resources and provide appropriate patient care. He told me that over the last 18 months, the surgeons had been told not to cancel planned surgery in order to complete orthopaedic trauma cases as planned surgery should take precedence. He said:
- "It seems to be much more important for the administration to get elective cases done than to manage the trauma. Patients often wait one or two days to have their broken leg fixed, but the elective carpal tunnel goes on".⁵⁵
- 17.40 I was told that this desire to avoid short term bad publicity also leads to an overemphasis on performance benchmarking which has promoted a culture of data cleansing and deceit or sometimes simply inappropriate clinical decision-making. The manipulation of data may occur through the early transfer of patients to wards to achieve access block benchmarks, or by reducing the number of patients placed on the waiting lists. This has been to the detriment of patient care.
- "Policy determined to avoid short term adverse publicity rather than considerations of quality care."⁵⁶
- 17.41 I discuss this matter further and make recommendations in Chapter 13.

Problems with Key Performance Indicators

17.42 In my view, there are several problems with these KPIs.

KPIs not directed to quality

17.43 The KPIs for the Emergency Department are directed to the time within which a patient is processed through the Emergency Department, rather than the far more important consideration of the quality of care that the patient received. As such, they do not always reflect the efficient functioning of the hospital, if one includes in the concept of efficiency a notion of quality. For instance, a KPI for triage waiting time may be met but the patient may need to return to the Emergency Department within a short space of time because of inadequate assessment, diagnosis, investigation or treatment.

17.44 In evidence received by the Inquiry, many clinicians lamented the insistence on meeting KPIs and expressed the view that they have little positive impact on the quality of patient care.⁵⁷ They said that the performance data for Emergency Departments relates primarily to “time” and that this has led to a level of micromanagement and scrutiny of the work of Emergency Department staff in recent years which is unprecedented⁵⁸. The submission was made, correctly in my view, that this level of scrutiny is not applied to other wards in the hospital, whereas what happens on those wards is often the cause of processing delays in Emergency Departments. It was suggested that KPIs could more meaningfully relate to appropriate ward placement, inpatient care and hospital discharge, as well as pathology and radiology processing.⁵⁹

17.45 The Inquiry received a large amount of evidence about the efforts made by Emergency Department staff to meet KPIs. Some of the evidence drew attention to the fact that KPIs applying to Emergency Departments can produce clinically inappropriate outcomes and that this demoralises clinicians. I heard evidence of a number of ways in which this occurs:

- (a) moving a patient out of the Emergency Department without proper assessment, in an effort to avoid breaching the KPI for access block, only to wait on the ward for proper investigations to be carried out culminating in surgery taking place many days later;⁶⁰
- (b) transferring a patient, although appropriately assessed in the Emergency Department, to an inappropriate ward where the patient is less likely to receive timely and safe care for his or her condition in order to achieve the KPI relating to access block⁶¹. Meanwhile, there may be available beds in the Emergency Department, which would be a better place for that patient to be should anything go wrong;
- (c) making a patient who has already passed the ‘access block’ benchmark of 8 hours wait in the Emergency Department while giving priority to another patient who has not yet breached the benchmark for transfer to a ward, even though they have less clinical need;⁶²
- (d) placing patients in ‘corridor beds’ in the Emergency Department in order to meet the KPI for triage waiting times.

17.46 It is clear from the above examples that Emergency Department staff spend a considerable amount of time worrying about meeting KPI benchmarks and that this is often not a productive or constructive concern. It is certainly not a method of ensuring patient safety and good quality of care for patients. Rather, it is the antithesis of those goals.

- 17.47 Use of the Emergency Department KPIs might be said to be supported by studies that have found an association between Emergency Department overcrowding, length of stay and mortality. That is, they might be said to be related to quality. I accept that in this regard the data collected about triage waiting times and access block is relevant and potentially useful for identifying problems and comparing the overall performance of the hospital system.
- 17.48 In one sense, performance indicators are a management tool that allows the administrative arm of the health service to identify problems in performance more quickly than they may otherwise be able to. Also, information on performance is important to enable clinicians and managers to improve standards. However, there may be valid reasons why a KPI is not met. As noted in the foreword to the *Australasian Clinical Indicator Report: 1998-2006*.⁶³
- "[I]ndicators and trends act as 'flags' for further investigation. There may be valid reasons for an organisation to be significantly below or above the average in an indicator. The point is to determine why."
- 17.49 The problem as I see it is that disproportionate insistence on KPIs can, and frequently does, produce both data manipulation and clinically inappropriate outcomes such as those I have listed above. Where they are used for the purpose of decision-making on resource allocation rather than patient care, they do not serve any quality-based purpose. The public is ostensibly interested in waiting times and thus these are given inordinate priority in reporting from Emergency Departments each day to NSW Health in North Sydney.
- 17.50 This over-emphasis on KPIs burdens health service managers, not only clinicians. I heard from hospital General Managers who told me that they find the requirement to report performance statistics on a daily basis, and the pressure to explain variations from norms, stressful, particularly as those "norms" are determined by "bureaucrats" or "economists" who are not in touch with what is happening on the ground⁶⁴. This is thought to be particularly unfair in smaller hospitals with less resources⁶⁵. I discuss this one size fits all approach below.
- 17.51 It was helpfully suggested to me that a few fundamental questions ought be asked about any KPI:⁶⁶
- What question is going to be answered by the data?
 - How is the data going to be used?
 - What definitions will be used to define the indicators being collected?
 - What incentives and accountabilities are used to get people to submit data?
- 17.52 I would add to the top of that list the question:
- Will the data collected on this indicator assist in improving clinical care?
- 17.53 It is essential that NSW Health address each of these questions if it is to justify the expense incurred, both in terms of time and staff morale, that the collection of data generates for the public hospital system, when KPIs are used to measure processing performance. I thoroughly agree with the statement that:
- "If you are going to use process indicators, you have to have a high level of evidence that exists for a direct link between the process and the actual outcome".⁶⁷
- 17.54 I note that Dr Bernard Lawless⁶⁸ stressed the primacy of outcome, and the need for evidence that the process will help improve outcomes. Only if such evidence exists can performance measurement on the basis of KPIs based on a given process be justified.

- 17.55 For the data to be meaningful, it is also necessary, at the very least, for there to be a consensus about the parameters of the definitions underlying the reporting requirements. I noted in Chapter 20 the confusion clinicians had about the definition for when a patient is first seen in the Emergency Department for the purposes of the KPI relating to waiting times per triage category.

Manipulation

- 17.56 KPIs can be readily manipulated. Unfortunately there have been instances of such manipulation within the public hospital system in the recent past.
- 17.57 The Inquiry received evidence about 2 such instances, occurring at Gosford Hospital in 2006 and at Ryde Hospital in 2005 and 2006, which concerned the KPIs for triage waiting times. This Inquiry did not investigate these matters but obtained by summons the documents relating to them.
- 17.58 The Inquiry also received evidence about the manipulation of models of care at Shellharbour Hospital in an effort to improve the hospital's performance against the KPI for access block. The Inquiry investigated this matter thoroughly and I have made findings about the conduct of certain individuals. I set these matters out in Appendix 8 to this report.

Data manipulation for triage waiting times KPIs

- 17.59 Two methods were identified in 2006 at Gosford Hospital. One involved staff changing the recorded triage category from a higher level to a lower level and the other involved changing the 'doctor seen time' recorded in the system to an earlier time than was in fact the case. Both practices resulted in waiting time benchmarks being met. The area health service in question carried out an internal audit and referred the matters to the Independent Commission Against Corruption. A member of nursing staff was the subject of disciplinary action.
- 17.60 During the internal investigation, staff identified that there had been significant pressure from hospital "senior management and the executive" to improve waiting time figures. The area health service's internal investigator found that it was "highly probable that the unsupported changes to triage data...were introduced in response to these pressures as a means of meeting Management expectations".⁶⁹ The responsible staff member was noted as being under "considerable pressure" to meet benchmarks, although the report does not specify by whom.⁷⁰
- 17.61 The report also notes the inherent conflict in attributing to the same person the responsibility not only for the collection and reporting of data, but also for making improvements to the system by which data is collected. The report noted:⁷¹
- "This level of responsibility allows the position full control over the triage benchmark processes including the ability to implement a process and sway results to provide a positive change without independent input, review and/or evaluation."
- 17.62 Although falsification of triage data deserves investigation and, where appropriate, sanction, it needs to be recognised that pressure to manipulate data in this way ultimately flows from insistence by high level management on achieving positive outcomes on process driven data. Government uses key performance indicators to assess the performance of its officers. This is a major contributor to the perceived

divide between those providing patient care 'on the ground' and those in managerial roles.

- 17.63 It is regrettable that pressure to meet key performance indicators leads to such conduct rather than active involvement jointly by management and clinicians to improve patient care, including waiting times. It goes without saying that if the figures are manipulated, they serve only a very limited purpose. It is not the triage scale that is the problem. Rather, the insistence on meeting key performance indicators has led to its misapplication. In my view, the triage categories should be used for their original intended purpose, that is, as a means to ensure effective and safe care on the basis of clinical urgency.
- 17.64 At Ryde Hospital in 2005 and 2006, staff were changing patient admission times so that fewer patients appeared to suffer access block. The area health service internal audit unit carried out an investigation. It was found that the correct data had been entered into the Emergency Department manual recording system but that data had been manipulated before being entered into the computer system, being the system from which access block figures were derived.⁷² Figures of access block of 15% and 13% were reported to the Department of Health for the months of November and December 2005, when the true figures were 27.8% and 28.3% respectively.
- 17.65 The investigation report records that one of the staff who had carried out this practice submitted that considerable pressure had been placed on her to reduce access block figures and that "the potential for withholding funding had been raised". It was also noted that another member of staff stood to obtain "career benefits" if access block figures were improved. A number of staff stated during the investigation that "they had heard that other Area Health Services 'fudge' their access block figures".⁷³
- 17.66 The area health service notified the Independent Commission Against Corruption. Disciplinary action was taken against relevant staff. This is another regrettable instance where pressure to meet key performance indicators leads to inappropriate conduct.

KPIs distort clinical decisions

- 17.67 Although there is an obvious interest in hospitals' performance in the community, key performance indicators achieve the very result they should be designed to avoid when they distort clinical care. I listed some examples of how this happens above at paragraph 17.44.
- 17.68 It seems to me that key performance indicators are less likely to result in clinical distortions where the hospital is adequately resourced. There is a relationship, for example, between the level of staffing in the Emergency Department and the time to meaningful assessment. Key performance indicators as they currently stand follow a one size fits all model, which does not take into account the differences between hospitals in workload, activity and resources. Insistence on complying with them can distort clinical activity. The events at Shellharbour Hospital described in Appendix 8 are one instance of this. Performance measures based on quality of outcome do not have this limitation.

The way forward

Review of key performance indicators

- 17.69 In my view, it is time that the focus of performance assessment in relation to Emergency Departments moved towards measuring quality of outcomes, rather than merely process driven statistics. This is because benchmarks based on quality are more likely to drive improvements in clinical outcomes.
- 17.70 I also consider that the unreasonable insistence on Emergency Departments achieving KPI benchmarks needs to be reviewed. It seems to me that KPIs are given inordinate attention because they are included as high level performance criteria under Area (and executive officer Performance Agreements). Although I recognise that performance measurement has been one of the priorities of the Clinical Services Redesign Program, in my view, NSW Health needs to revise the emphasis given to these factors in its efforts to achieve reform.
- 17.71 There is undoubtedly value in collecting data about processing times as this information is relevant to patient care and can drive positive change. However, I do not think that performance against processing KPIs alone ought to be included as criteria under Performance Agreements. This leads to micromanagement and unfair scrutiny of staff who perform their responsibilities within the resources provided to them. This ought to remove the micromanagement currently experienced by frontline Emergency Department staff in relation to their performance.
- 17.72 In my view, there is a risk that valuable information about the delivery of health care in this State will be lost if evaluations are based solely on processing data.
- 17.73 Facets of quality are amenable to data collection for the purpose of measuring the quality of patient outcomes, such as⁷⁴:
- Unplanned returns to the Emergency Department within a short period of time, such as 24 or 48 hours;
 - The quality of diagnoses made by Emergency Departments;
 - Documentation standards in Emergency Departments;
 - The extent to which a patient's journey adheres to a clinical pathway;
 - Sentinel events in Emergency Departments identified through the morbidity and mortality review processes;
 - Patient satisfaction, measured in part by the number of written complaints.
- 17.74 Of course, this does not mean that all aspects of the quality of care provided in the Emergency Department should be the subject of a key performance indicator. The Inquiry is not the appropriate forum for identifying the appropriate key performance indicators of quality of care relating to the Emergency Department. I have noted some of the studies and literature on the appropriate indicators on quality of care.⁷⁵
- 17.75 In my view, the performance measurement framework should aim to obtain accountability from the whole system, beyond the Emergency Department and even beyond the hospital and into the community. I agree with the following comment that measures which potentially drive hospitals and community services to work together to find solutions to issues, such as alternate care, are of great value:
- "Are you including in the performance measurement framework measures such as the whole journey length of stay, 30-days-post-discharge mortality and time to recovery, so that there is something that can potentially

drive the hospitals and community services to work together to find solutions to issues such as alternate care.”⁷⁶

- 17.76 I discuss in Chapter 16 my proposals for the publication of patient care criteria to enable measurement on a continuous basis of the performance in the provision of care to patients of each unit or ward, hospital, area (or functional) health service and NSW Health as a whole, in a number of areas. My comments in the present chapter apply insofar as that framework involves the use of processing indicators of the type discussed above.
- 17.77 In my view, a review of the present key performance indicators applying to the Emergency Department ought be carried out, addressing each of the below questions:
- What data is required to be collected?
 - What question is answered by the data?
 - How is the data used?
 - What definitions are used to define the indicators being collected?
 - What incentives and accountabilities are used to get people to submit data?
 - Will the data collected on this indicator assist in improving clinical care?
- 17.78 The same questions ought be asked about any proposed key performance indicators.

Recommendation 84: *Within 12 months NSW Health should critically review this requirement for reporting against Key Performance Indicators required of Emergency Departments to determine whether:*

- (a) *The indicators are useful;*
- (b) *The indicators are necessary; and*
- (c) *Whether any undue burden is being imposed on Emergency Department staff by the existing regulatory requirements.*

¹ NSW Health, *Executive Performance Management*, PD2006_083 at 7.

² Section 121G, *Health Services Act 1997* (NSW).

³ Confidential St George Hospital hearing, 14 May 2008, transcript 9.43.

⁴ Northern Sydney Central Coast Area Health Service Area Executive meeting, 17 June 2008.

⁵ Letter from NSW Health to Special Commission of Inquiry, 23 September 2008.

⁶ Australasian College for Emergency Medicine, *Guidelines on Constructing an emergency medicine medical workforce*, July 2008 at 6.

⁷ Report on Inquiry into the Royal North Shore Hospital, 2007, Joint Select Committee on the Royal North Shore Hospital, NSW Parliament, Sydney. p.34.

⁸ NSW Health *Annual Report 2006/07*, 2007, NSW Health, North Sydney, p. 42.

⁹ NSW Health *Annual Report 2006/07*, 2007, NSW Health, North Sydney, p. 43; Report on Inquiry into the Royal North Shore Hospital, 2007, Joint Select Committee on the Royal North Shore Hospital, NSW Parliament, Sydney. p.34.

¹⁰ NSW Health *Annual Report 2006/07*, 2007, NSW Health, North Sydney, p. 43.

¹¹ Auditor-General's Report, *Financial Audits, Vol 1*, 2008, NSW Parliament Legislative Council, Sydney, p. 25.

¹² Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.

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- ¹³ NSW Health *Annual Report 2006/07, 2007*, NSW Health, North Sydney, p. 51.
- ¹⁴ NSW Health *Annual Report 2006/07, 2007*, NSW Health, North Sydney, p. 42.
- ¹⁵ NSW Health briefing, 13 March 2008, transcript 75.16-42 and presentation at 7.
- ¹⁶ Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.
- ¹⁷ Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.
- ¹⁸ Letter from NSW Health to Special Commission of Inquiry, 20 March 2008 – Ambulance Service of New South Wales, *Standard Operating Policy – Recording of Off Stretcher Status, 2007-029*.
- ¹⁹ Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.
- ²⁰ Information provided during visit to Wollongong Hospital on 14 April 2008; Confidential Concord hearing, transcript 25.22; Information provided during visit to St George Hospital on 21 February 2008.
- ²¹ Information provided during visit to Mona Vale Hospital on 12 March 2008.
- ²² Meeting with Greg Rochford, Ambulance Service of New South Wales, 31 March 2008, presentation at 24.
- ²³ Meeting with Ambulance Service of New South Wales, 31 March 2008, transcript 34.15. Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.
- ²⁴ Meeting with Ambulance Service of New South Wales, 31 March 2008, transcript 34.15. Letter from NSW Health to Special Commission of Inquiry, 20 March 2008.
- ²⁵ Ronald Mawhinney, Royal North Shore Hospital hearing, 14 March 2008, transcript 359.8.
- ²⁶ Submission of Stan Walden, 20 February 2008, SUBM.015.0193 at 1; Submission of Trudy Zalewski, 13 April 2008, SUBM.070.0286 at 2-3; Submission of Dr Andrew Munro, 27 March 2008, SUBM.027.0441 at 2; Submission of Dr Martin Chase et al, 28 March 2008, SUBM.003.0047 at 3.
- ²⁷ Ronald Mawhinney, Royal North Shore Hospital hearing, 14 March 2008, transcript 357.18-22.
- ²⁸ Letter from NSW Health to the Special Commission of Inquiry, 13 November 2008.
- ²⁹ Cregan P. "The easiest cut: managing elective surgery in the public sector" (2005) 182 *Medical Journal of Australia* 605.
- ³⁰ Confidential Bankstown hearing, 13 May 2008, transcript 18.42.
- ³¹ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020, page 2.
- ³² Confidential Bankstown hearing, 13 May 2008, transcript 18.42.
- ³³ Confidential Bankstown hearing, 13 May 2008, transcript 20.14.
- ³⁴ Confidential Bankstown hearing, 13 May 2008, transcript 20.38.
- ³⁵ Confidential Bankstown hearing, 13 May 2008, transcript 19.8.
- ³⁶ Confidential submission, 28 March 2008, SUBM.009.0150 at 152 – 5
- ³⁷ Confidential submission, 28 March 2008, SUBM.009.0150 at 152 – 5
- ³⁸ Confidential submission, 28 March 2008, SUBM.009.0150 at 152 – 5
- ³⁹ Confidential submission, 28 March 2008, SUBM.009.0150 at 152 – 5
- ⁴⁰ Confidential submission, 28 March 2008, SUBM.009.0150 at 152 – 5; Dr Dean Fisher, Dubbo hearing, 19 March 2008, transcript 655.19.
- ⁴¹ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020, page 20.
- ⁴² NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020 at 11.
- ⁴³ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020 at 15.
- ⁴⁴ Dr Dean Fisher, Dubbo hearing, 19 March 2008, transcript 655.15.
- ⁴⁵ Dr Dean Fisher, Dubbo hearing, 19 March 2008, transcript 656.1.
- ⁴⁶ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020.
- ⁴⁷ Dr Dean Fisher, Dubbo hearing, 19 March 2008, transcript 655.1.
- ⁴⁸ Meeting with Professor Patrick Cregan and Professor Donald MacLellan, 22 May 2008.

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- 49 PD2006_020 *Waiting Time and Elective Patient Management Policy*, page 24.
- 50 PD2006_020 *Waiting Time and Elective Patient Management Policy*, page 24.
- 51 Professor Ian Harris, Liverpool hearing, 17 April 2008, transcript 1864, 1867.34.
- 52 Professor Ian Harris, Liverpool hearing, 17 April 2008, transcript 1866.44.
- 53 Dr David Baines, Children's Hospital at Westmead hearing, 15 May 2008, transcript 2909.14.
- 54 Dr David Baines, Children's Hospital at Westmead hearing, 15 May 2008, transcript 2909.14.
- 55 Dr Ian Incoll, Gosford hearing, 10 March 2008, transcript 52.25.
- 56 Submission of Dr Andrew Pesce, 2 April 2008, SUBM.013.0089 at 98.
- 57 Submission of Dr A. Pesce, Westmead Medical Staff Council, undated, SUBM.013.0089 at 98; Submission of Ian Webster SUBM.015.0235 at 541; Submission of Dr Richard Cracknell, 3 March 2008, SUBM.003.0202 at 202-4; Dr Peter Roberts, Hornsby Hospital hearing, 11 March 2008, transcript 207.1-11; Julie Hartley-Jones, Royal North Shore Hospital hearing, 2 April 2008, transcript 1300.30-1301.5.
- 58 Confidential St George Hospital hearing, 14 May 2008, transcript 7.
- 59 Dr Rod Bishop, Ms Sue Strachan on behalf of the Ministerial Taskforce on Emergency Care, March 2008, SUBM.002.0070 at 7.
- 60 Professor Ian Harris, Liverpool hearing, 17 April 2008, transcript 1868.5; Confidential Concord Hearing, 24 April 2008, transcript 29.
- 61 Meeting with the Australian Health Policy Institute, 11 April 2008, transcript 21.18-45.
- 62 Brian Grant, Liverpool Hospital hearing, 17 April 2008, transcript 1848.6.
- 63 The Australian Council on Healthcare Standards, *Australasian Clinical Indicator Report: 1998 – 2006 Determining the Potential to Improve Quality of Care: 8th Edition*, 2007, Australian Council of Healthcare Standards, Ultimo, p. 1.
- 64 Information provided during various hospital visits.
- 65 Dr Raghu Murthy, onsite inquiry hearing, 14 October 2008, transcript 293.
- 66 Dr Bernard Lawless, Expert Conference, 16 September 2008, transcript 161.44-163.14.
- 67 Dr Bernard Lawless, Expert Conference, 16 September 2008, transcript 163.23-5.
- 68 Provincial Lead, Critical Care and Trauma, Critical Care Secretariat, Ontario, Canada; Experts' conference, 16 September 2008, transcript 163.23.
- 69 Northern Sydney Central Coast Area Health Service, *Investigation Report into Gosford Hospital Triage Benchmarks*, 2007, Northern Sydney Central Coast Internal Audit Unit, p. 35.
- 70 Northern Sydney Central Coast Area Health Service, *Investigation Report into Gosford Hospital Triage Benchmarks*, 2007, Northern Sydney Central Coast Internal Audit Unit, p.35.
- 71 Northern Sydney Central Coast Area Health Service, *Investigation Report into Gosford Hospital Triage Benchmarks*, 2007, Northern Sydney Central Coast Internal Audit Unit, p35.
- 72 Northern Sydney Central Coast Area Health Service, *Investigation Report into Ryde Access Block Data*, December 2006, Northern Sydney Central Coast Internal Audit Unit.
- 73 Northern Sydney Central Coast Area Health Service, *Investigation Report into Ryde Access Block Data*, 2006, Northern Sydney Central Coast Internal Audit Unit, p. 51.
- 74 Australian College for Emergency Medicine, *Guidelines for Constructing an Emergency Medicine Medical Workforce*, July 2008.
- 75 Sibbritt, Isbister, Walker, "Emergency Department performance indicators that encompass the patient journey", (2006) 15(1) *Quality Management in Health Care* 27.
- 76 Professor Brand, Expert Conference, 16 September 2008, transcript 180.33-9.

18 Hospital acquired infection

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Hospital acquired infection

- 18.1 During the course of my Inquiry, I heard evidence of poor compliance with infection control procedures, a lack of adequate cleaning at hospitals, and a lack of resources to implement effective infection control.
- 18.2 In this chapter, I look at the incidence of hospital acquired infection in NSW compared to other states and countries, how NSW public hospitals are presently addressing this problem, and what more should be done.

The issue

- 18.3 Approximately 6% of all patients who are treated in Australian hospitals acquire an infection during their hospital stay.¹ This figure is unacceptable.
- 18.4 Hospital acquired infections are an unnecessary and avoidable burden on patients and the health care system. Hospital acquired infections cause unwarranted pain and suffering to patients, increase the seriousness of the patient's condition and sometimes cause death.
- 18.5 Hospital acquired infections also cost the health system in terms of prolonged hospital stays, and the additional treatments and medications required to enable patients to recover.

Types of hospital acquired infection

- 18.6 There are a number of different types of infections which can be acquired during a patient's stay in hospital. Infections are grouped in a number of ways, such as how the infection was transmitted. Categorised in this manner, hospital acquired infections include:
- (a) Surgical Site Infections (“**SSIs**”). These occur in approximately 10% of patients who undergo surgery. Most commonly, the infection is caused by germs carried on the patient's skin, or from operating room personnel.²
 - (b) Central Line Associated Blood Stream Infections (“**CLABs**”) represent between 20 to 40% of all hospital acquired bloodstream infections.³ These are infections in the bloodstream caused during the insertion of a central line, or whilst it remains *in situ*, because infection control procedures are not properly followed.
 - (c) Haemodialysis-associated bloodstream infections, related to diabetics patients. These are infections in the bloodstream caused during dialysis for kidney disease because proper procedures are not followed. They can cause considerable illness.⁴
 - (d) Neonatal infections, which include blood or cerebral spinal fluid infections usually acquired from the mother during the birth process. Some of these infections may be prevented through appropriate standards of maternal care.⁵
 - (e) Non-line-associated bloodstream infections, being infections that are acquired that are unrelated to intravenous lines.
- 18.7 Hospital acquired infections are also categorised by the bacteria causing the infection. One of the most common types of infection is “golden staph” (staphylococcus aureus), which commonly causes an abscess on the skin but can also lead to:
- (a) meningitis (infection of the membranes lining of the brain),

- (b) osteomyelitis (infection of the bone and bone marrow),
- (c) pneumonia (infection of the lungs),
- (d) septic phlebitis (infection of a vein), and
- (e) endocarditis (infection of the heart valves).

18.8 Some hospital acquired infections have developed virulent strains that are resistant to antibiotics. These infections, called multi-resistant organisms (“**MROs**”), include:

- (a) Methicillin Resistant Staphylococcus Aureus (“**MRSA**”), which I was told kills 35% of patients who are infected with MRSA in their bloodstream according to one report;⁶ (There are an estimated 7,000 MRSA bloodstream infections in Australia every year resulting in some 1,700 deaths from all causes, not just hospital acquired infections.⁷ It is worth noting that, for each case of MRSA bloodstream infection, the average length of hospital stay is approximately 24 days!⁸)
- (b) Methicillin Sensitive Staphylococcus Aureus (**MSSA**), which kills 25% of patients who are infected with MSSA in their bloodstream according to one report;⁹
- (c) Vancomycin Resistant Enterococci (“**VRE**”);
- (d) Multi-resistant Acinetobacter (“**MRAB**”); and
- (e) Vancomycin Intermediate Staphylococcus Aureus (“**VISA**”).

18.9 Multi-resistant organisms can be spread throughout the hospital in 3 ways:

- (a) through direct contact with bacteria carried on the skin, hands, clothing, bedding and other surfaces;
- (b) by release into the atmosphere through friction dislodgement of dried skin and hair; and
- (c) through the transport of infected particles by air currents to other individuals.¹⁰

Catchers and carriers of hospital acquired infections

18.10 Any condition that weakens their health generally will make patients more susceptible to infection. Patients who are likely to become infected are those with the following characteristics:

- (a) longer hospital stays,
- (b) poor nutritional status,
- (c) severe underlying diseases,
- (d) with invasive devices,
- (e) undergoing recurrent or recent antibiotic treatment; and
- (f) with wounds present.¹¹

There is also some evidence to suggest that the risk of hospital acquired infections also increases due to over-crowding in the Emergency Department.¹²

18.11 Whilst infected patients are the primary reservoirs of multi-resistant organisms in hospitals, multi-resistant organisms are spread by hospital staff who may either be:¹³

- (a) a transitory carrier of the bacteria in their nose or on their skin; or

- (b) colonised with a multi-resistant organism, that is, the bacteria has become established on or in their body, even though the person may not exhibit any symptoms or signs of an infection.

18.12 Patients, hospital staff and visitors may be colonised with, or merely carrying a multi-resistant organism on their clothing, without being aware of the risk that they present to other people. However, once colonised with a multi-resistant organism, 20% to 60% of patients in acute care will develop an infection.¹⁴

Incidence of hospital acquired infection

18.13 Our knowledge of the rates of hospital acquired infection is reliant on the accuracy of the data collected from NSW public hospitals. NSW Health has only been collecting this data since late 2002 or, in relation to multi-resistant organisms, since January 2008.

18.14 From 1 November 2002 to 31 December 2007, NSW Health arranged for the Australian Council of Healthcare Standards to collect, collate and analyse data on the rates of hospital acquired infection every 6 months.¹⁵ The results were grouped by hospital peer groups, that is, groups of hospitals having similar capacity and workload as discussed in Chapter 26. As a result, the data revealed the extent of the overall problem, but not how individual hospitals performed.

18.15 I obtained a copy of the raw data that the Australian Council of Healthcare Standards collected from NSW public hospitals. The data is recorded as follows:

$$\frac{\text{Total number of new infections at each hospital during the 6 months under study}}{\text{Total bed days at that hospital during those 6 months}}$$

The data reveals that some hospitals had 3 times the rate of infection of comparable hospitals. It should be noted, however, that infection rates are very dependent on the types of patients treated by a particular hospital. Hospitals that treat a large number of immuno-compromised patients, for example, hospitals which do transplantations, oncology and complicated surgery like cardiothoracic are likely to have higher rates of infection.

18.16 This data comes from incidents reported in the Incident Information Management System (IIMS)¹⁶ There are 3 major issues with the data reflected by the IIMS results:

- (a) Its accuracy depends on the thoroughness, honesty and diligence of those who report incidents. This may mean that an institution that is vigilant and fastidious in its testing for hospital acquired infections may report a higher rate of infection than a facility that isn't.
- (b) Testing that takes place may not represent the full extent of the infection in the hospital – there may be many more patients who are infected who are not detected. The author of one submission that I received, who works in the intensive care unit of a major hospital, predicted that if all patients were screened for resistant organisms, the figure of hospital acquired infections would double.¹⁷
- (c) It is not always possible to determine whether a particular infection was definitely acquired as a result of the patient's time in hospital.¹⁸

18.17 Nonetheless, the data provides a reasonable indication of the rate of hospital acquired infection in NSW public hospitals.

18.18 From 1 January 2008, area health services have instead submitted data directly to the Quality and Safety Branch of NSW Health on a monthly basis. Monthly reports have

been generated. The area health services obtain the data on hospital acquired infections from 3 sources:

- (a) pathology laboratory reports;
- (b) health information exchange; and
- (c) manually collected at the ward/unit level.¹⁹

18.19 The area health service collates this data and reports it to NSW Health.²⁰ This method of obtaining data on hospital acquired infections would seem to be more appropriate and reliable than by using IIMS data. Some of the sources of the statistics that I have discussed below may have been based on the IIMS data.

Comparison of NSW to other states and countries

18.20 With these limitations of the data in mind, NSW has the highest number of hospital acquired infection cases every year of any state in Australia as shown in the table below. Infections range from urinary tract infections through to MRSA bloodstream infections. This is not surprising, as NSW has the greatest number of patients.²¹

18.21 One measure of how well hospitals are performing in infection control is by comparing the rates of bloodstream infections that are caused by MRSA. As shown in the following table, NSW scores poorly.²²

State	No. of hospital acquired infections	No. of MRSA bloodstream infections (per 100,00 patients)
NSW	56,705	7.4
Victoria	48,312	6
Queensland	35,328	3.4
Western Australia	16,787	1.1

18.22 The best performing state in this regard is Western Australia, whose strict isolation policy and stringent MRSA control program reflects an acknowledgement of the seriousness of the problem.²³

A state-wide screening and control program was introduced in Western Australia following an outbreak of MRSA in a Perth hospital in 1982. The policy involves the screening of all patients who arrived from other states or from overseas and all staff members who had worked outside of Western Australia in the 12 months prior to commencing employment in the State. From 1998 to 2002 almost 10,000 MRSA notifications were detected. This type of program is commonly referred to as "search and destroy". Through this program Western Australia has successfully maintained a low level of MRSA related infections in their hospitals.²⁴

18.23 I was told that Australia generally does not compare favourably with other countries as we do not invest enough in infection control.²⁵ Australia's rate of bloodstream infections caused by MRSA from 1999 to 2002 was 26% of all bloodstream infections. The most recent data suggests that this has increased to an average of 31.9% of all bloodstream infections in Australia. I was told that the rate for MRSA infections in NSW is 43.1% of all bloodstream infections.²⁶ This means that, in NSW, we have increasing rates of people seriously infected with bacterial bloodstream infections who cannot be treated with the ordinary or usual antibiotics.

- 18.24 Countries who have implemented focussed programs in eradicating hospital acquired infections have achieved far better results. The Netherlands and the Scandinavian countries have managed to reduce their rate of MRSA bloodstream infections to as low as 1%.²⁷

Search and Destroy

In 2002, the Netherlands commenced a program targeted at eliminating the incidence of multi-resistant organisms in their hospitals. In the 10 years before starting the program, the rate of infection had increased from 5 cases a year to 1,500 cases a year. The program, referred to as "search and destroy", was based on early detection and containment of infection and included the following measures: isolation and screening of high risk patients; screening low risk groups, and strict isolation of carriers.

Patients were categorised as follows:

Group 1 – *the highest risk known carriers or those who have a positive culture from any body site;*

Group 2 – *patients who have been transferred from hospitals in other countries, or those who have had carriers as roommates or have been in wards where transmission of MRSA has occurred;*

Group 3 – *Hospital staff who were involved in caring for known carriers of bacterial infections or had been working abroad, and dialyses patients who received treatment abroad;*

Group 4 – *Those with no risk factors, for example healthcare workers from abroad, must be tested one week before commencing employment.*

The program also recognised various occupations which, due to their high levels of contact with other people or animals, were at high risk of being infected in the community. In the Netherlands, soccer players and pig farmers are considered automatically to be high risk patients.

Not only has the rate of MRSA in hospital decreased, but the rates of community acquired infections have been kept in check in the Netherlands.²⁸ The program has decreased the rate of MRSA bloodstream infections from 30% of all bloodstream infections down to about 1%.

- 18.25 New Zealand has adopted a similar 'search and destroy' policy.²⁹
- 18.26 Each year in Australia there is an estimated 35 MRSA bloodstream infections per 100,000 patient episodes. The estimate for the United States is approximately 55 per 100,000 patients.³⁰ Certainly we are not the worst; however we have a very long way to go before we are at acceptable levels. More needs to be done to address the rates of hospital acquired infection and the prevalence of antibiotic resistance organisms. Cultural change is required to eliminate this serious danger to patients in our hospitals.³¹

Cost of hospital acquired infection

- 18.27 The cost of hospital acquired infection to the patient and the NSW public hospital system is considerable.

Cost to the patient

- 18.28 Hospital acquired infection causes unnecessary pain, suffering and additional problems for patients. I heard evidence and received submissions from patients who became infected whilst in hospital and suffered during the additional surgery and extensive treatment to cure the secondary condition. For patients who had already gone through

major operations, the additional pain and suffering of the side effects of the hospital acquired infection can be physically and emotionally devastating.

CASE STUDY Ronald Taylor gave evidence via video-link from Tweed Heads.³² After a shoulder reconstruction operation, Mr Taylor contracted "golden staph". After another operation to remove the infection, Mr Taylor was told that he had acquired an additional infection of an unknown type. This resulted in him remaining in hospital for an additional 6 weeks. Mr Taylor told me that since this time, he has contracted shingles, a relapse of the golden staph and now has cancer. Mr Taylor was visibly upset by the additional suffering inflicted as a result of hospital acquired infection.

- 18.29 Patients have to pay for the cost of filling prescriptions for the drugs required to treat the hospital acquired infection after discharge. This is truly 'rubbing salt in the wounds'.

CASE STUDY Donald Coleshill gave evidence at Coffs Harbour.³³ Mr Coleshill had a hip replacement on 28 June 2006. Following the procedure, Mr Coleshill was still in a great deal of pain. He returned to the Emergency Department 16 days later and was told that he had been infected with golden staff during the hip operation. He had to have another operation to flush out and control the infection. During the operation, Mr Coleshill suffered a pulmonary embolism resulting in him being placed on special medication and necessitating the introduction of an intravenous line into his heart under x-ray. After 3 weeks in hospital, Mr Coleshill went home with a prescription for medicine to continue treatment of the golden staph. Mr Coleshill estimates that he had to spend approximately \$300 on this medication.³⁴

Recommendation 80: *NSW Health refund patients the net cost (if any) for medication necessary for the treatment of hospital acquired infection after discharge of the patient from the hospital.*

Costs to NSW Health

- 18.30 There are considerable financial costs incurred by NSW public hospitals as a result of hospital acquired infections. The patients are likely to have an increased length of stay in hospital, may need to be re-admitted for further treatment for the infection and will require additional diagnostic tests and treatments.
- 18.31 The complete cost of hospital acquired infection is not easy to determine. The current data does not separately record the number of additional bed days necessitated by, nor the cost of, treating the secondary condition. It is also impossible to accurately determine the number of infections that are not reported. It is however appropriate in considering the costs to act on the basis that many infections go unreported. Any other assumption would be unwise.
- 18.32 I received a submission that contained the estimate that 150,000 people acquire hospital acquired infection in Australia each year. The estimated cost of these infections is \$600 million, or the budget of 2 major teaching hospitals.³⁵ I am not in a position to independently verify this submission and I do not attempt to do so. However, even if this figure is exaggerated by a multiplier of 10 and the costs of such infection approach \$60 million, it is still much too a high a figure to be acceptable.
- 18.33 One way to estimate the cost of hospital acquired infections is to calculate the number of hospital bed days lost in treating patients who had acquired an infection in hospital. The Australian Commission on Safety and Quality in Health Care calculated that there were 56,705 hospital acquired infections in NSW hospitals in 2004-05. When this figure

is multiplied by the average length of stay in hospital to treat a hospital acquired infection, the authors estimate that 629,600 bed days were lost for NSW in 2004-05.³⁶

- 18.34 This is a truly astonishing figure. NSW Health told me that, at present, a typical cost for an inpatient for one day in a NSW public hospital is a little under \$1,000.³⁷ On this basis, the cost may be estimated to be in excess of \$629 million. Again, one doesn't need to be precise to be able to conclude that the cost to NSW Health of infections of this kind is enormous and represents a significant impediment to the delivery of safe and cost effective health care in NSW.

How are NSW hospitals managing hospital acquired infection?

- 18.35 I saw examples, and heard evidence of others, where our hospitals are neither well-equipped nor well operated to actively reduce hospital acquired infection.

Hand hygiene facilities

- 18.36 Some hospitals have limited hand washing facilities.³⁸ I was told that in some hospitals there is not a sufficient provision of alcohol-based antiseptic gel for staff to use instead of washing their hands.³⁹ Yet, in many other hospitals which I visited there were abundant supplies within easy reach for staff to use. This did not of itself, regrettably, mean that the staff used the gel in an appropriate way. However, without the readily available means to take this simple step which reduces hospital acquired infection, improving hand hygiene in NSW public hospitals will be that much harder.

Cleaning

- 18.37 It is necessary that hospitals remain clean to minimise the chance of non-infected patients coming into contact with harmful bacteria.
- 18.38 I received a number of submissions, both from patients and clinicians, complaining about the lack of cleanliness in NSW public hospitals. The types of comments made were about the general dirtiness of the wards,⁴⁰ bathrooms that were not cleaned,⁴¹ the shortage and limited use of cleaning staff,⁴² nurses having to clean floors and toilets⁴³, infestations of insects, and only dry mopping of floors.⁴⁴ As Mr Williams, the carer of his wife who has been hospitalised on many occasions, observed,

"Basic hygiene activities such as washing/wiping down the bedside unit, chair arms, bed frames etc., with or without any form of antiseptic, was non existent."⁴⁵

- 18.39 A number of people suggested to me that routine cleaning data should be collected and recorded.⁴⁶ This is one useful way of being independently satisfied about the state of cleanliness of particular facilities, wards and rooms.
- 18.40 NSW policy directives contain requirements for cleaning. Facilities are already required to conduct cleaning audits annually as detailed in the *Cleaning Service Standards, Guidelines and Policy for NSW Health Facilities*. All NSW hospitals are required, at minimum, to be audited yearly. The cleaning services audit measures the existence of cleaning services policies, procedures and systems including those directed to the matters of management oversight and policy, occupational health, safety and security, quality assurance/best practice and education.

- 18.41 In the context, however, of eradication of hospital acquired infections, it is important to recognise that cleaners are, effectively, part of the clinical team when it comes to controlling hospital acquired infection. The success of their role impacts on the clinical condition of the patients, and the safe and cost effective operation of hospitals. They are essential to the delivery of acute care services in public hospitals.

Recommendation 81: *The extent of hospital cleaning services be reviewed within 12 months so as to ensure that properly trained cleaners are available, at least:*

- (a) *In the principal referral group A and B hospitals and paediatric specialist hospitals on a 24 hour a day, 7 days a week basis*
- (b) *In major metropolitan and non-metropolitan hospitals, on a permanent 16 hour a day, 7 days a week basis and on call at other times.*

Isolation of infected patients

- 18.42 Isolation of infected patients should be the immediate response when hospital staff learn of a patient with an infection.⁴⁷ The separation of these patients from the general population assists in reducing the risk of infection spreading throughout the hospital.

"The people who are known to be colonised with resistant bugs need to be treated as potential risks to other patients and they need to be cohorted and their choices of antibiotics need to be tailored towards their potential infections from those resistant bugs."⁴⁸

- 18.43 Isolation can only occur if there is sufficient space, beds and single rooms in which to accommodate patients. The lack of hospital beds has from time to time resulted in infected patients being placed next to patients awaiting surgery – a potentially lethal combination.

"... elective patients have been admitted for orthopaedic or urological surgery and placed between a medical patient with pneumonia coughing up purulent sputum and a surgical patient draining pus from an abscess that was surgically incised on the previous night".⁴⁹

- 18.44 I was told that at Hornsby Hospital, patients with MRSA are moved an average of 3.25 times during their stay due to an insufficient number of single rooms and rooms with bathrooms. I am pleased to hear that staff at this hospital are working to combat the spread of infection through the hospital, however the lack of facilities results in an unnecessary drain on the resources of nursing staff, ward clerks and cleaning staff to move the patient.⁵⁰

"We need better hospital design so that contact precautions and single-room isolation can be achieved."⁵¹

- 18.45 At other hospitals I saw that the same bathroom facilities are used by both the patients in the Emergency Department and those in the intensive care unit.⁵² I heard of one patient who contracted MRSA whilst in the intensive care unit, and whilst he was isolated in the ward, he shared a shower with other non-infected patients.⁵³ I was also told that ward beds that contained patients with multi-resistant organisms are washed and immediately used for non-infected patients, whereas previously the beds were blocked for 24 hours in between such patients.⁵⁴

"International literature has identified that patients occupying that room previously occupied by a patient who was infected and/or colonized with MRSA or VRE,

significantly increased risk of acquiring the same organism.”⁵⁵

- 18.46 I received a submission from a highly experienced nurse who told me that she was aware of several patients who were infected with MRSA who had gone through the operating theatres for surgery without some of the theatre staff being notified.⁵⁶ This is in clear breach of the appropriate standards of infection control. The fact that further patients were operated on in the same theatre without it being properly cleaned is conducive to the spread of the insidious MRSA infection.
- 18.47 I heard of some poor management decisions, such as nurses being ordered to move infected patients out of isolation and into multi bedded wards to accommodate uninfected private patients.”⁵⁷
- 18.48 At the other end of the scale, some surgical units, such as the elective joint replacement unit at the Royal Prince Alfred Hospital, use ‘ring fencing’, by which the unit is physically separated from the rest of the hospital and all patients are screened prior to admission. By this method, entire wards can be kept free of multi-resistant organism infections.⁵⁸ Where physical separation is not possible, contact precautions and isolation rooms can still be used until the patient’s multi-resistant organism status is known.⁵⁹

Monitoring infected patients

- 18.49 Some hospitals have systems for tracking the movements of infected patients through the hospital. Dr John Gallagher told me about the IDAlert system that they have implemented at Westmead Hospital. This system enables clinicians to track patients, who are either infected or are colonised with organisms, as they are moved around the hospital. The live data from the IDAlert system shows the prevalence of resistant bugs in the in-hospital patient population. Identification of these patients enables them to be appropriately managed and cohorted, as it is continuously updated and provides current information on infected patients.⁶⁰
- 18.50 Similar tools have been developed in other states.⁶¹

Information available to staff

- 18.51 The Clinical Excellence Commission has mounted a thorough and extensive campaign to improve the hand hygiene habits of the NSW Health staff. The details of that campaign can be found on the website of the Clinical Excellence Commission and I refer to them below. The commission made considerable information available to my staff.
- 18.52 The Quality and Safety Branch of NSW Health has collated a large amount of material to assist in informing healthcare workers about what can be done about hospital acquired infections. A number of modules have been developed to assist staff in learning more about what they can do to reduce hospital acquired infections. The module on hand hygiene contains a large amount of information that can be used by hospitals for training and education purposes. The website developed by the Quality and Safety Branch also contains links to articles and different international initiatives on infection control.⁶²
- 18.53 Some hospitals have developed hand hygiene education computer programs on the internet.⁶³
- 18.54 There is no shortage of information and material on hospital acquired infection, and how to combat it, available through the internet.

- 18.55 What I am disappointed by is that notwithstanding all of this material, and the obvious good commonsense of hand washing to prevent hospital acquired infection, compliance is and remains at an unsatisfactorily low level.

Regular staff meetings

- 18.56 Some hospitals, such as Royal Prince Alfred Hospital, hold regular infection control meetings. These meetings are an opportunity to discuss the rates of infection in different wards of the hospital and develop measures to reduce the infection rates.⁶⁴ Regular meetings mean that infection control is constantly reinforced and remembered. Infection control is an ongoing issue and all staff need to be aware of it, all the time.

Efforts of NSW Health

- 18.57 NSW Health has responded to the challenge of hospital acquired infection in 2 main ways:
- (a) allocating resources; and
 - (b) formulating policies.
- 18.58 Unfortunately, neither have succeeded in lowering the rates of hospital acquired infections to anywhere near an acceptable level.

Investment of NSW Health

- 18.59 I was told that NSW Health through the area health services has not invested in enough staff nor the physical resources to implement effective infection control.
- 18.60 For example, I was told that hospital acquired infection costs the Sydney West Area Health Service between \$6 million and \$20 million a year. On the other hand, spending on infection control and screening for multi-resistant organisms amounts to about \$1.1 million. This would appear to be false economy, when most of the literature suggests that the money spent on hospital acquired infection more than pays for itself.⁶⁵
- 18.61 For infection control to be effective, dedicated staff need to ensure that infection control standards are met and that outbreaks of pathogens are contained and treated appropriately. The Commonwealth Department of Health and Aging has produced guidelines recommending that there should be approximately 1.5 infection control practitioners to 200 acute health care beds.⁶⁶ This is supported by research⁶⁷ and endorsed by the Australian Infection Control Association and the Australian Council of Healthcare Standards.⁶⁸ Some researchers argue that this figure should be revised down to 1:110.⁶⁹
- 18.62 In contrast to these guidelines:
- (a) At Westmead Hospital, a hospital with 900 beds, plus 300 dental chairs, I was told that there are 3 full time equivalent staff who deal with infection control and who also have some responsibility for community health and mental health.⁷⁰
 - (b) I was told that at Nepean Hospital the number of infection control practitioners employed is less than half of the benchmark levels suggested in the literature.⁷¹
 - (c) At Coffs Harbour Hospital, they do not have a clinical microbiologist or infectious disease physician on staff in the hospital.⁷² This hospital has 229 beds and 22,567 patients are treated each year.⁷³

18.63 I heard from other witnesses of the lack of resources to implement infection control procedures.

"There may be enough budget to screen patients for infections, but there will not be a budget for the extra staff and the physical resources necessary to monitor patients, and reschedule appointments. Extra cleaning will be required but extra cleaners will not be appointed."⁷⁴

18.64 Similarly, I was told at Westmead Hospital when the hand hygiene campaign referred to elsewhere in this chapter was initiated, there was no extra staff allocated to conduct the audit or collate the data, essential components in the effectiveness of the campaign.⁷⁵ Further,

"there are a lot of requirements or mandated requirements put out from the State, but often there is no supporting infrastructure or resources attached to that. Some of the samples can be that, all of a sudden, they may change the sterilising requirement for bronchoscopes. Obviously that will cost facilities a huge amount of additional resources and cost. So there are a lot of statements and requirements put out, but not often any sort of monetary or resource things attached to it."⁷⁶

18.65 I have been told that further training is required in infection control measures and screening to reduce the rates of hospital acquired infection. NSW Health policy mandates that health care facilities develop "annual and regular ongoing education for all levels of staff" and that it be conducted on orientation or induction of all new staff.⁷⁷ I was told that this has not happened in some facilities and that more education programs are required as many staff are not aware of the need for infection control and measures that are to be taken.⁷⁸

Standards

18.66 There are a large number of policy documents relevant to infection control issued by NSW Health. These policies contain information about the reporting of infection control incidents, data collection, specific prevention measures, management of infection incidents and critical incident reporting. Many additional policies are also referred to in these policies.

18.67 I was told that the problems with the current infection control policies are that:

- (a) there are too many of them;
- (b) they are too detailed and too difficult to implement;
- (c) infection control resources are not standard throughout NSW – different hospitals use different equipment – and it is not clear what the standard response should be;
- (d) the policy directives are inconsistent and contradictorily; and
- (e) sometimes there are inconsistent requirements issued by the Clinical Excellence Commission and NSW Health for different purposes, one for infection control and another for collection of data.⁷⁹

18.68 The overabundance of policies related to infection control is recognised by NSW Health.

"When we looked at infection control, we found 30 policies. They were quite complex, quite typical, they

were not related to one another, they weren't interconnected."⁸⁰

- 18.69 I understand that NSW Health is working on developing a simplified policy that will be easier to implement and for staff to comply with. The goal is to have a single page statement with a simple standard and a step by step implementation guide.⁸¹ This policy statement, that I have reviewed in draft form, extracts the relevant sections from the larger policy directives.
- 18.70 The Quality and Safety Branch, part of the Health Performance Service Division of NSW Health, is responsible for setting the standards for infection control throughout NSW.
- 18.71 The Quality and Safety Branch of NSW Health has developed two principal policy directives governing hospital acquired infections in NSW.
- (a) PD2007_036, *Infection Control Policy*, dated 23 May 2007; and
 - (b) PD2007_084, *Infection Control Policy: Prevention & Management of Multi-Resistant Organisms (MRO)*, dated 13 November 2007.

PD2007_036, Infection Control Policy

- 18.72 PD2007_036 is the current general infection control policy, however it does not attempt to comprehensively outline the requirements for infection control.
- "It is intended as a framework within which the NSW health service can develop comprehensive operational infection control policies and procedures appropriate to their own health organisation."⁸²
- 18.73 PD2007_036 outlines a 2 tiered approach to reducing the incidence of hospital acquired infections.
- (a) The first tier includes the standard procedures of hand hygiene, use of gloves, masks, gowns, donning and removing personal protective equipment, equipment handling, laundry and respiratory hygiene.
 - (b) The second tier includes additional precautions in relation to airborne particles, droplets and contact transmissions. It also provides guidance for the safe handling and disposal of sharps, processing re-usable instruments, environmental cleaning, laundry linen and the procedure for outbreak management.
- 18.74 There is no controversy surrounding the requirement for surgical staff to be appropriately gowned, masked and scrubbed prior to entering the operating theatre. Patients and the community would be surprised and shocked if there were not policies that dictated the appropriate clothing and infection control procedures in the operating theatre.
- 18.75 It is the view of some that staff attire outside the operating theatre is also important and that staff be appropriately dressed throughout the wards. It was suggested to me that staff should have short sleeves, should not wear lanyards, white coats, or ties when treating patients.⁸³ The rationale for this is that bacteria can be easily transported by hospital staff on the clothing, just like on the surface of the skin. This seems logical, and something which commonsense and intuition would support. However, I have not seen any research which supports this approach and accordingly do not feel able to positively recommend it without further investigation.

Bare below the elbows

On 17 September 2007, Alan Johnson, Health Secretary of the National Department of Health in the U.K announced a new policy for clothing of health care workers the "Bare Below the Elbows Policy". From 1 January 2008, staff or agency employees working within clinical areas are no longer allowed to wear long sleeves, watches, jewellery, ties, or the traditional white coats. Despite some minor adjustment issues, this policy has been effectively implemented.⁸⁴ Early results of this initiative indicate that already there has been some reduction in hospital acquired infection in the United Kingdom.⁸⁵

- 18.76 None of the NSW policy directives contain any mention of attire outside of the operating theatre, nor any restrictions on the type of clothing that is suitable for caring for or visiting patients on the ward.
- 18.77 I heard support for the introduction of a 'Bare below the elbows' policy in NSW.⁸⁶ A strong advocate for such a policy is Dr Paul Stalley who gave evidence to the Inquiry at the Royal Prince Alfred Hospital about the existence of such a policy at the hospital. On my visit there I was able to observe the policy being put into effect.

Recommendation 82: *I recommend that the Clinical Excellence Commission within 9 months, undertake a review of the evidence which exists about the appropriateness of a policy such as the "Bare Below the Elbows Policy" and develop a policy capable of ready implementation and evaluation about the appropriate clothing and accoutrements which ought be worn by health care workers when engaged in clinical care in public hospitals in NSW.*

- 18.78 None of the NSW policy directives specify disciplinary action for failure to comply with any of the requirements. In theory:
- (a) clinicians could activate the Management of a Complaint or Concern About A Clinician process which I discuss further in Chapter 16; or
 - (b) the chief executive could report such conduct to a clinician's registration board where the chief executive suspects it may constitute professional misconduct or unsatisfactory professional conduct.⁸⁷
- 18.79 Failure to observe appropriate hand hygiene has formed the basis of complaints against clinicians.
- 2 area health services recorded 6 or 7 complaints each,
 - 4 area health services recorded one or 2 complaints each, and
 - 5 area health services have not recorded any such complaints.⁸⁸
- 18.80 Such complaints are generally made by patients including complaints that:
- a clinician failed to perform hand hygiene during blood collection;
 - the clinician failed to observe antiseptic hand hygiene prior to a procedure;
 - the clinician failed to perform hand hygiene prior to a procedure under local anaesthetic and the insertion of a cannula.

The clinicians concerned either received counselling from the director of medical services, were investigated by the NSW Medical Board or were investigated by the Health Care Complaints Commission.⁸⁹

PD2007_084, Infection Control Policy: Prevention & Management of Multi-Resistant Organisms

- 18.81 PD2007_084 is directed at establishing measures to control the emergence and transmission of multi-resistant organisms in public health organisations.⁹⁰ It also provides additional information for infection control, including:
- (a) infection control measures – hand hygiene, standard and contact precautions, patient placement, cohorting and movement and health care worker education;
 - (b) use of antimicrobials;
 - (c) environmental cleaning;
 - (d) surveillance of multi-resistant organisms;
 - (e) recommendations for screening of patients and health care workers; and
 - (f) risk categorisation of patients.
- 18.82 PD2007_084⁹¹ itemises the responsibilities of each level of hospital staff in respect of hospital acquired infection as in the following table.

role	responsibility
Chief executive	<ul style="list-style-type: none"> • ensuring that resources are available to enable implementation of this policy.
Director of Clinical Governance	<ul style="list-style-type: none"> • ensuring implementation of this policy • ensuring development of local policies and procedures to support this policy.
Infection Control Professional (ICP)	<ul style="list-style-type: none"> • tracking of MRO patients through effective screening and laboratory liaison • ensuring attending medical officer and ward clinical staff are advised of a new isolate • ensuring an Infection Control Plan is initiated for each MRO patient.
Infectious Diseases/Clinical Microbiology specialist	<ul style="list-style-type: none"> • ensuring ICP and ward clinical staff are notified of new isolates.
Head of Pharmacy	<ul style="list-style-type: none"> • ensuring that antibiotic utilisation data is collated and reported to relevant staff
Nurse Unit Manager	<ul style="list-style-type: none"> • ensuring compliance with the policy by staff on their ward and providing feedback to staff on their compliance with the policy
All Health Care Workers	<ul style="list-style-type: none"> • complying with hand hygiene and personal protective equipment requirements • complying with prevention/management strategies for MRO infected/colonised patients

- 18.83 While the policy firmly places responsibility with each layer in the organisation, it seems to me that it does not make anyone accountable for the rates of infection or infection control compliance. NSW Health simply places responsibility with individual hospitals, requiring hospitals to:

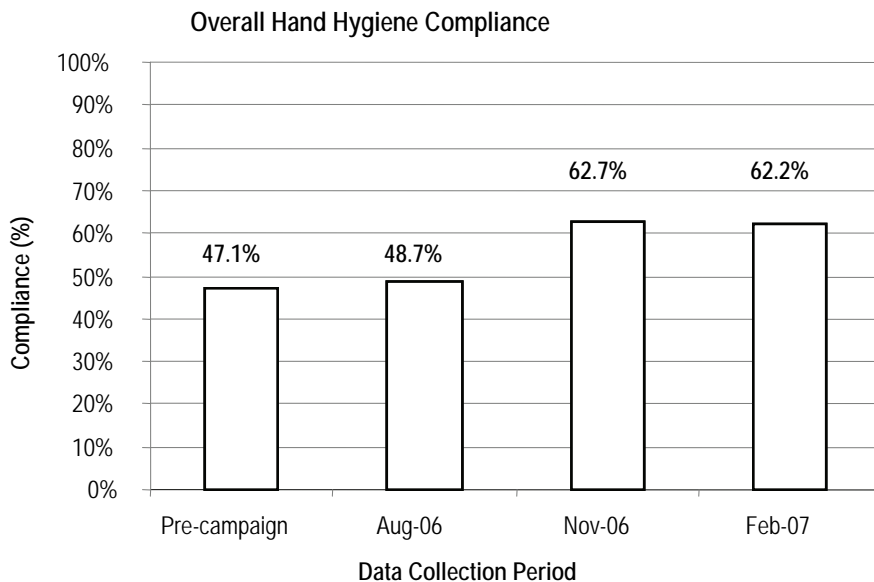
“develop management and accountability approaches for infection control that align with patient safety initiatives and activities to reduce the transmission of MRO [multi-resistant organisms]”⁹²

Hand hygiene

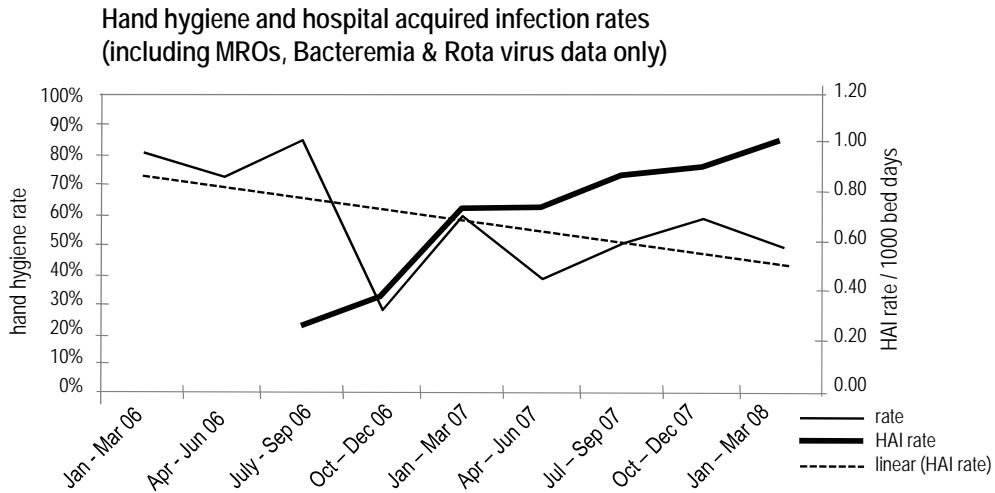
- 18.84 One of the simplest and most effective ways to reduce hospital acquired infection is to **wash your hands!** There is little doubt that a task as simple as washing hands before and after seeing a patient will assist in reducing the spread of infections throughout hospitals.
- 18.85 A current authority on hand hygiene is Professor Didier Pittet of the World Health Organisation in Geneva. Pittet's conclusion is plain:
- "Hand hygiene is the simplest, most effective measure for preventing [hospital acquired] infections"⁹³
- 18.86 The World Health Organisation has drafted guidelines for hand hygiene using alcohol-based formulations and soap and water. According to these guidelines, effective hand hygiene takes only 20 to 30 seconds when using an alcohol based formulation.⁹⁴
- 18.87 The cost effectiveness of this simple procedure has implications not only for patient safety, but also the bottom line.
- "A single severe infection of a surgical site, lower respiratory tract, or bloodstream may cost the hospital more than its entire annual budget for antiseptic agents used for hand hygiene."⁹⁵
- 18.88 Hand washing is one of the key strategies in reducing the occurrence of hospital acquired infections and is an effective means of controlling multi-resistant organisms.⁹⁶ The evidence that supports the effectiveness of hand washing in reducing the spread of infections through hospitals is incontrovertible.
- 18.89 NSW Health has recognised the importance of hand washing in the clinical setting and in recent times has incorporated hand hygiene guidelines into its policy directives.
- "Hand hygiene is the single most important practice to reduce the transmission of MRO in HCF [health care facilities]."⁹⁷
- 18.90 Audits on the compliance of clinicians with hand washing protocols indicate that half of the staff fail to follow adequate hand hygiene. Clinicians spoke of their disappointment at these results,⁹⁸ their frustration at the poor example set by senior clinicians who are "amongst the worst",⁹⁹ and of the difficulty in getting their colleagues to wash their hands.¹⁰⁰
- "The hardest thing of all is to get my colleagues to wash their hands. That, I think is the single most important thing we can actually do"¹⁰¹
- 18.91 Apparently, staff are good at washing their hands where it is protecting themselves, but not quite as good as recognising the absolute need to wash their hands to protect their patient.¹⁰²
- 18.92 I am truly staggered at how few hospital staff wash their hands before and after patients and the immense difficulties which have been encountered to try and get them to do so. The culture in place in NSW public hospitals which does not insist on a high level of compliance with infection control procedures is clearly defective. I would regard it as bordering on the scandalous.

The “Clean Hands Save Lives” campaign

- 18.93 In March 2006, the Clinical Excellence Commission and NSW Health started a hand hygiene campaign, “Clean hands save lives”. This program was similar to that developed by the World Health Organisation and “Clean Your Hands” campaign developed in the UK.¹⁰³ The program lasted 12 months and cost \$903,742. The majority of this money was for the employment of around 10 full time equivalent project officers and a state project officer. The remaining money was spent on posters, DVDs and education campaigns.
- 18.94 Part of the project was distributing alcohol hand washing gels and dispensers in NSW public hospitals. These enables hand hygiene without the need for fixed plumbing and without the adverse dermatological effects on skin of constantly using soap. The area health services were responsible for providing the gels and wall fixtures.
- 18.95 The immediate results from this campaign were an improvement in the hand hygiene compliance rate from 47.1% pre-campaign to 62.2% over the course of the campaign. I was told by NSW Health that a conservative estimate that this project saved the health system was \$100 million in preventing infection.¹⁰⁴



18.96 Importantly, the increase in compliance with hand hygiene is reflected in a decrease in the rates of multi-resistant organisms, bacteraemia and rota virus infections. This is demonstrated on the following graph.¹⁰⁵



18.97 I note the results of the improvements in hand washing for each professional group, nurses, doctors, allied health and other staff, demonstrated on the following table. The highest rate of compliance in any of these groups is that of nurses at 76.9% after patient contact. The lowest rate is 36.9% for doctors before patient contact. This means that only a little more than a third of doctors wash their hands prior to patient contact.

Table 18.1 Improvements by Professional Group, CEC briefing, 22 May 2008, p.24

	Improvement before patient contact (%)			Improvement after patient contact (%)			Overall total improvement (%)		
	from	to	total	from	to	total	from	to	total
Nurses	44.7	59.2	14.5	65.5	76.9	11.4	54.5	68.0	13.5
Doctors	24.9	36.9	12.0	34.8	54.9	20.1	29.6	45.7	16.1
Allied health	32.0	56.7	24.7	50.2	69.7	19.5	40.2	63.2	23.0
Other staff	27.9	51.0	23.1	42.6	64.2	21.6	34.5	57.6	23.1

18.98 My concern with these results is, firstly, the compliance rate was not at an acceptably high level after the campaign, and, second, that there is a slight drop between November 2006 and February 2007. The compliance rate fell from 62.7% to 62.2% in the last 3 months of the campaign. I am concerned that this drop, although slight, reflects a dropping of standards and an increase in complacency.

18.99 These concerns were proved correct in recent information that I received from the Clinical Excellence Commission. In July 2008, the Clinical Excellence Commission requested that each area health service conduct hand hygiene compliance audits. It was discovered that, since the completion of the Clean Hands Save Lives campaign, compliance had dropped from 62.2% in February 2007 to 57.9% in July 2008. This was reflected in some of the evidence that I heard.

"We have just started a project at New South Wales Health to follow on from that campaign where we are getting each ward to take ownership and we have set up a training program and we are doing observational hand hygiene

audits. We started 1 January, and the first three months, I can tell you, are quite appalling.¹⁰⁶

- 18.100 Against that trend, staff of the Children's Hospital at Westmead have continued to work on improving their hand hygiene compliance. At the commencement of the "Clean hands save lives" campaign, only 23% of observed hand hygiene incidents were compliant. At the end of the campaign, this had improved to about 62%. As of June 2008, the hand hygiene compliance rate had risen to 85%. This success satisfies me that with good leadership and a good culture, an acceptable level of compliance can be achieved.
- 18.101 The work of the Clinical Excellence Commission represents a start in effecting culture change;¹⁰⁷ however this change must continue.

Applying the pressure

- 18.102 It seems to me that a lot of effort is needed to keep infection control as an issue with clinical staff. Reminding staff about infection control needs to be wide spread and continuous to bring about long term cultural change.
- 18.103 For example, I was told that at Nepean Hospital, after a recent outbreak of infection in the neo-natal intensive care unit, infection control nurses were assigned to watch the hand hygiene practices of the clinical staff.

"They went and sat there every single day, because that was our current issue, and we eradicated that problem, but we did it with single-minded dedication and focus to the issue."¹⁰⁸

- 18.104 This was a very resource intensive exercise, however I understand that for the last 12 months they have managed to maintain the focus on the issue and hand hygiene audits have demonstrated a sustained change.¹⁰⁹ This is the sort of cultural change that is required.
- 18.105 A number of mechanisms were suggested to me as applying the necessary pressure to effect long term cultural change in respect of hand hygiene practices.

Audits

- 18.106 A number of people suggested to me that hand hygiene compliance should be collected and recorded.¹¹⁰ Hand hygiene compliance is audited through observing the practices of staff recording whether they wash their hands when they are required to do so.
- 18.107 I have reviewed the results of a survey conducted throughout NSW conducted for the purpose of monitoring how well hospitals are implementing infection control procedures. One of the questions asked was whether, "Observational studies of hand washing within clinical areas occur every month". The results indicate that approximately 18% respondents said that this occurred "almost never" and only 17% said that this occurred "almost always".¹¹¹
- 18.108 I was told that simple audit tools are planned in the simplified "one page statement" on infection control being developed by NSW Health.¹¹²

Feedback

- 18.109 The key factor in improving the compliance rate is provision of contemporaneous feedback on performance. I have discussed further elsewhere in this chapter how such feedback is vital and should be provided.

Enforcement of professional standards

- 18.110 The low rates of hand hygiene among health professionals is particularly confronting when considered against the requirements of their professional bodies in this regard.
- 18.111 Professional registration bodies through their governing legislation prescribe infection control standards. For example, clause 16 of the *Physiotherapists Regulation 2008* states that a physiotherapist "must not, without reasonable excuse, fail to comply with the infection control standards ..." The infection control standards in this particular case is quite detailed, as follows:

"3 Hand and skin cleaning

- (1) Hands must be cleaned:
 - (a) immediately before and after any direct patient care, and
 - (b) immediately after handling blood or other body substances.
 - (2) Subclause (1) does not apply in circumstances where physiotherapy treatment is required to be performed urgently and cleaning facilities are not readily available.
 - (3) Hands may be cleaned by:
 - (a) using washing facilities involving water and a soap or antiseptic, or
 - (b) using non-water cleansers or antiseptics.
 - (4) Hands or other skin surfaces that are contaminated with a patient's blood or other body substance must be cleaned as soon as it is practicable to clean them.
 - (5) The requirement to clean hands applies regardless of whether gloves are also required to be worn."¹¹³
- 18.112 There are similar professional standards for doctors, nurses, and for some, but not all, allied health professionals as not all allied health professionals are governed by legislation.¹¹⁴
- 18.113 Failure to comply with these standards may form the basis of a complaint against a health care professional and possibly a finding of unsatisfactory professional conduct by the relevant board. The seriousness of the complaint will, of course, dictate the appropriate disciplinary measure.
- 18.114 I note that these professional requirements only apply to medical practitioners, nurses, midwives, physiotherapists, dentists, dental technicians and podiatrists. There are no such grounds for professional disciplinary action against allied health staff, aides or ward staff who also come into contact with patients.

18.115 In my view, where it does not already do so, the legislation governing the entitlement of healthcare professionals to practice their skills in NSW should make clear that a failure to observe hand hygiene can be grounds for disciplinary action.

Further sanctions needed

18.116 Despite the education campaigns, regulations and policy directives the fact is that many NSW health professionals do not observe hand hygiene requirements. In my view, a range of sanctions needs to be introduced to increase compliance to **100%** by all health care professionals who come into contact with patients, including visiting medical officers.

18.117 Enforcement standards should be clearly articulated, penalties should be mandated and patients should be informed of the problem.

"At the end of every hospital bed, I would like to see a sign facing the patient saying, 'Has your doctor washed his hands before he touched you?'" ¹¹⁵

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18.118 I have heard from health professionals who have told me that unless there are enforcement of standards, an acceptable standard of compliance will never be achieved. ¹¹⁶ I agree that enforcement of standards is required.

18.119 I received a number of suggestions in this regard:

- (a) I heard about a hospital in the USA that has implemented a 5-stage process for dealing with breaches of infection control measures. The first stage is a one-on-one discussion and the fifth stage is termination of employment. This strategy has increased hand hygiene compliance up to 99-100%. ¹¹⁷
- (b) One suggestion was that the staff member should view a DVD on hand hygiene. ¹¹⁸
- (c) Another suggestion was that employees who had not complied with the requirement for hand washing were initially counselled and if still not compliant they are formally disciplined. ¹¹⁹

18.120 In my view, in order to increase the performance of all staff within NSW Health who are engaged in the clinical care of patients, there needs to be a mandatory and enforceable obligation for all health professionals to wash their hands before and after coming into contact with a patient. Anything less than 100% compliance with this requirement is in my view unacceptable.

Recommendation 83: *Within 6 months, NSW Health develop a new policy which outlines an enforcement regime which includes the following as a minimum, for failing to comply with hand hygiene protocols for all staff who come into contact with patients.*

- (a) *Where the failure is unintentional:*
- (i) *First occasion Counselling*
 - (ii) *Second occasion Completion of an online educational package*
 - (iii) *Third occasion Attendance at a public education lecture with other 'non-compliers' and a warning that any further failure will result in formal disciplinary action*
 - (iv) *Fourth occasion Disciplinary action*
- (b) *Where the failure is intentional or reckless, immediate disciplinary action is called for which may include, depending upon the seriousness of the conduct, counselling, supervision, or other disciplinary action including dismissal.*
- (c) *It should be mandatory for a Chief Executive to report professional staff including VMOs, to their relevant registration authority for unsatisfactory professional conduct in all cases where a failure has occurred on four occasions or else is intentional or reckless.*

Compliance with the hand hygiene should become part of the contractual obligations of all health care workers.

An intentional or reckless failure to comply with hand hygiene precautions should be reported on IIMS and regarded, at a minimum, as a SAC 2 category incident.

Identification of patients with hospital acquired infection

- 18.121 Patients with a hospital acquired infection need to be rapidly identified, so that measures can be taken to treat the patient, eliminate the source of the infection, and prevent the infection spreading to other patients.
- 18.122 The increasing rate of multi-resistant organism infections in the community further increases the need to screen patients as they enter the hospital, particularly if they are a high risk of carrying an infection. Statistics from the USA indicate that as many as 7% of patients admitted to the hospital are carriers of MRSA and show no visible signs of infection.¹²⁰
- 18.123 Dr John Gallagher, from Westmead Hospital, advised that at present in the absence of universal screening procedures, or else screening of the high risk patients, healthcare workers have to assume that everybody is an infection control risk¹²¹ The practical difficulties for health care workers confronted with the necessity to act on such an assumption cannot be overstated. It is a significant additional burden on their everyday working practice.

"...we are screening currently less than 10 per cent of people that enter this hospital, for multi-resistant

organisms, and that wouldn't be different at any hospital throughout New South Wales."¹²²

- 18.124 It was suggested to me that NSW should adopt a similar policy to the 'search and destroy' approach pursued in the Netherlands (discussed earlier) or that in the U.K, and screen all patients or at least those with chronic conditions who regularly attend hospitals.¹²³

Screening for MRSA in Great Britain In 2002, the U.K. reported a similar level of MRSA bloodstream infections as the average for Australia, approximately 35 cases per 100,000.¹²⁴ Now, the U.K has reduced its rate of MRSA bloodstream infections by 49% on the 2003-04 figures.¹²⁵ The rate of reported MRSA bloodstream infections for the April–June quarter 2006 was 1,742. The rate for the same quarter in 2008 was 836.¹²⁶ Even the Prime Minister, Gordon Brown, is publicly committed to reducing the incidence of hospital acquired infections with MRSA screening as one of the main initiatives.

"The commitment is to screen all non-emergency admissions from 1 April 2009, where clinically appropriate, and all emergency admissions from 1 April 2011."¹²⁷

This is an ambitious project, and indicative of the realisation of Great Britain health authorities of the importance of controlling hospital acquired infections.

New technology

- 18.125 The current method of screening for multi-resistant organisms takes between 48 and 72 hours and involves taking a blood sample, incubating it, and then testing the culture for resistance to antibiotics.
- 18.126 I was told that there are methods that involve RNA/DNA technologies that have been developed overseas that enable much faster screening.¹²⁸ This will eliminate the need for unnecessary isolation of patients.
- 18.127 Technology such as the rapid or real time PCR testing has been developed that is currently being trialled to assess its accuracy and cost effectiveness.¹²⁹ The results of these trials are as yet inconclusive. Despite the uncertainty of the cost implications, many claim that these new tests will be effective in reducing the rate of MRSA transmission.¹³⁰
- 18.128 The other advantage of these tests is that they only require a nasal swab as opposed to a blood sample. I have heard of a new method developed at Strathclyde University in the UK that enables testing for MRSA in a little as 10 minutes.¹³¹
- 18.129 NSW Health should certainly keep abreast of these developments.

Cost implications

- 18.130 Is screening patients for multi-resistant organisms cost effective? Some studies have demonstrated that the savings in preventing the spread of infection justifies the cost associated with screening patients for these infections.¹³² As discussed above, the main saving for NSW public hospitals in controlling the rate of multi-resistant organisms is in reduction in wasted bed days.
- 18.131 There can however be substantial costs in screening patients. The Medicare Benefits Schedule currently lists a single test to detect pathogenic organisms as costing \$22.15.¹³³ This has led some to question whether it is a cost effective exercise to attempt to control multi-resistant organisms in a facility where multi-resistant organisms

are already endemic. (An infection is endemic when the infection is maintained in a particular population without the need for any external influences.) MRSA is endemic in many major hospitals in NSW as it is constantly present in the hospital population.

- 18.132 Bina Rubinovitch and Didier Pittet from the Infection Control Programme, University of Geneva Hospitals, Geneva Switzerland undertook a review of research that has examined the clinical effectiveness and cost efficiency of programs introduced to reduce the rate of multi-resistant organisms. They found that, whilst eradication may not be possible where there are large numbers of patients in acute care facilities and in the community, MRSA control in the hospital can significantly improve patient outcomes and be cost effective.

“...the lesson learned from the past three decades of both success and failure in MRSA control is that managing endemic MRSA in the acute-care hospital is a realistic goal if judicious screening, improved hand hygiene practices and early implementation of contact isolation are applied.”¹³⁴

The way forward

- 18.133 In 2006, the NSW Expert Group on Multi-Resistant Organisms recommended that vulnerable and high risk patients be screened on the basis of local risk assessment in accordance with the policy directive that would become PD2007_084.¹³⁵ However there is no requirement in this policy directive for any hospital to screen patients for infection or colonisation by a multi-resistant organism. Currently the NSW Health policy only recommends the screening of the following categories of patients:

Organism	HCF-wide admission approach	ICU/HDU and other specific unit approach	Nursing home, long term care HCF
MRSA	<p>Patients with chronic wounds or indwelling medical devices (not previously documented to have MRSA)</p> <p>Readmissions within 6 months of previous episode of inpatient care regardless of the diagnosis at that time</p> <p>Pre-operative patients:</p> <ul style="list-style-type: none"> • Cardiovascular surgery • Elective joint replacement surgery • Vascular surgery where a prosthetic graft is used <p>Transfers from other acute or long term HCF or readmission after recent prolonged inpatient care</p> <p>Admission screening in locales where CA-MRSA is prevalent</p>	<p>All patients on admission and discharge. For units with endemic MRSA or evidence of recent transmission, screening should also be repeated at least weekly</p> <p>Selected pre-operative patients:</p> <ul style="list-style-type: none"> • Cardiovascular surgery • Elective joint replacement surgery • Vascular surgery where a prosthetic graft is used • Solid organ or bone marrow transplantation • Inpatients > 5 days who are to undergo major surgery (who will be admitted to endemic MRSA units) <p>Screening of transfers from other HCF is important in localities where MRSA is prevalent in transferred patients who do not have chronic wounds or indwelling medical devices</p>	<p>Not recommended unless an outbreak or a history of MRSA transmission within the HCF</p>
VRE MRGN eg. MRAB	Not recommended	<p>Optional</p> <p>The decision to introduce routine admission and interval VRE or MRAB screening for ICU/HDU and other non-ICU clinical services eg. renal dialysis, organ transplant, haematology or</p>	Not recommended

oncology should be made after consideration of whether healthcare associated MRO morbidity has been documented in unit patients.

Screening may be prudent, if there is a known VRE or MRGN problem at a nearby HCF

If haemodialysis patients are travelling between AHS or interstate and require dialysis, VRE screening may be a requirement prior to acceptance at another HCF

Recommendation 84: *NSW Health ought mandate the screening of vulnerable and high risk patients by standard or rapid screening technology for MRSA and all other significant pathogens across all area health services in the case of planned admissions BEFORE and for all other cases IMMEDIATELY AFTER entry into the hospital. Such mandatory screening ought to commence as soon as practicable but ought be fully operational within 12 months.*

Accountability

- 18.134 I have already discussed measures for enforcing hand hygiene. In my view, there is room for more accountability for hospital acquired infections generally across both clinicians and management.
- 18.135 The problem through many NSW hospitals is that there is little ownership of the problem amongst the staff of the hospital and infection control is often perceived as the problem of the infection control practitioners. Research internationally has demonstrated that the lack of accountability of the hospital administrators and clinicians is a major impediment to achieving zero tolerance of hospital acquired infections.¹³⁶

Feedback

- 18.136 A driver of improvement is feedback to hospital staff on how they are performing in respect of hospital acquired infection. I was repeatedly told that one of the biggest impediments to improved infection control is the ability to feed information gathered back to the clinicians at the coalface.¹³⁷
- 18.137 I heard of the frustration of the clinicians who report the mandatory indicators information to NSW Health as required, however they do not receive appropriate feedback on how they are performing.¹³⁸ Without this information, they are not aware of what the issues are and how to address them.
- 18.138 I was told that currently NSW Health only give an indicator of the whole area health service.

"...if a unit knew what their infection result was, there would be far more interest in that unit tackling the issue. At the moment we give an indicator for an entire health service"¹³⁹

- 18.139 A study was conducted by researchers from Wisconsin University who examined the impact of a surveillance study on health care workers in the Hospital Eva Peron in Argentina.¹⁴⁰ The study was conducted in 2003 and involved the taking of culture samples from the hands of 32 health care workers. The baseline of compliance with hand washing was 47.2%. The researchers informed the healthcare workers about the types of micro organisms found on their hands. Over the following month, continuous feedback was given to the hospitals about the rates of compliance and types of organisms found. At the end of the month long programme, hand washing compliance had increased to 78.5%.¹⁴¹
- 18.140 I don't understand why more information is not provided back to the hospitals and wards on their rates of infections and hand washing compliance. There is no doubt in my mind that appropriate feedback directly to hospitals that contains the rates of infection in each ward would assist in hospitals monitoring how they are performing and reforming their practices.

Recommendation 85: *NSW Health to consider PD2007-084 and if appropriate, to rewrite it, to include material about and requirements for infection prevention which needs to include as a minimum, the following:*

- (a) *each ward must undergo regular audits (at least monthly) and random audits. The audits should be undertaken by an infection control professional who is not part of the staff of the ward;*
- (b) *each ward must nominate either the nurse unit manager or in the alternative, an appropriate infection control officer whose tasks include education about infection control, enforcement of infection control standards, displaying leadership in the ward by their example and undertaking audits of performance in other wards or hospitals;*
- (c) *each ward must publicly display statistics and results compiled monthly and updated throughout the year showing, at least:*
 - (i) *the rate of hospital acquired infection per patient on the ward;*
 - (ii) *the rate of compliance with hand washing techniques (and any other applicable hygiene techniques) separately for each group of health care workers caring for patients.*

Accountability of management

- 18.141 It was suggested to me that at Sydney Children's Hospital that infection rates should be something for which the chief executive is publicly accountable.¹⁴²
- 18.142 This was one of the recommendations that received unanimous support at the 2006 meeting of the NSW Expert Group on Multi-Resistant Organisms, where it was agreed that controlling MRSA should be one of the key performance indicators for Area Health Executives. The expert group recommended that NSW Health, in consultation with it, should develop a set of mandatory key performance indicators relating to multi-resistant organism surveillance.
- 18.143 I note that the performance indicators contained in the 2007-08 Performance Agreements between NSW Health and the various area health services contain reference to the need to reduce the rates of hospital acquired infections. But more needs to be done and it must be done more quickly.¹⁴³

Public reporting

- 18.144 A question is whether it would also assist to publish data beyond the hospitals to the public.
- (a) In the USA more than half of the states have mandatory public reporting of the infection rates with several others reporting to government on a mandatory or voluntary basis.
 - (b) France has had mandatory public reporting since 2006.
 - (c) The UK has been gradually increasing reporting on the rates of various types of infection.¹⁴⁴
- 18.145 Currently none of the other Australian States have mandatory public reporting and have varying levels of reporting requirements. I understand that the prospect of publishing the infection rates for hospital acquired infection and also the development of nationally consistent guidelines has been the topic of some discussion at recent Council Of Australian Governments' meetings.
- 18.146 I heard from a number of health care professionals who supported making publicly available the statistics on hand hygiene compliance and the infection rates at each hospital.¹⁴⁵ Access to such statistics would allow a comparison between hospitals and may be an incentive for hospitals to reduce the incidence of MRSA in their facility.¹⁴⁶
- "Hospitals must publish their infection rates and achieve best practice."¹⁴⁷
- 18.147 The problem, as identified above, is the accuracy of this data. If you have an institution, which is vigilant and careful, and constantly testing, it will have a much higher incidence of MRSA than someone who has poor infection control and slip-shod reporting and notification.¹⁴⁸
- 18.148 One suggestion that I have heard of was to collect the data on the rates of MRSA bloodstream infections from the pathology laboratories attached to the facilities. This type of infection is suggested as it represents about one quarter of all *staphylococcus aureus* infections, and would, therefore, represent a good indicator of the hospital's level of MRSA control. It is appropriate that I leave the detail of what is collected and published to those who are experts in the field who will be able to take into account such national guidelines as may come into existence in the near future. However there seems little doubt that publishing the infection information is a significant beneficial factor in driving improvement in this area.¹⁴⁹

¹ Spelman D W "Hospital-acquired Infections" (2002) 176(6) Medical Journal of Australia 286.

² Spelman D W "Hospital-acquired Infections" (2002) 176(6) Medical Journal of Australia 286.

³ NSW Health "Infection control program quality monitoring indicators User Manual (Version 2) 2005, NSW Health, North Sydney, p. 6.

⁴ The Australian Council on Healthcare Standards, Australasian Clinical Indicator Report 1998-2006, *Determining the potential to improve quality of care, 8th edition, 2007, The Australian Council on Healthcare Standards, Sydney*, pp. 262-266.

⁵ The Australian Council on Healthcare Standards, Australasian Clinical Indicator Report 1998-2006, *Determining the potential to improve quality of care, 8th edition, 2007, The Australian Council on Healthcare Standards, Sydney*, pp. 267-272.

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- 6 Submission of Adjunct Associate Professor Richard West AM, SUBM.031.0183 at 195.
- 7 Collignon P et al. "Staphylococcus aureus Bactermia, Australia" (2005) 11(4) *Emerging Infectious Diseases* p. 554.
- 8 Rubinovitch B and Pittet D "Screening for methicillin-resistant Staphylococcus aureus in the endemic hospital: what have we learned?" (2001) 47 *Journal of Hospital Infection* 9.
- 9 Submission of Adjunct Associate Professor Richard West AM, SUBM.031.0183 at 195 at 224.
- 10 Submission of Adjunct Associate Professor Richard West AM, SUBM.031.0183 at 198.
- 11 Submission of Adjunct Associate Professor Richard West AM, 31 March 2008, SUBM.031.0109 at 164; Joanne Predergast, Royal North Shore hearing, 2 April 2008 transcript 1148.18.
- 12 Editorial "Hospital overcrowding: a threat to patient safety" (2006) 184 MJA 203; Richardson D "Increase in patient mortality at 10 days associated with emergency department overcrowding" (2006) 184 *Medical Journal Australia* 213.
- 13 Confidential submission, 31 March 2008, SUBM.031.0109 at 165.
- 14 Rubinovitch B and Pittet D "Screening for methicillin-resistant Staphylococcus aureus in the endemic hospital: what have we learned?" (2001) 47 *Journal of Hospital Infection* 9 at 10.
- 15 Material provided by NSW Health in response to summons, DOH.078.0003.
- 16 Since May 2005.
- 17 Confidential Submission, 21 April 2008, SUBM.023.0294 at 296.
- 18 Australian Commission on Safety and Quality in Health Care (ACSQHC), *Reducing harm to patients from health care associated infection: the role of surveillance*, Report, 2008, Sydney, p. 59.
- 19 Letter from NSW Health to Special Commission of Inquiry, 23 October 2008, p. 5.
- 20 Letter from NSW Health to Special Commission of Inquiry, 23 October 2008, p. 5.
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19 Deteriorating patients

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- 19.1 In this chapter, I examine one aspect of the safety and quality of patient care in public hospitals – the deteriorating patient.
- 19.2 This is a label which is applied to a patient whose clinical condition does not improve as might be expected with the provision of good health care in hospital. Rather, whilst in hospital, the patient's clinical condition deteriorates and becomes worse with time.
- 19.3 The deterioration of the patient may only be detectable by subtle signs in some cases. Often the deterioration is only detectable when a sentinel event occurs. One of the consequences of this mix of signs is that the detection of the deteriorating patient by hospital staff can, in some cases be quite problematic. But, with proper care and attention, in most cases there are signs and symptoms in patients which point to the patient's deterioration and the need for intervention.
- 19.4 Signs of deterioration often appear during the night when the wards have fewer staff and often when only junior medical officers are available on-site.

The Extent of the Problem

- 19.5 Over the course of the Inquiry, I came across a number of examples that illustrate what can happen in a hospital when a patient's condition deteriorates, and is not detected.

Case Study 1: Vanessa Anderson

Vanessa Anderson died approximately 2 days after she was admitted to Royal North Shore Hospital with a skull fracture caused by a golf ball strike. Her injury was diagnosed as a "mild head injury". The Deputy State Coroner found that a series of errors, including a failure of communication at the clinical level, led to Vanessa's death.¹ In the hours before her death, staff failed to detect and then monitor an episode which could have alerted them to a deterioration in Vanessa's condition. A detailed account of Vanessa's case appears in Chapter 1.

During the course of the inquiry, I interviewed Vanessa's father, Warren Anderson. He told me that in his view, the most dangerous part of a hospital is not the intensive care unit but, rather, suffering a "mild injury".² He believes that whilst at Royal North Shore Hospital, Vanessa was handled in a complacent manner.³

Case Study 2: Belinda Griffey

Belinda Griffey had been in a car accident and was admitted to Nepean Hospital on 29 April 2004 with a broken hip and pelvis. Her sodium levels fell and by the 5th day of Belinda's admission, her family noticed that something was seriously wrong. On 7 May 2004, a pathology test indicated that Belinda's sodium level was at a life-threateningly low level. This was reported to nursing staff. The pathology results were not followed up. It was not until 9 May 2004, when Belinda lapsed into a coma and was rushed to the Intensive Care Unit, that steps were taken to correct the sodium level, which by then had dropped even lower. Belinda's condition did not improve.⁴ Belinda's family encountered difficulties with staff when they went to the nurse's station on several occasions with concerns about Belinda's deteriorating condition.⁵

Case Study 3: Rebecca Murray

Mrs Rebecca Murray presented to the birth suite of Bathurst Base Hospital at 5:00 am on 24 June 2007. An emergency lower caesarean section operation was carried out. Her uterus and cervix suffered injury in the process, resulting in a loss of a great deal of blood. That information was not passed to the recovery nurse. Although low blood pressure warranting the calling of an emergency team had been recorded at 8:36 am, and the table next to Mrs Murray's bed in the recovery unit was full of towels soaked in blood, the nurse did not call an anaesthetist at home until 8:50 am, when Mrs Murray's blood pressure reached the critically low level of 54/22.⁶

Mrs Murray was subsequently returned to the operating theatre for an emergency examination under general anaesthetic.⁷ Despite aggressive management, bleeding was unable to be controlled so the locum obstetrician proceeded to perform a hysterectomy.⁸ Mrs Murray ultimately suffered a cardiac arrest and was taken by helicopter to Nepean Hospital's Intensive Care Unit, where she passed away.⁹

19.6 There were a number of other clinical incidents raised during the Inquiry that highlighted the failure to detect or appropriately respond to deterioration in a patient's condition.¹⁰

19.7 The available data suggests that such failures are not necessarily isolated incidents. According to NSW Health, an analysis of clinical Severity Assessment Code ("SAC") level 1 incidents from December 2006 to November 2007 identified 20 deaths where systems issues had contributed to a failure to detect deterioration in the patient's condition.¹¹

19.8 Although 20 such deaths suggests that the failure to detect or respond to a patient's deterioration is a concern, the available Root Cause Analysis data suggests a greater prevalence than this. Analysis of such data in the Sydney West Area Health Service alone indicated the following:

- In 2005, aspects of the provision of health care could possibly have contributed to, or exacerbated, the patient's outcome in 28 of 35 cases.¹²
- In 2006, of the 31 non-mental health related Root Cause Analyses, only 3 were not related to patient death, and it was determined in 25 cases that aspects of the provision of health care could possibly have contributed to, or exacerbated, the patient's outcome.¹³
- In 2007, for Root Cause Analyses in which death was the outcome, there had been a variation from the expected standard of care that significantly contributed to the patient's death in 14 cases.¹⁴
- Management of the deteriorating patient was identified as a significant theme in a number of cases that were the subject of a Root Cause Analysis.¹⁵

19.9 During my visit to Ballina Hospital, I was told that Root Cause Analyses had identified inadequate assessment and monitoring and failure to detect deteriorating patients as the cause of a number of adverse incidents.¹⁶

19.10 I note that an information memorandum issued by NSW Health's Strategic Development Division on 31 August 2007 confirmed that the failure of staff to detect deteriorating patients is a serious problem. The memorandum stated:

"The NSW Health Reportable Incident Review Committee (RIRC) has identified, from an analysis of Reportable Incident Briefs (RIBs) and Root Cause Analysis (RCA) reports, a systemwide clinical management issue relating

to the failure of clinicians to recognise the early clinical signs and symptoms of deteriorating patients who require clinical intervention, and the notification of appropriate senior staff.

The number of reported SAC 1 incidents related to the failure to detect a deteriorating patient has been steadily increasing since August 2006 with the initial number reported for a 1 month period being 3 (August 2006) increasing to 32 in June 2007."¹⁷

Existing mechanisms

- 19.11 Whilst the detection of deteriorating patients poses a problem for the health system, a number of mechanisms have been established in NSW public hospitals so that deteriorating patients are identified and attended to urgently.

Liaison and Support from Intensive Care Units

- 19.12 First, the Intensive Care Units in some hospitals provide a service to assist ward staff to identify and attend to deteriorating patients.
- 19.13 For example, Professor Anthony McLean, the Director of the Intensive Care Unit at Nepean Hospital, told me that his unit had established a liaison team which goes from the Unit into the hospital wards every day to review seriously ill patients who have been sent from the Intensive Care Unit to the ward, thereby ensuring that the patients' transition to the ward is satisfactory. In so doing, the Intensive Care Unit attempts to "fill the gap" in experience on the ward in the identification of deteriorating patients by providing a team that is available as a ready resource.¹⁸
- 19.14 So too, I was told that Sydney Children's Hospital has developed a patient review process whereby a nurse is able to contact the Intensive Care Unit to examine a patient if the nurse is uncertain whether a patient is deteriorating.¹⁹ I was informed that no difficulties had arisen with respect to Intensive Care Unit staff responding to such requests.²⁰
- 19.15 However, not every hospital has an on-site Intensive Care Unit which can provide this service.

PACE and MET

- 19.16 Second, there is often a system in place whereby a response team can be called out in situations where a patient's condition unexpectedly deteriorates.
- 19.17 For example, in 2005 Westmead Hospital implemented the PACE system (the "Pre-Arrest Criteria for Escalation" of therapy). I understand that PACE is a two-tiered system whereby:²¹
- (a) if a patient is showing signs of deterioration, the clinicians with responsibility for the ward who are looking after the patient are called, and they have 30 minutes to resolve the problem;
 - (b) if the ward clinicians are unable to resolve the concern, the second tier of the PACE system is activated and the Advanced Life Support ("ALS") team at the hospital is called.

- 19.18 The composition of the ALS team is variable but typically consists of staff from the Intensive Care Unit and the departments of anaesthesia, medicine and surgery.²²
- 19.19 A similar arrangement, known as the MET (Medical Emergency Team) system, has been implemented in other hospitals. As I understand the distinction, the ALS team is independent of the Intensive Care Unit, whereas MET members are drawn from intensive care staff.²³ The difference between the way in which these teams are constituted do not impact on patient care. Both systems seem to work well and have much in common.
- 19.20 Given the availability of these systems to respond to deteriorating patients, the prevalence of deteriorating patients amongst avoidable deaths is a matter of concern.
- 19.21 The problem does not appear to be the efficacy of MET or PACE once these teams are called and their services made available to the patient.²⁴
- 19.22 Rather, the problem appears to be the failure of ward staff to detect the signs of deterioration in the first place, and to promptly notify the MET or PACE team. This was certainly borne out in the cases I have discussed above. This problem was also highlighted by a witness from NSW Health who told me that it was rare to see a case where there was a failure by a response team to respond in a timely manner to a PACE or MET call; rather, the “typical scenario” was where the call to the PACE team or MET was not made or was delayed.²⁵ Indeed, Karen Priest (who gave evidence concerning the treatment of her mother at Gosford Hospital in 2004) told me that inexperienced nursing staff failed to detect signs of her mother’s deteriorating condition and, as a consequence, the MET system at the hospital was not utilised.²⁶
- 19.23 As a neurologist at Concord Hospital observed, there is often a failure by staff to discuss deterioration in patients. The patient’s deterioration may not have been discussed with the senior doctor who, in turn, will not have discussed it with the consultant. This can have devastating consequences:²⁷
- “If errors have been made in the interpretation of the clinical signs of problems or the solution needed, then those errors do not have a chance to be corrected.”
- 19.24 What then ought be done to assist in the detection of an appropriately early stage of a deteriorating patient.

A clinicians’ debate

- 19.25 There is a debate between two groups of Intensive Care specialists as to which is the best model of care for detecting and attending to deteriorating patients: the method described above as PACE or that propounded by Professor Theresa Jacques at St George Hospital. Essentially, the debate centres around whether the “rescue mechanism” should involve an Intensive Care team, High Dependency team, or a MET.²⁸
- 19.26 The approach advocated by Professor Jacques recommends the implementation of the Clinical Emergency Response System (“CERS”), which I understand to be a hospital-wide system for the management of cardio-respiratory arrest (and conditions that are highly likely to lead to it).²⁹ A key component of this system is that there will be specially trained doctors in all wards to address deteriorating patients, rather than reliance on the Intensive Care Unit, thereby relieving unnecessary strain on the Intensive Care Unit.³⁰

- 19.27 A similar line of reasoning appears to be adopted by clinicians who support the PACE model in preference to the MET model, who say that the latter is a drain on the Intensive Care Unit's resources and leads to the de-skilling of ward staff. For example, A doctor expressed concern that the MET is viewed as a "*quick, easy and cheap fix*" for addressing deteriorating patients, which absolves primary teams of all responsibility for their sickest patients on the basis that the MET will attend and deal with the matter.³¹ He told me that this has led to the de-skilling of ward staff and has created an "enormous" burden on the Intensive Care Unit's resources.³² He submitted that in contrast, the PACE system allows the primary team to maintain "ownership" of the patient, whilst providing a "catch net" for patients who require more specialised care.³³
- 19.28 Similarly, the Director of Royal Prince Alfred Hospital's Intensive Care Unit expressed the view that the presence on wards of limited medical staff with varying education levels, increased patient loads and higher acuity patients has created a dependence on the Intensive Care Unit in the management of deteriorating and critically ill patients.³⁴ In his opinion, the availability of MET has also contributed to the de-skilling of ward staff and has adversely impacted upon the functioning of the Intensive Care Unit.³⁵
- 19.29 I raise this debate not to resolve any aspect of it, but to illustrate the problems in making decisions in health: whilst there is agreement that a system is required to address an identified concern, it is difficult to reach a consensus as to the specifics of the system.
- 19.30 In October 2008, the Clinical Excellence Commission issued a report "Between the Flags Project: The Way Forward" in relation to the lack of recognition and appropriate management of inpatients whose condition is deteriorating.³⁶ This was the result of a project in collaboration with NSW Health and the Greater Metropolitan Clinical Taskforce, which included a review of the literature, consultation with industry experts, exploration and examination of various local issues associated with recognition and management of the deteriorating patient and a trial of some solutions for implementation in five health facilities representing tertiary, metropolitan, rural base and rural hospitals.³⁷
- 19.31 The report suggests the following minimum requirements for a state-wide response to the deteriorating patient:³⁸
- establishment of a system for early identification of an at-risk patient in every hospital in NSW (involving the implementation of a specifically designed vital signs/observation chart);
 - development of escalation protocols to manage deteriorating patients, which should include a rapid response system;
 - development and implementation of detailed education and training programs aimed at recognising and managing the deteriorating patient;
 - the ongoing collection and analysis of data to monitor the implementation and progress of the program;
 - a standardised process for the handover of patients which can be utilised on all occasions and can also be used when all clinicians are not on site together;
 - high level support from both management and clinicians; and
 - ongoing evaluation of the program.
- 19.32 This approach appears to be a very positive step forward: it sets a baseline for an appropriate response system, which allows the quality of any such system to be controlled, while permitting some degree of variation.

Why are deteriorating patients overlooked?

- 19.33 There are a number of reasons why deteriorating patients may be overlooked by hospital staff.
- 19.34 The Clinical Excellence Commission report (noted above) identified the following matters as central to whether staff appropriately detect and respond to a deteriorating patient:³⁹
- whether the observation regime is sufficient;
 - whether appropriate escalation protocols are in place;
 - whether education and training programs aimed at recognising and managing deteriorating patients exist;
 - whether there is an appropriate handover regime; and
 - whether the system in place has support from management and clinicians.
- 19.35 NSW Health conducted a number of focus groups with junior medical officers and nurses at which the issue of deteriorating patients was raised. The following reasons were amongst those raised as to why clinical staff do not respond to deteriorating patients:⁴⁰
- they were unclear as to the criteria under which they were to be called, and when they should call for help;
 - overdependence on automatic monitoring;
 - lack of clarity in respect of their role and responsibilities;
 - lack of adequate/clear documentation;
 - inadequacies in handover practices; and
 - issues arising from the organisation of the staff of a ward;
 - inadequate staffing levels;
 - doctors who would not accept the subjective judgments advanced by more junior medical officers or nursing staff.
- 19.36 The importance of clinicians' concerns as to their own judgement was reinforced in a recent study, which noted that the subjective "sense" of a nurse that a patient is deteriorating is recognised as important in early intervention, and that additional objective evidence should then serve to attract junior medical staff to set a high priority with respect to review of the patient.⁴¹
- 19.37 Significantly, during the Inquiry I was told about a Root Cause Analysis relating to the death of a patient, which observed that ward staff had been given negative feedback from members of the MET when called, contributing to a reluctance amongst various clinicians to call the MET when a patient met some MET criteria. The Root Cause Analysis stated:⁴²
- "This may have contributed to several opportunities to intervene in the patient's management by the certified MET team being missed and instead being referred to the [career medical officer]."

An after hours problem?

- 19.38 I was told over the course of the Inquiry that more patients deteriorate after hours.
- 19.39 For instance, a doctor at Concord Hospital informed me that in his view, the failure to notify or discuss deterioration in admitted patients was largely an out-of-hours problem.⁴³ Similarly, the Acting Director of Nursing and Midwifery at Royal North Shore Hospital told me that a lot of sick patients deteriorate after hours because people are not around to pick up the fact that the patient is deteriorating, and because of a lack of support after hours.⁴⁴
- 19.40 I suspect that patients deteriorate uniformly throughout the day and night, and what witnesses were really saying was that such deterioration is not detected as quickly or dealt with as effectively after hours. This appears to me to be due to a number of things:
- There are fewer staff walking around the wards after hours who might notice signs of deterioration.
 - There is a higher reliance on nursing staff to identify deteriorating patients, and not all nurses have the training or experience to appreciate the significance of signs of deterioration.
- 19.41 These concerns were reflected in the comments of a nurse at Westmead Hospital, who said that the medical High Dependency Unit is staffed from 5:00 pm to 9:00 pm Monday to Friday with only one experienced registrar. After that, nursing staff are required to identify deteriorating patients. The system used to assist the nurses is to give them a set of guidelines relating to deteriorating patients, with access to an emergency response system. They carry a small plastic reference card that identifies certain physiologic parameters, and they are authorised to call for assistance if they believe that a patient is at risk even if he or she has not reached the relevant parameters.⁴⁵
- 19.42 I heard from a witness that in the Sydney West Area Health Service, a program called “Recognising the Deteriorating Patient” has been developed. As part of that program, education sessions have been held at the hospital. However, she informed me that it was difficult to arrange for night staff to attend those sessions.⁴⁶
- 19.43 Given the correlation between night shift and the incidence of adverse events involving deteriorating patients, it is obvious that night staff need to be able to attend and get the benefit of the education programs.

Education & training

- 19.44 It seems clear that further education and training needs to be provided across all NSW public hospitals in the identification of deteriorating patients.
- 19.45 The Director of the Emergency Department at Nepean Hospital suggested that emphasis be placed on the education and training of junior medical and nursing staff in this context.⁴⁷ In a similar vein, Professor Anthony McLean, the Director of the Intensive Care Unit at Nepean Hospital, stated that ward staff are becoming de-skilled in looking after deteriorating patients. They do not see a lot of very sick patients on certain wards, hence they may not be “comfortable” when they do see them. He also said that if staff do see very sick patients, they may not be particularly well-trained in recognising the signs of deterioration.⁴⁸

- 19.46 A number of senior intensive care clinicians in a joint letter to the Inquiry spoke about the need for systemic education of ward staff in the skills necessary to recognise the deteriorating patient.⁴⁹
- 19.47 In a paper providing guidelines for in-hospital clinical emergency response systems for medical emergencies,⁵⁰ Professor Harrison and Associate Professor Jacques recommended the development of the following education systems, which would no doubt help to address clinicians' lack of experience in critical care:
- Every member of the hospital's staff with clinical care responsibility should be trained and assessed in basic life support and/or advanced life support appropriate to his or her clinical role.
 - Medical, nursing, allied health and ward staff should receive training in early recognition and management of antecedent symptoms and signs associated with potential medical emergencies.
 - Hospitals should have a designated individual or group responsible for the supervision of the clinical emergency response systems, the organisation of the training of staff and the conduct of quality improvement in the CERS.
 - NSW Health should progress the development of education programs that have widespread application across all NSW acute care services for training of staff in the early recognition and management of antecedent symptoms and signs of potential medical emergencies.
- 19.48 I should note that during her evidence, Associate Professor Jaques told me about the "RAMPAC" (Recognition and Management of Patients with Acute Conditions) course run for St George Hospital junior medical staff and nursing staff on the St Vincent's Hospital campus.⁵¹ She informed me that the focus of the course is on developing an education package concerning the management of the deteriorating patient as part of the recommendations of the Greater Metropolitan Clinical Task Force document entitled "The Clinical Emergency Response to the Deteriorating Patient".⁵² She told me that the Institute of Medical Education and Training ("IMET") is aware of and endorses this document, and she was of the view that IMET is the right group to oversee and facilitate the development of such programs for doctors-in-training.⁵³ I should add that over the course of the Inquiry I received documentation containing feedback from the course and, generally, it was well received by attendees.⁵⁴ It appears to me that such education strategies are important to ensure that staff receive sufficient education in relation to deteriorating patients.
- 19.49 I also note that some area health services are developing policies on deteriorating patients, which seems to me to be a necessary precursor to effective education on the topic.⁵⁵

The way forward

- 19.50 The adoption and implementation of the approach proposed by the Clinical Excellence Commission in its October 2008 report represents the best way forward, in that it provides minimum standards across a number of key areas rather than adopting an overly prescriptive approach that may not be suitable across the range of hospitals within our public health system. I therefore propose to recommend that a system for the management of deteriorating patients be developed in accordance with the Clinical Excellence Commission's proposals.

Recommendation 91: *Within 12 months, NSW Health is to implement a system in accordance with the recommendations of the Clinical Excellence Commission for the detection of deteriorating patients containing the following elements:*

- *a system for early identification of an at-risk patient in every hospital in NSW (this system will involve the implementation of a specifically designed vital signs/observation chart);*
- *escalation protocols to manage deteriorating patients, which would include a rapid response system;*
- *development and implementation of detailed education and training programs, aimed at recognising and managing the deteriorating patient;*
- *the ongoing collection and analysis of appropriate data to monitor the implementation and progress of the program;*
- *a standardised process for the handover of patients which can be utilised on all occasions and can equally be done when all clinicians are not on site together;*
- *high level support from management and clinicians; and*
- *ongoing evaluation.*

- ¹ Inquest into the Death of Vanessa Anderson (Unreported, Westmead File 161/2007, Magistrate Milovanovich, Westmead Coroners Court, 24 January 2008), p. 14.
- ² Meeting with Warren and Michelle Anderson, 7 March 2008.
- ³ Meeting with Warren and Michelle Anderson, 7 March 2008.
- ⁴ Kevin Griffey, Nepean Hospital hearing, 8 April 2008, transcript 1321.20-29. See also Root Cause Analysis (RCA) Report, RCA No.8:04, Nepean N135, attached to submission of Kevin and Christine Griffey, 8 April 2008, SUBM.069.0115.
- ⁵ Kevin Griffey, Nepean Hospital hearing, 8 April 2008, transcript 1321.20-29. See also Root Cause Analysis (RCA) Report, RCA No.8:04, Nepean N135, attached to submission of Kevin and Christine Griffey, 8 April 2008, SUBM.069.0115.
- ⁶ Final RCA Report, RCA RI 07/523, attached to submission of Adrienne and Lewis Furner, 24 June 2007, SUBM.005.0248 at 249.
- ⁷ Final RCA Report, RCA RI 07/523, attached to submission of Adrienne and Lewis Furner, 24 June 2007, SUBM.005.0248 at 249.
- ⁸ Final RCA Report, RCA RI 07/523, attached to submission of Adrienne and Lewis Furner, 24 June 2007, SUBM.005.0248 at 249.
- ⁹ Meeting with Jim Murray, 4 April 2008; and Final RCA Report RCA RI 07/523, attached to submission of Adrienne and Lewis Furner, 24 June 2007, SUBM.005.0244.
- ¹⁰ I note in particular (a) Donald Mackay, who was in a spinal unit in the Royal North Shore Hospital following a surgical procedure on his lungs. He began to hallucinate and experience breathing difficulties that the nursing staff did not respond to. The nursing staff also ignored Mrs Mackay's efforts to draw their attention to these problems, failing to note or action her concerns. He eventually died at home in Port Macquarie after a ventilator provided by the air ambulance service was returned by Mr Mackay's doctor, Dr Stewart (Therese Mackay, Port Macquarie hearing, 28 March 2008, transcript 1049.37-1064; Email from Therese Mackay, 3 February 2008, together with attachments); (b) One witness, who had surgery at the Royal Prince Alfred Hospital in 2004, had fasted for a long time while waiting for surgery and was very dehydrated. She lost blood during surgery, but received no

transfusion or IV fluids. She had a hyponatremic fit and nearly died, having a very low sodium reading. There were delays in getting medical attention – for example, her husband went to fetch a doctor, but the doctor did not actually come into the witness' room. The witness was concerned that her deteriorating condition was not detected by the nurse and the doctor did not come and see her immediately, and she told me of her concern that had she been in a single room and her husband not been there, the outcome would have been much worse (Confidential Bankstown hearing, 13 May 2008, transcript 2.41-5.09); (c) One witness from the Clinical Governance Unit expressed concerns about the “quality” of nurses working on the night and weekend shifts, and discussed 3 cases in which there was a failure of staff to appreciate the seriousness of the situation and recognise the signs and symptoms that were indicative of the patient’s clinical deterioration, and did not take any action until the patients went into cardiac arrest and resuscitation attempts were unsuccessful (Confidential hearing at the Inquiry’s offices, 13 June 2008, transcript 14.29-26.04).

- 11 Letter from NSW Health to Special Commission of Inquiry, 31 October 2008.
- 12 Sydney West Area Health Service Clinical Governance Unit, *Annual Review of Root Cause Analysis - 2005*, March 2006, SW008.0012.
- 13 Sydney West Area Health Service Clinical Governance Unit, *Annual Review of Root Cause Analysis - 2006*, August 2007, SW008.0129.
- 14 Sydney West Area Health Service Clinical Governance Unit, *Annual Review of Root Cause Analysis - 2007*, April 2008, CORR.027.0090 at 97.
- 15 Sydney West Area Health Service Clinical Governance Unit, *Annual Review of Root Cause Analysis - 2007*, April 2008, CORR.027.0090.
- 16 Information provided during visit to Ballina Hospital on 28 April 2008.
- 17 NSW Health Strategic Development Division, Statewide Services Development Branch, Brief File 05/6555-4, 31 August 2007, attached to the submission of Dr Robert Herkes and others, 28 March 2008, SUBM.007.0394.
- 18 Professor Anthony McLean, Nepean Hospital hearing, 8 April 2008, transcript 1460.42.
- 19 Information provided during visit to Sydney Children’s Hospital on 19 May 2008.
- 20 Information provided during visit to Sydney Children’s Hospital on 19 May 2008.
- 21 Confidential Westmead hearing, 10 April 2008, transcript 49.5-49.18; and Westmead Hospital, *PACE Pack: An Introduction to Westmead’s PACE system*, 2nd Edition, April 2008, attached to confidential submission, received on 10 April 2008, SUBM.027.0419.
- 22 Confidential Westmead hearing, 10 April 2008, transcript 49.16-49.22.
- 23 Email dated 10 April 2008 attached to confidential submission, 17 April 2008, SUB.027,0388.
- 24 Harrison GA, Jacques T, McLaws M, and Kilborn G, “Combinations of early signs of critical illness predict in-hospital death – The SOCCER Study (Signs of Critical Conditions and Emergency Responses)” (2006) 71 *Resuscitation* 327, p. 333.
- 25 Confidential hearing at the Inquiry’s offices, 13 June 2008, transcript 14.29-26.04.
- 26 Karen Priest, Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 3139.10-39.
- 27 Dr Stephen Reddel, Neurologist, Concord hearing, transcript 2116.05-21; see also submission of Dr Stephen Reddel, 24 April 2008, SUBM.049.0012 at 0015.
- 28 NSW Health Briefing, 22 May 2008, transcript 61.13, 63.01.
- 29 Harrison G, and Jacques T, *Summary of GMCT Guidelines for In-Hospital Clinical Emergency Response Systems for Medical Emergencies*, Greater Metropolitan Clinical Taskforce, 14 September 2006.
- 30 Harrison G, and Jacques T, *Summary of GMCT Guidelines for In-Hospital Clinical Emergency Response Systems for Medical Emergencies*, Greater Metropolitan Clinical Taskforce, 14 September 2006.
- 31 Email dated 10 April 2008, attached to confidential submission, 17 April 2008, SUBM.027,0388.
- 32 Email dated 10 April 2008, attached to confidential submission, 17 April 2008, SUBM.027.0388.

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- ³³ Email dated 10 April 2008, attached to confidential submission, 17 April 2008, SUBM.027.0388.
- ³⁴ Submission of Dr Robert Herkes and others, 28 March 2008, SUBM.007.0394 at 396.
- ³⁵ Submission of Dr Robert Herkes and others, 28 March 2008, SUBM.007.0394 at 396.
- ³⁶ The Clinical Excellence Commission, *Between the Flags Project – The Way Forward*, October 2008, The Clinical Excellence Commission.
- ³⁷ The Clinical Excellence Commission, *Between the Flags Project – The Way Forward*, October 2008, The Clinical Excellence Commission, p. 3.
- ³⁸ The Clinical Excellence Commission, *Between the Flags Project – The Way Forward*, October 2008, The Clinical Excellence Commission, pp. 10-13.
- ³⁹ The Clinical Excellence Commission, *Between the Flags Project – The Way Forward*, October 2008, The Clinical Excellence Commission, pp. 10-13.
- ⁴⁰ NSW Health Briefing, 22 May 2008, transcript 60.40; Clinical Excellence Commission, Presentation: *Incident Management and Root Cause Analysis*, 22 May 2008, p. 28.
- ⁴¹ Harrison GA, Jacques T, McLaws M, and Kilborn G, "Combinations of early signs of critical illness predict in-hospital death – The SOCCER Study (Signs of Critical Conditions and Emergency Responses)" (2006) 71 *Resuscitation* 327, p. 333.
- ⁴² Final RCA Report, RCA R107/622, 26 July 2007, attached to submission of Sharyn Medway, 12 May 2008, SUBM.045.0276.
- ⁴³ Dr Stephen Reddel, Neurologist, Concord hearing, transcript 2116.05-21; see also submission of Dr Stephen Reddel, 24 April 2008, SUBM.049.0012 at 15.
- ⁴⁴ Jan Tweedie, Royal North Shore Hospital hearing, 14 March 2008, transcript 313.7.
- ⁴⁵ Confidential Westmead hearing, 26 May 2008, transcript 45.08-46.05.
- ⁴⁶ Confidential hearing at the Inquiry's offices, 13 June 2008, transcript 14.29-26.04.
- ⁴⁷ Dr Rod Bishop, Nepean Hospital hearing, 8 April 2008, transcript 1382.20-42.
- ⁴⁸ Professor Anthony McLean, Nepean Hospital hearing, 8 April 2008, transcript 1462.21-26.
- ⁴⁹ Submission of Dr Robert Herkes and others, 28 March 2008, SUBM.007.0394 at 396.
- ⁵⁰ Harrison G, and Jacques T, *Summary of GMCT Guidelines for In-Hospital Clinical Emergency Response Systems for Medical Emergencies*, Greater Metropolitan Clinical Taskforce, 14 September 2006, p.2.
- ⁵¹ Associate Professor Theresa Jacques, St George hearing, 14 May 2008, transcript 2880.3-7.
- ⁵² Associate Professor Theresa Jacques, St George hearing, 14 May 2008, transcript 2880.14-18.
- ⁵³ Associate Professor Theresa Jacques, St George hearing, 14 May 2008, transcript 2880.18-23.
- ⁵⁴ *Summary of Comments from Participants Attending the Recognition and Management of Patients with Acute Conditions Course – RAMPAC*, August 2006; *Summary of Comments from Participants Attending the Recognition and Management of Patients with Acute Conditions Course – RAMPAC*, April 2008; and *Summary of Comments from Participants Attending the Recognition and Management of Patients with Acute Conditions Course – RAMPAC*, November 2008, provided during evidence of Associate Professor Theresa Jacques, St George Hospital hearing, 14 May 2008, transcript 2881-2882.
- ⁵⁵ For example, *Recognition and Management of the Deteriorating Patient*, handled conjointly between the Nursing and Midwifery Directorate and the Clinical Governance Unit of the Northern Sydney Central Coast Area Health Service, and referred to in the minutes of meeting of the Northern Sydney Central Coast Area Health Service Executive Team, 17 June 2008, paragraph 7.1.4b.



Special Commission of Inquiry

Acute Care Services in NSW Public Hospitals

Part E

Areas of medical treatment

20 Emergency Department

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- 20.1 Two features are immediately noteworthy about Emergency Departments:
- (a) The Emergency Department is, in many ways, the public face of a hospital. It is what most people think about when they think of hospital. A patient's experience in an Emergency Department is often taken as an indication of how NSW public hospitals operate overall, which may or may not be accurate.
 - (b) Most problems or stresses which I observed in the NSW public hospital system find expression, in one form or another, in Emergency Departments, be it a lack of senior doctors, ineffective bed management practices, widespread use of locums or poor communication with patients or their families. It is for this reason that you will find many cross-references in this chapter to elsewhere in my report, where I have dealt with such issues more thoroughly.

Growth in attendances at Emergency Departments

- 20.2 The Emergency Department is defined by the Australasian College for Emergency Medicine as:
- "the dedicated area in a hospital that is organised and administered to provide a high standard of emergency care to those in the community who perceive the need for or are in need of acute or urgent care including hospital admission."¹
- 20.3 The College's policies do not include a definition of 'acute' or 'urgent' care. A central element in the College's definition is that it identifies the perception that a patient may have about the need for care, not only their actual need. In other words, the definition embraces, at least as one element, a subjective assessment by a non-clinically qualified person as to their clinical needs.
- 20.4 Over the last 4 years, there has been an increase in the number of patients going to Emergency Departments across NSW, in excess of what you would expect by reason of population growth alone. In 2006-2007 there were 2,303,877 Emergency Department occasions of service in New South Wales.² In 2002-2003, the figure was 1,982,190. The growth in attendances at Emergency Departments increased significantly in 2005-2006, with the trend continuing into 2006-2007 and beyond.³

Period	Attendances at Emergency Departments
2002-2003	1,982,190
2003-2004	1,986,084
2004-2005	2,007,356
2005-2006	2,137,364
2006-2007	2,303,877
2007-2008	2,415,899

- 20.5 Statistics, based on 10-year age groupings, suggest that the most frequent users of Emergency Departments are patients in the 15-24 age bracket.⁴ A recent study indicates that the number of attendances by patients under 25 years is growing faster than that of older patients (defined as those over 65 years).⁵ This age group are using Emergency Departments as a primary care substitute, seeking the convenience of, and

- wanting to access, all services in one place. 34% of the under 25s were diagnosed for “injury or poisoning”, which included open wounds, sprains, fractures and contusions.
- 20.6 That study indicates that over the past 3 years 44% of all attendances at Emergency Departments were by ‘primary care patients’, defined as those patients in triage Categories 4 and 5 who do not arrive at Emergency Departments by ambulance and who are not admitted to any ward of the hospital⁶. This definition was therefore extremely broad and did not identify whether the patient was a ‘GP-type’ patient. By GP-type patient, I am referring to patients who could be more appropriately and cost effectively cared for in a GP surgery than in an Emergency Department.
- 20.7 The study identified that patients under 25 years of age made up 47% of all primary care patients in 2006/07. In that study, younger patients especially were found to prefer an Emergency Department to a GP because it provides all of the diagnostic and treatment services potentially needed, a so-called ‘one-stop shop’.⁷
- 20.8 There is no data available to show how many GP-type patients frequent New South Wales Emergency Departments. Nor is data available to show what proportion of patients attending Emergency Departments could more appropriately and cost effectively be treated by community mental health and drug alcohol services. It is clear, however, from the evidence I received during the course of the Inquiry, that patients within this latter group frequently attend Emergency Departments throughout the State, and are indeed a permanent feature in some Emergency Departments and that they have particular needs. This topic is of sufficient importance to warrant its own chapter, and I have dealt with this in Chapter 22.
- 20.9 Another recent study showed that the growth rate in Emergency Department attendances between 2000-2001 and 2005-2006 has been the highest in the relatively more urgent triage Categories 2 and 3, with the volume of Category 4 patients remaining relatively unchanged and Category 5 patients decreasing in number⁸.
- 20.10 Throughout the Inquiry, I was told that increasingly, older and frail patients with multiple problems that take many hours to assess, are using Emergency Departments. Indeed, the available data indicates that one group fostering the demand for Emergency Department services are patients over 65 years of age in triage Categories 1, 2 and 3 with health issues around chronic disease.⁹ 22% of patients over 65 fall within the primary diagnosis “factors influencing health status” with over half these attendances related to follow up exams, procedures and after care, suggesting that the Emergency Department is routinely used as a substitute for outpatient clinic services. The 75+ age group grew in number of Emergency Department attendances by 20.42% between 2000-2001 and 2005-2006, which was substantially in excess of growth in other age groups¹⁰.
- 20.11 The available statistics on the rise in demand on Emergency Department services were echoed strongly in the evidence I received during the course of the Inquiry, primarily from Emergency Department staff, namely that patient numbers have increased steadily over time, notwithstanding a perceived decrease in bed numbers and no change to funding or staffing numbers or increase in downstream treatment capacity.¹¹

Reception

Triage

20.12 When a patient enters the reception area of an Emergency Department, the first port of call is generally a counter bearing the sign “Triage Nurse”.

20.13 Triage comes from the French verb ‘*trier*’ meaning ‘to sort out’. The triage system is a way of placing patients into categories of care so that they are seen according to the urgency with which treatment is required.¹² As one doctor put it,¹³ triage in fact involves 2 steps. The first is:

“the classic process of checking ‘are you about to die’”

20.14 The second step is an assessment by a nurse on the basis of clinical urgency. In addition to allocating to patients a category under the Australasian Triage Scale, a triage nurse may initiate appropriate investigations or initial management according to organisational guidelines.¹⁴

20.15 Typically, when a person arrives at the Emergency Department, they will be unfamiliar with the facility and the procedure. It can be quite confusing, particularly if a person is under stress, feeling pain or discomfort, and is unwell. Clear communication is of the essence of the start of the interaction with hospital staff. The first indication which a person has of what to do, or where to go, is given by signs. A sign which uses the term ‘triage’ is meaningless to most people. It conveys nothing to a person who is not clinically trained. Patients and their families do not generally know what it means. Yet, this is the first point of call for them at the hospital. All references in Emergency Departments to “triage” should, in my view, be changed. Whether a term alone is used such as “patient priority”, or whether a different signage system is employed, perhaps using numerals to indicate where a person ought go first, as well as a description is something for a communication expert to establish.

20.16 I note that the Inquiry of the Joint Select Committee on the Royal North Shore Hospital recommended that the term “patient priority” be used instead of “triage”.¹⁵ Similarly, the report of Professors Hughes and Walters into the care of a patient with threatened miscarriage at Royal North Shore Hospital suggested that the term “Priority Desk” be used instead of “Triage Desk” and that, in the area where paperwork is filled out, the term “Reception” be used instead of “Admission Desk”.¹⁶ That report also noted the benefits of having uniform signage in all hospitals. I generally agree with the sense proposals. I would leave it to communication experts to choose the appropriate words.

Recommendation 92: *NSW Health devise ways of ensuring that adequate and clear information is provided to all patients who attend at the Emergency Department.*

20.17 I discuss triage further below.

Communication

20.18 One of the most common complaints by the public, reflected in media reports, is the amount of time which they have to wait to be seen by a treating doctor in the Emergency Department after triage. It seems to me that, with some simple measures, this experience can be made more efficient and safe.

- 20.19 Public expectations are usually that they will be seen immediately. However, unless a patient is suffering a cardiac arrest or has been critically injured, this is unlikely, regardless of whether the patient arrives at the Emergency Department by ambulance, transfer from another hospital or by his or her own means. I heard evidence from staff working in the Emergency Department that the community's expectations about the timeliness of public hospital care often do not match reality.¹⁷
- 20.20 Patients cannot see what goes on behind the doors of the Emergency Department and, usually, will have little idea of the pressures under which the doctors and nurses are operating. It is difficult for patients in the waiting room to be understanding of those pressures if they don't have such information. One of the personal stories that I heard early in the Inquiry made clear that this can be a real difficulty for patients.¹⁸ They do not know how many patients are currently being seen in the Emergency Department, how long they will have to wait before being seen, or why or how patients need to be prioritised.
- 20.21 Hospital staff expressed great reluctance to give an estimated waiting time to patients. I was told that the Emergency Department is not a good environment for giving patients an estimated waiting time, as they cannot absorb this type of information and it can disappoint expectations.¹⁹ At most of the hospitals that I visited, I was told, and observed for myself, that things can change quickly, with an unpredictable flow and number of people presenting at Emergency Departments and the numbers of highly urgent cases. This is largely because the hospital has no control over the number or timing of presentations.
- 20.22 Some staff referred to tools they have seen used to educate patients in the waiting room about the process, although I didn't see any in use. At one hospital I visited, however, the waiting room displayed a sign alerting waiting patients that there would be up to a 4 hour wait for non-emergency cases.²⁰ This may have been helpful in adjusting the expectations of some patients. At another hospital, I was told that a video had previously been on display in the waiting room, showing footage of staff working at the hospital and portraying what goes on behind the scenes, and that this was helpful.²¹
- 20.23 In my view, there needs to be better communication between hospitals and patients in the waiting room about what is going on behind the scenes, how long they can expect to wait and the like. Patients in the waiting room want to know when they will be seen, who they will be seen by, and what the next step in the process is.²² Providing at least some of this information in person to patients would improve their experience. This becomes more difficult after hours, or at other times when the workload is heavy. One way around this difficulty would be to provide the information electronically.
- 20.24 As an example, if you go to a bank, or many government departments and have to wait in a queue, there is often a TV screen with information about how many people are ahead of you in the queue, your estimated waiting time and the like. In my view, such a system should be installed in busy Emergency Department receptions conveying the following information:
- (a) An information video explaining what is going on behind the doors, why patients need to be prioritised, the roles of the various hospital staff that they are likely to encounter.
 - (b) screen containing information about how many patients are currently being seen in the Emergency Department, of what severity, waiting times for each triage category, automatically updated when new patients arrive. Whilst the privacy of patients precludes a detailed description of what is being treated behind the doors, some generic information should be supplied. It would be helpful if that

screen also conveyed the message that the anticipated waiting time can change if a more urgent patient presents and requires treatment ahead of those currently waiting. It is equally important to clearly state to those waiting, preferably in written form, that if their condition changes, they should notify the staff at the reception immediately.

20.25 Patients can't be expected to wait hours for treatment without complaint if they are not provided with sufficient information to engender patience and tolerance for others being treated ahead of them in the queue. Possibly the worst case of having to wait that I heard about during the Inquiry related to a profoundly disabled child who waited in the Emergency Department at Lismore Base Hospital with his mother for 9 hours before being told that there were no beds and they should go home. One week later, they again had occasion to visit the hospital. That time, the child and his mother had to wait 11 hours in the Emergency Department before being placed in a bed.²³ Waiting times of this duration are plainly unacceptable. To say nothing of the clinical urgency of the patient's condition, better communication surely could have alleviated that situation.

20.26 Another aspect of communication is signage. The reception to Emergency Departments is almost invariably called "Waiting Room" and is full of signage bearing medical terms such as "triage" which are meaningless to the public. I have touched on this issue earlier in this chapter.

Care

20.27 Most members of the public are under the belief that, once they have arrived at an Emergency Department and given their details to either the triage nurse or the administration clerk, they are 'in the care' of the Emergency Department. That is, they have arrived at a place of safety from a medical point of view. Hence, Ms Horska, whose experience I referred to in Chapter 1, had an expectation that she would be better cared for in the reception area than she was.

20.28 However, my observation of Emergency Department staff is that they regard a patient as having 'come into' the Emergency Department only after the patient has physically moved out of reception, through the doors or flaps and into the main treatment area of the Emergency Department. I recognise, however, that it is not the responsibility of the triage nurse to commence treatment.

20.29 It was explained to me that the most vulnerable patients in our hospitals are those in the Emergency Department reception waiting to be diagnosed.²⁴ The vulnerability of waiting patients is exacerbated, and in some senses caused, by the 'one size fits all' model of care presently in place in most hospitals around the State. That is, everyone is pooled together to 'wait for a doctor', and those of lower acuity must wait the longest and are continually shuffled to the back of the queue. Some new models have already been developed to alleviate the problems presented by growing demand. I discuss these below. In my view, further initiatives need to be taken in this direction.

20.30 The policy of the Australasian College for Emergency Medicine on triage says that the triage nurse should ensure continuous reassessment of patients who are waiting for treatment, and, if the clinical features²⁵ change, re-triage the patient accordingly. I agree all of the staff of the hospital working in, or passing through the waiting area should be alert for any deterioration in the patient's condition which warrants bringing them into the main treatment area of the Emergency Department more quickly than previously thought would be necessary.

- 20.31 Presently, hospitals tackle the risk presented to waiting patients in a variety of ways. In the Emergency Department at St George Hospital an extended practice nurse liaises with clinicians and the patients after a patient is triaged.²⁶ The Emergency Department at Westmead Hospital introduced a default rule whereby any patient waiting for more than 2 hours is seen regardless of his or her triage category.²⁷ This is subject to giving the very small number of Category 1 patients absolute priority. Approximately 16 to 18 Category 1 patients require treatment at Westmead's Emergency Department each week.²⁸ That the Emergency Department also has a process of re-triaging so that patients can be seen earlier if their condition deteriorates while they wait. The number of triage nurses has also been increased to 2, and there is a Clinical Initiatives Nurse and a doctor assisting at triage, when possible.²⁹
- 20.32 The Director of Emergency Medicine at Westmead's Emergency Department told the Inquiry that the triage system introduced there, which I have just described, is effective where bed occupancy in the Emergency Department is not at 100%.³⁰ Over the last 3 months, Westmead Emergency Department has received 155 presentations and 60-70 ambulance offloads each day and has therefore had to 'suspend' the system, due to having 100% bed occupancy.
- 20.33 Some hospitals tackle the risk to the deteriorating patient by having a Clinical Initiatives Nurse who reviews patients in the waiting room and, where appropriate, commences investigations and initial treatment according to clinical guidelines. This takes place in the waiting room or in a treatment room, depending on the lay-out and facilities of the Emergency Department in question. There is a limit to the scope of treatment that such a nurse can provide as they do not have the authority to depart from clinical protocols. The Clinical Initiatives Nurse then hands the patient over for on-going care to Emergency Department staff. A key component of the role is communication and education of the waiting public regarding health care and waiting times.³¹ A number of documents, provided to the Inquiry, developed at either area health service or facility level define the role³².
- 20.34 On one view, the advent of the role has created more work for the Emergency Department because many patients who previously did not wait are staying, as they no longer expect long waits for treatment.³³ Also, although the reduced waiting time may improve 'front door' key performance indicators (how quickly patients are seen), use of a Clinical Initiatives Nurse may make the 'back door' key performance indicators worse (such as time to discharge or admission). This is because patients may still wait the same amount of time to see a doctor, despite receiving some treatment from the Clinical Initiatives Nurse.
- 20.35 Although there may be perceived negatives to the implementation of the role, the Clinical Initiatives Nurse is to my mind an appropriate response by hospitals to the problem of adequate care for patients in the waiting room when the Emergency Department is crowded. Lengthy waiting times mean that some patients become aggressive, experience pain or discomfort for longer or do not wait to be seen by a doctor. I heard evidence about all 3 difficulties. Not only can the Clinical Initiatives Nurse commence medical care when the patient arrives, he or she can communicate waiting times and monitor the condition of patients while they wait. As one emergency physician said to me, there is merit in trying to take the emphasis in Emergency Departments away from just waiting to see a doctor.³⁴ I generally received positive feedback from Emergency Department staff about the role³⁵ and was told that starting treatment and tests early reduces waiting time.³⁶
- 20.36 In their report into the events surrounding Ms Horska's hospital attendance on 25 September 2007³⁷, Professors Hughes and Walters noted that the Clinical Initiatives

Nurse is regularly called away from the reception area into Emergency Department treatment areas to provide 'surge' capacity during busy times and that this is not acceptable. They said:

"With the advent of the Clinical Initiative Nurses, waiting rooms are now, in fact, pre-treatment areas where initial assessment and even some diagnostic steps can begin. However, the Clinical Initiative Nurses are still not considered essential in the waiting room. They are regularly called into the ED itself to add 'surge capacity' during busy times. It is during these very times that waiting delays become particularly long and when the condition of patients in the waiting room can change. It is more, rather than less important, therefore, for a Clinical Initiative Nurse to be in the waiting room at these busy times. Clinical observation of patients in the waiting room is critically important."

- 20.37 I agree entirely with these comments. Busy periods are precisely the times when close observation of patients in the waiting area, and initiation of treatment where appropriate, is required. In my view, the role of the Clinical Initiatives Nurse should be embedded in Emergency Departments.

Recommendation 93: *Within 12 months, the role of the Clinical Initiatives Nurse should be introduced, if not already in existence, in the waiting room of Emergency Departments in all metropolitan areas and in major regional cities.*

- 20.38 Another group of patients for whom medical care could start on arrival is those arriving by ambulance. If hospitals commence medical care on arrival of a patient at the Emergency Department, this has a flow-on effect for ambulance paramedics, who will not have to wait and care for patients as that will be a matter for Emergency Department staff. It also addresses the issue for people who come seeking help and who do not wait, even though they may need help.

Triage

Triage categories

- 20.39 Patients arriving at the Emergency Department are placed into one of 5 triage categories under the Australasian Triage Scale. Triage time is the time spent in the Emergency Department from triage (assessment of urgency) to commencement of active treatment. Benchmark times for each of the 5 triage categories are based on recommendations from the Australasian College for Emergency Medicine:³⁸

Table 20.1 Australasian Triage Scale Categories

Category	Description of condition	Examples of condition	Percentage of patients ³⁹
1	life-threatening illness or injury, to be treated within 2 minutes	critical injury or trauma, cardiac arrest	1% of patients
2	imminently life-threatening illness or injury, to be treated within 10 minutes	chest pains, difficulty breathing, severe fractures	8% of patients

Category	Description of condition	Examples of condition	Percentage of patients ³⁹
3	potentially life-threatening illness or injury, to be treated within 30 minutes	major fractures, heavy bleeding, severe illness	32% of patients
4	potentially serious condition, to be treated within one hour	sprained ankle, earache, migraine headache	47% of patients
5	less urgent condition, to be treated within 2 hours	minor cuts, rashes	12% of patients

20.40 Emergency Departments record the percentage of triage patients who are attended to within the timeframe required for each triage category. In 2006-07, the results in New South Wales were :⁴⁰

- (a) 76% of people were seen within the recommended time;
- (b) the median waiting time for all patients was 20 minutes.

20.41 NSW Health uses a performance threshold, based on the percentage of patients for each triage category who should commence treatment within the relevant waiting time recommended by the Australasian College for Emergency Medicine. The triage targets set by the College and the percentage of patients reportedly seen within the target timeframe in 2006-2007 and 2005-2006 were as follows:

Category	Target ⁴¹	Achieved in 2006-2007 ⁴²	Achieved in 2005-2006 ⁴³
1	100%	100%	100%
2	80%	87%	81%
3	75%	71%	61%
4	70%	74%	66%
5	70%	89%	87%

20.42 Assuming the reliability of these figures, achieving benchmarks appears most difficult for Category 3 and Category 4 across Area Health Services.⁴⁴ Together patients in these categories make up approximately 75% of all patients presenting to Emergency Departments in New South Wales.⁴⁵ That being the case, their triage times appear to be the best indicators of the efficiency of Emergency Departments. The highest acuity patients (Categories 1 and 2) make up 9% of patients.

20.43 Several of the submissions to the Inquiry highlighted that Category 3 and 4 patients are at risk because they can have underlying illnesses that are not, and generally cannot be, detected at triage and yet these patients are required to wait the longest.⁴⁶ This risk is particularly acute for older patients within those triage categories, who, I was told, are less likely than young people to complain about waiting times. In NSW in 2006-2007, 21% of Category 4 and 45% of Category 3 patients were admitted to hospital.⁴⁷ Many of the older patients are appropriate for admission to Medical Assessment Units which would obviate the need for them to attend the Emergency Department. I discuss this further below.

Who does triage?

- 20.44 There are a range of practices in operation in Emergency Departments across NSW. Triage is primarily a nursing role. In many of the smaller hospitals, the triage nurse is also the nurse in charge of the Emergency Department.
- 20.45 I received evidence that triage is one of the most difficult jobs in the Emergency Department but is often left to a junior nurse.⁴⁸ This is because traditionally the majority of staff work at the 'back end' of the Emergency Department, with only skeleton staff handling the triage process at the 'front end'. I was told that junior staff tend to 'over triage' patients (allocate a higher than expected triage category), for fear of making a mistake,⁴⁹ and that triage should be done by a senior experienced nurse.⁵⁰ One suggestion was that the triage nurse should have a minimum of 10 years nursing experience.
- 20.46 I agree that the triage nurse needs to be an experienced, senior registered nurse with emergency or critical care experience. As triage plays an integral part in managing the efficient and appropriate flow of patients through the Emergency Department, the role is one which, ideally, ought to be entrusted to a senior registered nurse particularly one who has experience in an emergency and/or critical care environment. Given, in particular, that there is an association between length of stay in the Emergency Department and quality of care⁵¹, it seems to me to be essential for patient care and efficient patient flow through the hospital to ensure as far as practicable immediate recognition of the patient's needs by a senior clinician at the point of presentation.
- 20.47 I appreciate that this may not be possible in all hospitals of all different sizes and locations at all times but, nevertheless, I do believe that for the majority of hospitals an experienced, senior nurse should be available to carry out the triage role. For all tertiary hospitals and hospitals where the volume and the spread of conditions are similar to those at tertiary hospitals, I propose that the person undertaking triage have, as a minimum, the qualifications I have described. Those hospitals are capable of being readily identified by those with experience in emergency medicine.
- 20.48 Several submissions sought to highlight the inadequacies of the conventional model of assessment in the Emergency Department, which involves serial assessment first by a triage nurse, then by a junior doctor, followed by a registrar and/or senior emergency physician. Treatment can be delayed for hours. I was told⁵² that it is imperative for a senior doctor to be involved at triage, or as early as possible in the assessment process, particularly where all beds in the Emergency Department are occupied and the waiting room is full. Minor patients can be seen and discharged quickly and the care of sicker patients is initiated faster and is more streamlined.⁵³ Emergency specialist involvement at this point also allows some patients to be directly transferred to an inpatient unit. Overall, I was told, it leads to better quality and more efficient treatment and reduces access block. This submission was made most strongly by the Australasian College for Emergency Medicine, but was also made by many individual doctors.
- 20.49 I have no doubt that, if there were enough senior doctors available to do this, this would be an ideal scenario. The problem is, however, that there are not enough senior emergency doctors at the present time. As I discuss later in this chapter, in my view, clinical staff should undertake tasks for which they are suitably qualified so as to allow senior clinicians, in particular, to be freed up to attend to those components of patient care which require the skills for which they have particular expertise. I have no doubt that a senior emergency nurse would be able to make a very valuable contribution to

individual patients in many of the less serious cases which come to the Emergency Department. I discuss this further below.

Recommendation 94: *Triage should be carried out by a senior experienced registered nurse with emergency or critical care experience whenever possible and, without exception, in all tertiary hospitals, and in all like hospitals.*

Do we need these triage categories?

- 20.50 With the exception of Categories 1 and 2 which are life threatening patients requiring very prompt resuscitation or care, there is no clinical or scientific basis for the 5 triage categories used in NSW. With category 2, although such patients clearly need to be seen as soon as possible, there is no scientific basis to the 10 minute time period upon which that category is based. No-one could identify any evidence or scientific study which could explain how the 10 minute figure was reached. No-one could explain to me why the time period was not either 5 minutes or 15 minutes. The figure is clearly an arbitrary one.
- 20.51 Several of the emergency physicians who gave evidence to the Inquiry were of the view that the use of Categories 3, 4 and 5 is driven by community expectations about timeliness of care in the Emergency Department and not based on clinical or scientific evidence.⁵⁴
- 20.52 Modern triage started in Australia. The first 5-point triage scale was developed by Dr Gerry FitzGerald from Ipswich, Queensland in the late 1980s and was known as the 'Ipswich Triage Scale'. I was told that the scale was originally developed as a tool to determine the cost of emergency services.⁵⁵ It seems that the underlying principles were not only to optimise the scarce resources of emergency medicine but also to ensure efficient and effective care on the basis of medical urgency.⁵⁶
- 20.53 In the early 1990s, the Australasian College for Emergency Medicine saw a need to standardise a triage scale throughout Australia. In 1993, it slightly modified the Ipswich Triage Scale into the National Triage Scale, which in 2000 became the Australasian Triage Scale.⁵⁷
- 20.54 In the mid-1990s, both Canada and the United Kingdom introduced 5-point triage scales based on the National Triage Scale, known as the *Canadian Triage and Acuity Scale* and the *Manchester Triage Scale*, respectively.⁵⁸ Other countries have implemented a 5-tier triage scale, including New Zealand, Hong Kong and Belgium. Medical literature says that in the USA the implementation of a 5-point triage scale, the *Emergency Severity Index*, is underway and gaining momentum.⁵⁹
- 20.55 The Canadian scale is similar to the Australasian Triage Scale in terms of timeframes objectives, with the exception of category 2, which is within 15 minutes rather than 10 minutes. Under the Manchester Triage Scale, nurses first identify the patient's chief complaint, and then choose one of 52 flow charts to conduct a structured interview and assign a triage level from 1 (immediate care needed) to 5 (care within 4 hours). I was told that the decision-making process under that system is less subjective than under the Australasian Triage Scale.⁶⁰
- 20.56 As a performance indicator, triage categories are not directed to the **quality** of care that a patient receives, simply the time within which they are first seen. That is, they measure processing and speed of processing not outputs such as quality,

appropriateness of treatment or safety. Nor do they measure the complexity or severity of the patient's condition. As Dr Simon Battersby explained to me at Gosford.⁶¹

"To give you an example, a lady with a chest pain, who would be a triage category 2 normally, would be expected to be seen in 10 minutes. I could see her in 12 minutes, keep her happy, get the diagnosis right, organise her management and disposition, she would be a very happy customer, but I failed her because I saw her in 12 minutes. I could see her in 5 minutes, be rude to her, get her diagnosis wrong, organise the wrong disposition, have a procedural stuff up but, according to the Department of Health, I've succeeded by her".

- 20.57 I agree with the evidence of the emergency physician who said that key performance indicators for triage categories measure the easiest things, not the real things that matter. What matters is the quality of the care provided and the medical outcome. I discuss this further below.

Misapplication of the Australasian Triage Scale

- 20.58 The purposes for which the Australasian Triage Scale has come to be used since it was embedded in the system have led to its manipulation. One emergency physician told me that the scale had been "hijacked" and had become a "rod" for the Emergency Department. This is driven in part by government and community expectations.
- 20.59 The use of the Australasian Triage Scale is open to misapplication in at least these ways:
- (a) Differentially categorising patients of a similar clinical condition depending on local Emergency Department rules and practices.
 - (b) Practices regarding the commencement of clinical treatment, that is, when the clock stops running, differ.
- 20.60 There have been efforts to promote the consistent application of the Australasian Triage Scale. Most of these efforts have been at a national level. The Australasian College for Emergency Medicine has set down Guidelines for the uniform application of the Australasian Triage Scale.⁶² The Commonwealth Department of Health and Ageing recently released a resource book, in collaboration with the College of Emergency Nursing Australasia, the Council of Remote Area Nurses Australia, the Australian College of Emergency Nursing and the Australasian College for Emergency Medicine, to promote "the consistent application of the Australasian Triage Scale".⁶³ This resource book was sent to all hospitals in Australia.⁶⁴ Training programs are also carried out.⁶⁵ Research shows greater divergence among triage nurses on the application of the scale for patients with mental health problems, and, to a lesser extent, for children and pregnant women, than for other patients.⁶⁶
- 20.61 A key performance indicator for safe access to emergency care, which NSW Health uses to monitor the performance of Emergency Departments, is waiting time by triage category. The criteria applied by NSW Health for measuring the waiting time is the time when active treatment is commenced.⁶⁷ The system used in most Emergency Departments to record the waiting time is Emergency Department Information System (EDIS). It is that information which is used to calculate the triage benchmark figures.
- 20.62 EDIS has a number of screens for data input. There are fields for 'doctor seen time' and 'nurse seen time'. According to memoranda to area health services from NSW Health, the time that treatment has commenced includes instances where nursing staff commence active treatment according to an approved protocol.⁶⁸ Active treatment by a

nurse is not considered to have commenced where physiological observations are undertaken, the patient is prepared for examination, an IV is placed where such placement is not part of a clinical pathway and the other instances outlined in a memorandum to the Chief Executives of all area health services in February 2006.⁶⁹

- 20.63 I heard evidence suggesting that there is little consistency in the way information is collected regarding the initiation of active treatment due to confusion about the parameters of 'nurse seen time'. In some places, the clock stops running when an emergency physician sees, assesses and treats the patient. In other places, the clock stops when a nurse takes an initial set of observations when the patient is in a bed. In a busy Emergency Departments, the patient may still wait several hours after that point to see an emergency physician. I was told that it is not a case of staff manipulating the data, but simply an interpretation that is available to staff of when clinical care commenced.⁷⁰ However, this variance in interpretation does seem to be contrary to the memoranda circulated by NSW Health to which I have just referred.
- 20.64 Using the time when active treatment is commenced as the starting point for waiting times looks at face value to be the correct starting point. However, it will prove to be so only where:
- (a) active treatment of the condition warranting the triage category has begun, that is, not general observations or investigations;
 - (b) there is agreement among clinicians as to what constitutes the start of active treatment; and
 - (c) there is effective communication to emergency department staff about the parameters of active commencement of treatment. The accurate calculation of waiting times is reliant upon nursing and medical staff entering consistent and reliable data.
- 20.65 A uniform approach can only be used where clinicians have agreed on the appropriate models of care.
- 20.66 In addition to the lack of clarity on when active treatment commences, unfortunately, there have been instances of hospital staff deliberately altering data to meet performance benchmarks for waiting time.⁷¹ I discuss these instances in Chapter 17.

Simplification

- 20.67 Underlying most of the evidence received by the Inquiry from patients and their carers, and the submission of the Australasian College for Emergency Medicine, is the notion that the true function of the Emergency Department is to treat all and any patients who come through the door. This supports the need for triage Categories 4 and 5. On the other hand, the lower triage categories themselves may encourage non-urgent presentations. The perpetuation of these categories is understandable, given the public perception that the Emergency Department will provide care to any person who chooses to present. Indeed, the Emergency Department is generally unable to refuse treatment. In other words, there is a need for triage categories which cater for the service needs created by community expectations.
- 20.68 This raises a question about the proper role of the Emergency Department. One view is that any patient who attends the Emergency Department is an emergency department patient who is entitled to, and deserves to, be seen. This view is reflected in the definition of emergency care adopted by the Australasian College for Emergency Medicine to which I referred in paragraph 20.2 above. Another view is that the principal

function of an Emergency Department is to provide emergency care where clinically needed.

- 20.69 It is a readily observable phenomenon that not all patients who attend Emergency Departments require emergency care in the true sense and it cannot be seriously doubted that they should be managed in alternate settings. To illustrate this point, I was given the example of a 'GP type patient' who decides at midnight to go to the emergency department with a low backache that they have had for the last 2 years.⁷² Whilst no doubt an example chosen to illustrate the point, it does make clear that the very broad definition of emergency care adopted by the Australasian College of Emergency Medicine cannot, in its entirety, be an effective workable definition of emergency care in public hospitals in NSW. The hypothetical patient referred to in the example clearly although in pain and in need of pain relief (and perhaps a diagnostic investigations) is not in need of the skills and experience of a fully trained emergency specialist.
- 20.70 Another group of patients who might be better treated in an alternative setting is the mentally ill. The question is what options exist for the care of some of these patients who can receive more appropriate care elsewhere and who may simply be adding to the congestion in an Emergency Department. The complexity of the issue in part relates to the fact that a patient's condition and treatment needs sometimes cannot be finally ascertained until a complete assessment by an experienced clinician is carried out.
- 20.71 I have noted medical literature on the issue of which patients are rightfully considered appropriate Emergency Department patients. It highlights, for example, that what is an appropriate presentation depends on the condition being managed, the patient's understanding of their condition and their needs, and the locally available resources for that condition.⁷³
- 20.72 I propose as a first step towards the rationalisation of Emergency Department services, and in an attempt to manage proper demand for the services in the face of a significant workforce shortage that the provision of emergency care be based on and determined solely by clinical condition, rather than patient demand and self assessment. There is, in my view, a need to stream patients away from Emergency Departments where they are not true emergency patients or where care can be provided elsewhere more efficiently and safely. In other words, I do not think that the present system which requires nearly all unplanned admissions to a public hospital to go through Emergency Departments ought be retained. Over time, this will serve a public education purpose about the true function of Emergency Departments which in my view is to provide emergency care.
- 20.73 On that basis, I wish to make recommendations about the organisational framework for the provision of emergency and unplanned care. My recommendations are set out below.
- 20.74 I set out below the models of care which in my view ought alleviate demand on Emergency Departments.
- 20.75 A number of emergency physicians were in favour of simplifying the triage categories to, for example, a 3-scale system of "see immediately", "see as soon as you can" and "can wait"⁷⁴ or a 2-scale system of "see now" and "can wait".⁷⁵ In practice, this is how patients are currently categorised in some of the less busy hospitals. I see merit in these proposals and wish to make recommendations in this regard elsewhere in this chapter.

- 20.76 It is also widely contended that there are several benefits to having a 5-tiered triage system, as opposed to a 3-tiered triage system, including:⁷⁶
- there is evidence that a 5-tiered triage system is more reliable and valid than a 3-level system;
 - 5-tiered triage systems enhance consistency in decision-making (or ‘inter-rater reliability’ as it is technically termed);
 - there is no general agreement in a 3-tiered system about what constitutes urgency, non-urgency or degrees of urgency;
 - triage categories 4 and 5 are not as straightforward as they may appear and there is danger in further simplifying them;
 - a 5-tiered triage system correlates with measures of resource consumption, disease severity, length of stay and mortality;
 - a 5-tiered triage system has secondary uses, including for research, costing, quality assurance and resource planning and permits interdepartmental comparison of performance parameters such as casemix, operational efficiency, outcomes and cost;
 - there is an interest in standardising triage nationally; and
 - nurses are less likely to under-triage using a 5-tiered triage system (that is, apply a category lower than expected) than when using 3-tiered scale.
- 20.77 There is little literature in the New South Wales, or Australian, context about the relative merits of a 3-tiered and 5-tiered triage scale. This is not surprising given that the modern 5-tiered scale was developed in Australia. I recognise that the Australasian Triage Scale has become recognised nationwide, indeed internationally, and that there is value in having a decision-making structure which has become professionally accepted and validated.
- 20.78 While the Australasian Triage Scale is applied Australia-wide, some hospitals have adapted it to suit local conditions. This has been done in an effort to address the long waiting times of patients in the lower triage categories. I mentioned one such example relating to Westmead Hospital above.
- 20.79 I was also told about the system adopted by Flinders Medical Centre in South Australia.⁷⁷ Under that system, staff allocate a triage category to all patients. In the usual way, the small number of patients with life threatening conditions take priority. All other patients, however are divided into those who are likely to go home directly from the Emergency Department and those likely to be admitted, with each group being seen by a different team of doctors and nurses. Patients in each stream are seen in order of arrival, no matter what their allocated triage category.⁷⁸ I was told that, at the same time, nurses were also empowered and trained to undertake suturing and other simple tasks under a ‘see and treat’ model of care.⁷⁹ This allows early treatment and discharge by a nurse of patients with limited clinical care needs.
- 20.80 According to a study reported in the medical literature and other information provided to me, the percentage of patients attending Flinders Medical Centre Emergency Department but not waiting to be seen after initial triaging fell sharply.⁸⁰ The time to initiation of meaningful treatment fell by a mean of 7 minutes and the time spent in the Emergency Department for those patients who were subsequently admitted to hospital fell significantly from 8.5 to 7 hours after streaming. The overall effect of the changes was reportedly that on average there were 3 to 4 patients fewer per hour in the department after streaming under this system commenced.

- 20.81 In my view, the safety of such a system relies on having experienced staff carrying out both triage and monitoring of the waiting room. Because patients are seen in order of arrival, there is a heightened need to ensure that patients who deteriorate as they wait are seen earlier than expected. I note that a 'triage and treat' system is in place under the Clinical Services Redesign Program which allows protocol-based early treatment and discharge, by senior nurses, of patients in Category 5 who have limited clinical care requirements.⁸¹

Overcrowding

- 20.82 The recent increase in patients going to Emergency Departments across NSW has put them under significant pressure, leading to overcrowding, long delays for treatment and less than ideal patient care.

- 20.83 The following definition of overcrowding is consistent with the problem I was often told about:

"the situation where Emergency Department function is impeded primarily because the number of patients waiting to be seen, undergoing assessment and treatment, or waiting for departure exceeds either the physical or staffing capacity of the Emergency Department."⁸²

- 20.84 Overcrowding is exacerbated by the following factors:
- (a) many Emergency Departments are housed in buildings which are too small, poorly designed, or lack the facilities needed to run an efficient department;
 - (b) Emergency Departments suffer from the same problems as other hospital wards in obtaining necessary equipment – see Chapter 30;
 - (c) Emergency Departments also suffer from the same problems as other hospital wards in having after hours access to X-ray and pathology – see Chapter 24;
 - (d) heavy reliance on junior staff, who are generally slower in assessing and treating patients, slows down the assessment of patients;
 - (e) heavy reliance on locums, who lack familiarity with the local facilities and processes, can also contribute to overcrowding – see Chapter 7;
 - (f) there is often a mismatch of staff rosters to patient attendances; and
 - (g) there is often an inefficient flow of patients through the entire hospital, due to the ad hoc and inefficient nature of discharge practices and discharge planning in many hospitals.
- 20.85 One group of patients who are over-represented in Emergency Departments are older patients, and I have discussed in Chapter 3 how to better treat some elderly patients without subjecting them to an Emergency Department.
- 20.86 Finally, an over-crowded Emergency Department is a confusing spectacle for patients. In my many visits to Emergency Departments across the State, it was almost always difficult to identify the roles of the various staff in the treatment area. To reduce patient bewilderment for patients, I have discussed in Chapter 15 the implementation of visible identification and uniforms for Emergency Department staff.
- 20.87 The evidence from medical literature supports the conclusion that the most disturbing result of overcrowding in Emergency Departments is that it is associated with increased

patient death.⁸³ Where overcrowding compromises the provision of safe care, I regard it as dangerous and unacceptable.

20.88 At one hospital I heard that patients sometimes have to stand outside in the ambulance bay while they wait for treatment, due to overcrowding. In some hospitals, 'corridor' patients are an established feature of the Emergency Department. At Wollongong Hospital, as an example, it was drawn to my attention that every day 2 or 3, and sometimes 4 or 5, patients are held in the corridor and treated there.⁸⁴ Wollongong Hospital is not the only hospital to suffer from this problem. Emergency Department staff at Tweed Hospital, Sydney Children's Hospital and Port Macquarie Hospital⁸⁵ are also compelled to treat patients in corridors on a regular basis due to overcrowding. No doubt this is a problem at other hospitals as well.

20.89 The practice of accommodating patients in corridors is far from ideal, as was explained to me by Dr David Brock from Tweed Heads.⁸⁶

- (a) Corridors are not suitable for examinations or confidential consultations,
- (b) In corridors, patients are distant from necessary equipment,
- (c) Obstructing corridors impedes rapid response to other incidents,
- (d) Poorer infection control,
- (e) Corridors are an overstimulating environment for mentally ill patients, and
- (f) Treating patients in corridors increases the likelihood of staff burnout and risk of injury to staff.

20.90 Some doctors also consider overcrowding in Emergency Departments a security risk, particularly where there is no closed circuit television.⁸⁷ Other detrimental effects I was told about are that ambulance offload is delayed or bypassed altogether (by reason of ambulance re-direction notices), nurses spend more of their time away from core emergency activity, privacy is compromised and noise levels go up, leading to unsatisfactory communication.⁸⁸ Overcrowding within Emergency Departments can be so severe that doctors lose the ability to carry out some clinical tasks properly.⁸⁹

20.91 Among the suggestions made by Dr Brock⁹⁰ was to move stable patients awaiting admission to inpatient corridors. The Australasian College for Emergency Medicine and others⁹¹ also put forward a "Full Capacity Protocol" that entails sending patients for whom the emergency phase of care has finished to inpatient hallway beds. I was given a number of studies supporting this suggestion.⁹² One study concluded that when hospitals are at full capacity, patients would rather "board" in inpatient hallways than in Emergency Department corridors. The strategy is also said to improve staff morale and reduce the overall length of stay in hospital.

20.92 I have considered this proposal in detail. I agree that overcrowding is a problem which relates to the whole of the hospital and is not solely an Emergency Department problem. Solutions therefore need to be devised on a hospital and system-wide basis. It is neither fair nor efficient for managers and clinicians working elsewhere in the hospital to leave the problem of overcrowding and access block for emergency specialists to try to solve, given that the pressures on the Emergency Department stem in large part from what is occurring in the rest of the hospital and community facilities. From what I have observed, patient flow in the rest of the system is the single most significant factor in determining patient flow through, and particularly out of, the Emergency Department.

20.93 Although it is a whole of system problem, I consider that the placement of patients in inpatient corridors involves too great a degree of risk to patient care. It merely transfers

the problem elsewhere, but does not solve the problem. While overcrowding and access block are problems for the entire hospital, I do not think that the answer is to allow the risk to be passed along the line.

- 20.94 In addition to the proposals for solutions to overcrowding that I discuss elsewhere in this report, in my view, hospitals need escalation protocols which enable staff and resources to be mobilised in times of increased patient needs.

Recent solutions for overloaded Emergency Departments

- 20.95 In 2005, NSW Health embarked on a program to improve the patient journey. The Clinical Services Redesign Program has multiple facets. One set of initiatives relates to Emergency Departments.

- 20.96 NSW Health made submissions to me about the improvement in access to Emergency Departments as a result of the Clinical Services Redesign Program, despite a significant growth in Emergency Department attendances in the last 3 years. An integral part of the strategy was increased performance management and performance targets for Emergency Department activity as well as increased bed capacity. Models of care that emerge from the projects carried out in the program are placed on a web-based database.

- 20.97 The perception I received from clinical staff was quite different. Many Emergency Department clinicians say that most of the solutions identified and implemented under the Clinical Services Redesign Program have involved the re-allocation of existing resources, rather than an increase in resources.⁹³ It is said that the measures implemented, while helpful, are subject to the “law of diminishing returns”. I was also told that any increase in resources has been insufficient to deal with the magnitude of the increase in demand on emergency services. Other concerns relate to the perceived⁹⁴:

- “forcible imposition” of models of care against senior medical advice;
- lack of evidence of the benefits of the models of care which are introduced; and
- the unreasonable insistence on performance targets in the form of key performance indicators that has been a feature of the program.

- 20.98 Emergency Departments across the state have implemented a variety of measures to overcome problems being experienced. Some new processes have been the result of the Clinical Services Redesign Program, while others have not. Some involve patients effectively ‘bypassing’ the Emergency Department. Not all Emergency Departments have one or other of the models of care described below.

Emergency Medicine Unit

- 20.99 Admission to Emergency Medicine Units is via the Emergency Department. Designated Emergency Department medical staff have responsibility for the Emergency Medicine Unit which is generally attached to the Emergency Department but physically separate.

- 20.100 Patients are selected in an Emergency Department as suitable for admission to an Emergency Medicine Unit where it is anticipated that the duration of their stay for treatment or observation will be less than 24 or 48 hours (depending on the particular unit) and their condition will not require substantial input from an inpatient medical team.⁹⁵

- 20.101 The aims of Emergency Medicine Units include⁹⁶:

- improving the operation of the Emergency Department by reducing overcrowding;
- reducing waiting times in the Emergency Department;
- meeting access block benchmarks;
- improving hospital bed utilisation.

20.102 I heard that there is sometimes pressure from hospital administration to allow admitted inpatients to occupy the beds in Emergency Medicine Units while they are awaiting an inpatient bed in an effort to improve the hospital's access block figures.⁹⁷ Allowing inpatients who are not expected to have a total length of stay in hospital of 24 to 48 hours to occupy Emergency Medicine Unit beds is contrary to the admission criteria and intent of these units.⁹⁸

Short Stay Unit

20.103 Short Stay Units are described in a number of ways, including as Emergency Medicine Units, Surgical Acute Review & Assessment, Short Stay Observation Units and Older Persons Evaluation Review & Assessment Units.⁹⁹ They have been developed to provide a short period of assessment (generally less than 24 hours), course of therapy or observations.

20.104 Resources are concentrated at the 'front end' of Short Stay Units to allow early transfer out of the Emergency Department. Their effective functioning depends on dedicated medical and nursing staffing. I was only given positive feedback about Short Stay Units.¹⁰⁰

The Third Door

20.105 More recently, NSW Health has established protocols so that patients can enter the hospital without first passing through the Emergency Department.

20.106 This can involve transferring elderly patients from nursing homes directly to an inpatient, or outpatient, unit rather than requiring the patient to first go through an Emergency Department.¹⁰¹ It involves such initiatives as Medical Assessment Units, Community Acute Post Acute Care (a hospital in the home type program) and Older Persons Evaluation Review & Assessment which identify older persons at triage (that is, in the Emergency Department but before coming into the Emergency Department treatment area) or earlier for transfer to a specialised ward.¹⁰²

20.107 I was told that patients with chronic conditions, cancer and renal patients are particularly suited to this type of model of care. The advantages are that:¹⁰³

- the patients are often known to the unit or team into whose care they are directly transferred; and
- the clinicians in the unit or team are skilled in looking after the condition that the patient has.

20.108 I was told that direct transfer to a specialised outpatient unit for these groups of patient is ideal and that these units can be set up to provide emergency care as well so that the advantages identified are maintained.¹⁰⁴

20.109 Patients who are suitable for admission to hospital through the "Third Door" by-pass the Emergency Department because their condition requires specialist care. The "Third Door" initiative is a recognition that the model of care requiring Emergency Departments to provide holistic care across every subspecialty is not appropriate, given both the increased demand on the Emergency Department and the increased number of patients

with subspecialty health problems. The “Third Door” is a partial solution to the problem because sub-specialty patients are triaged earlier to the appropriate unit and do not consume the limited resources of the Emergency Department. Transferring patients directly to specialist units is, of course, not an entirely new concept – where systems are in place, obstetric and stroke patients bypass the Emergency Department and have been doing so for some time.

- 20.110 It seems to me to be essential to foster and increase “Third Door” initiatives. This may involve the creation of Medical Assessment Units adjacent to inpatient units specialising in patient groups identified as appropriate for admission to Medical Assessment Units. Strategies already exist in some sections of the public health system in New South Wales to better coordinate the care of patients who do not need to go through Emergency Departments or who, in appropriate cases, can be cared for outside the hospital environment. Some are discussed in Chapter 3. In my view, it is essential to encourage and develop these strategies to improve the coordination of patient care and to alleviate the pressures currently experienced by Emergency Departments.

Medical Assessment Unit

- 20.111 A Medical Assessment Unit is an alternate diagnostic and treatment centre in the hospital designed to ease the burden of the Emergency Department. It is suitable for non-critical medical patients who are expected to stay in hospital for less than 48 hours.¹⁰⁵ This includes complex and elderly patients. Patients suitable for admission to a Medical Assessment Unit by-pass the Emergency Department, as discussed above under ‘Third Door’. In most cases, the triage nurse in the Emergency Department identifies the patient as potentially appropriate for admission. In some cases, GPs and geriatricians can refer patients to Medical Assessment Units.
- 20.112 There are 17 Medical Assessment Units in New South Wales and 5 more planned for the 2008/2009 year.¹⁰⁶
- 20.113 Some emergency physicians submitted to the Inquiry that a Medical Assessment Unit requires new inpatient beds and appropriate staffing to be effective, and this has been lacking.¹⁰⁷ Another concern about how Medical Assessment Units have operated is that patients who would previously have been seen in an Emergency Department and discharged home are now being admitted to the hospital after a short stay in the Medical Assessment Unit, which has worsened access block rather than improved it.¹⁰⁸
- 20.114 On the other hand, witnesses gave evidence that this dedicated treatment stream assists in moving patients through the hospital and discharging them quickly into appropriate care in the community¹⁰⁹. I discussed above under ‘Third Door’ some of the other benefits of the Medical Assessment Unit which I was told about. In my view, Medical Assessment Units are an important part of the solution to the increasing pressures being placed on Emergency Departments. It seems that patients with chronic and complex conditions are those most likely to require admission to Medical Assessment Units.
- 20.115 To be effective, Medical Assessment Units need dedicated medical staff, including senior physician cover, nursing, allied health and support staff. They also need effective communication and referral systems, not only with Emergency Department triage, but also with community services, primary care services, GPs and inpatient services. These supporting systems need to be in place to ensure effective and continuous care and efficient patient flow, given the patient groups identified as appropriate for admission to Medical Assessment Units. This is because in most cases,

Medical Assessment Units are appropriate for patients who have had a prior assessment by a doctor, be it a GP or at another hospital¹¹⁰.

Recommendation 95: *Within 18 months, each hospital within a peer group down to and including B2 – Major Non-Metropolitan Hospital and which operates an Emergency Department, ought also to establish a Medical Assessment Unit where enrolled chronic and complex patients will be assessed prior to admission.*

Fast Track Area

- 20.116 Fast track streams sends patients with conditions of lower urgency or complexity into a separate zone of an Emergency Department where they are attended to by a separate group of staff which may not include a specialist emergency physician. NSW Health's Clinical Service Redesign Program emergency models of care identifies that staff should be senior clinicians who are competent to make fast and safe decisions about treatment, investigations and discharge. Fast track patients are generally triage category 4 and 5 patients. They may have conditions requiring redressing of wounds or plaster checks or involving sprained ankles and small cuts.¹¹¹
- 20.117 This model of care is for patients who are likely to be discharged within 2 hours.¹¹²
- 20.118 The Emergency Department at Wyong Hospital has created an enterprising fast track area which they call the "house doctor" area.¹¹³ That area is staffed by 2 Career Medical Officers for 2 shifts a day and one Career Medical Officer for the overnight shift. In addition, a number of nurses, who are quite senior, work there. The purpose of the house doctor area is to take the category 4 and 5 patients who are unlikely to be admitted to the hospital. I was told that the proportion of patients that are admitted is in the order of 10%.
- 20.119 Port Macquarie Hospital also has a fast track area, called the Express Community Care Centre, which is open between 9:00am and 5.30pm.¹¹⁴ It is staffed by a Career Medical Officer and a nurse practitioner. Emergency Department triage nurses are trained to perform certain tasks, such as writing x-rays requests, so that patients can be streamed into the Centre without having to return to the Emergency Department. Only a small number of patients are admitted to the hospital from the Centre and many of them are streamed from there into community programs, such as hospital in the home and CAPAC.¹¹⁵
- 20.120 I was told that the fast track initiative at Bankstown Hospital's Emergency Department markedly decreased treatment times for less complex Emergency Department patients.¹¹⁶ The Inquiry was not provided with any data to confirm this statement. However, studies reported in medical literature have indicated that fast track zones improve care for non-admitted patients, primarily because they reduce waiting time and the rate of patients who do not wait.¹¹⁷
- 20.121 In principle, fast track zones do not have any bearing on access block as access block is driven by patients who need admission. It may well be the case, however, that by improving the flow of patients through Emergency Departments, the protracted wait of other patients in the community is shortened and access to care is enhanced. I agree with the statement that¹¹⁸:

"It is important that EDs look for initiatives such as fast track to improve aspects of efficiency that are within their control."

- 20.122 It has been suggested that improved access for minor cases resulting from fast track systems only serves to increase demand.¹¹⁹ The Second Annual Report on the NSW Clinical Services Redesign Program¹²⁰ noted that this suggestion is worth investigating, given the as yet unexplained increase in attendances at Emergency Departments in the 2 years following the creation of a large number of fast track zones (before 2005, there were only 2 fast track zones in operation in New South Wales emergency departments).
- 20.123 Given that New South Wales experienced a significant increase in demand on Emergency Departments in 2005/2006 (according to available data¹²¹), I agree that it would be worth investigating whether there is any relationship between the improved access resulting from fast track zones and demand on emergency department services.

3-2-1 Model of Care

- 20.124 The 3-2-1 process breaks down a patient's journey through an Emergency Department into brackets of time, being:¹²²
- 3 hours for the Emergency Department to examine a presenting patient, run diagnostic tests, commence initial treatment and determine whether the patient is likely to be admitted;
 - 2 hours for specialty medical teams to consult with a view to admission; and
 - 1 hour for inpatient wards to be ready to take over the care of the admitted patient and move the patient from the Emergency Department to the ward.
- 20.125 A feature of the 3-2-1 model of care is that if specialty team review is not possible within 2 hours, the specialty team must accept the Emergency Department's decision to admit the patient. It may elect to find a suitable alternative department for the patient to be transferred to, but this remains the responsibility of the admitting department, not the Emergency Department.
- 20.126 This model of care goes some way to recognising that overcrowding is a whole of hospital problem. Speciality inpatient teams are under pressure to ensure that systems are in place to respond within 2 hours to requests and to review patients in Emergency Departments promptly.
- 20.127 The Department of Health in the United Kingdom set a target for the National Health Service in 2003 that no patient should be waiting more than 4 hours in an Emergency Department from arrival to admission, transfer or discharge. For the financial year 2005-06, data shows that over 98% of patients were seen, diagnosed and treated within 4 hours of their arrival at Emergency Departments in the United Kingdom. Nevertheless, clinicians have raised concerns that the target has put pressure on Emergency Departments to compromise patient care.¹²³ In a survey conducted by the British Medical Association and the British Association for Emergency Medicine at the end of 2006,¹²⁴ 66% of respondents said that some patients may be moved to inappropriate areas or wards and 58% reported that patients may be discharged from an Emergency Department before they have been adequately assessed or stabilised. 31% of respondents (147/471) reported that data manipulation was used as an additional measure to meet emergency access targets.
- 20.128 In the course of the Inquiry, I have not received evidence about whether such a 4 hour limit (which includes waiting time) is achievable in the New South Wales context. It seems to me, however, that a one size fits all approach is unlikely to garner favour with Emergency Department staff. The 3-2-1 model of care at least breaks down the different elements of the patient's journey into manageable segments of time. These key time points in theory permit identification of the barriers to patient flow and the

decision-making necessary for clinicians outside of the Emergency Department in the process.

Conclusion

- 20.129 A number of strategies need to be pursued to address current demand and projected future demand, and thereby to overcome overcrowding. I summarise the strands of reform below.

Primary Care Centres and Emergency Departments

- 20.130 In my view, patients of lower acuity, namely those who fall within categories 4 and 5 of the present Australasian Triage Scale, who attend the hospital seeking urgent or unplanned care and who are not determined clinically to be in need of immediate or emergency care should be treated in a separate treatment area near the Emergency Department, designated a Primary Care Centre. I accept that Category 4 and 5 patients are not necessarily all primary care patients (as I discuss below in the section entitled “Primary Care patients”). While a proportion of the patients in those categories have complex problems requiring management by Emergency Departments or inpatient units, most of the patients in those categories are discharged home after a short phase of care in the Emergency Department (about 80% of Category 4 patients and over 90% of Category 5 patients were discharged from the Emergency Department in 2006/2007)¹²⁵.
- 20.131 Patients in Categories 4 and 5 comprise about 60% of patients attending the Emergency Department. They are assessed as being safe to wait for treatment for 1 or 2 hours respectively. In my view, greater efficiencies in patient flow will arise if those patients are streamed, from the outset, into a separate treatment area that is appropriately staffed to meet the clinical needs of patients ordinarily making up those triage categories. I find it hard to accept that this requires the input of an emergency physician in every case.
- 20.132 Of course, this does not mean that patients who are identified as appropriate for care in a Primary Care Centre cannot be re-triaged if the initial triage category is found to have been inappropriately allocated, their condition deteriorates or is found to require more complex investigation and treatment, including by an emergency specialist or inpatient team. Primary Care Centres should be co-located with Emergency Department whose function would be to provide care for only those in need of immediate or emergency care which requires the services of highly skilled emergency teams led by specialist emergency physicians. In my view, changes to the organisational structure of Emergency Departments in the way I have described will provide the conditions for improving patient flow and reducing overcrowding in Emergency Departments. This is because there will be a recognition from the outset (a) of the resources likely to be needed to treat the patient’s condition and (b) of the patient’s likely disposition.

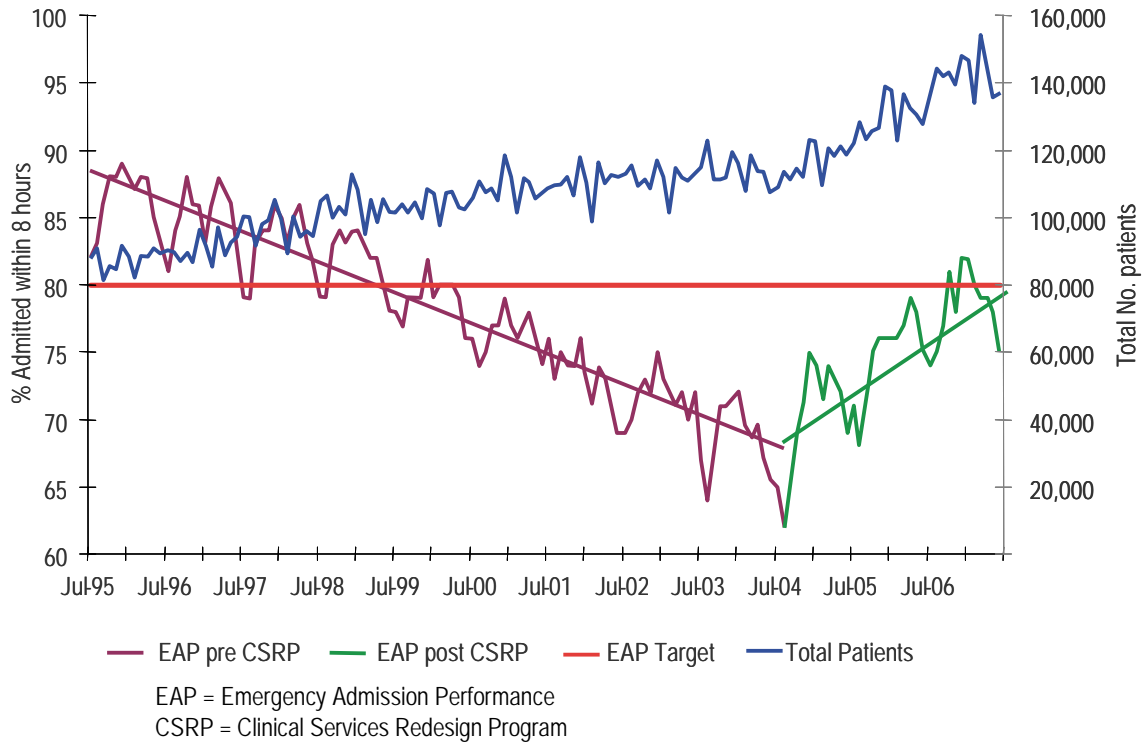
Summary of reforms

- 20.133 As I see it, the strands of reform are as follows:
- (a) **Demand management:** meaning, steps to reduce demand on Emergency Departments
 - (i) ambulance paramedics should be permitted to treat or not transport to an Emergency Department as I discuss in Chapter 27;

- (ii) elderly, or chronic and complex patients who are not in need of urgent treatment, but who may need admission, should be dealt with through a 'third door', such as a Medical Assessment Unit;
 - (iii) patients of lower acuity (that is, those who fall within categories 4 and 5 of the present Australasian Triage Scale) who attend the hospital seeking urgent or unplanned care and who are not determined clinically to be in need of immediate or emergency care should be treated in a separate treatment area near the Emergency Department, designated a Primary Care Centre (as discussed above);
 - (iv) NSW Health should strengthen initiatives for primary care of patients at home and in the community and for the coordination of care between hospitals and the community. In my view, alternate plans should be encouraged and developed which involve looking after patients in the community, including mental health patients.
- (b) **Increased efficiency:** meaning, what steps can be taken to increase the throughput of Emergency Departments? This includes:
- (i) addressing the shortage of emergency specialists;
 - (ii) addressing the reality that Emergency Departments' business peaks in the late afternoon by rostering staff (in Emergency Departments and in other services within the hospital where appropriate) when patients require them;
 - (iii) addressing by making more efficient and more timely the process of discharge of in-patients;
 - (iv) entrusting the care of some patients who do not need to see an emergency specialist to an appropriate health professional – I discuss this below under the heading "Changing roles";
 - (v) ensuring there are support services available for the efficient diagnosis and treatment of patients in Emergency Departments, that is, imaging and pathology – see Chapter 24;
 - (vi) developing and encouraging pre-arrival diagnosis and treatment protocols, such as ETAMI (early triage of acute myocardial infarction) whereby the trace from the ambulance is read in Emergency Departments and the patient is sent where they should go;
 - (vii) developing minimum stay Emergency Department patient streams where intervention is predicted and likely;
 - (viii) introducing protocols for care agreed by emergency clinicians which permit patients to be cared for by clinical support staff suitably qualified to attend to those components of patient care which require their skills.
- (c) Removal of access block for patients who are to be admitted by permitting Emergency Departments to admit patients upon certain strict conditions which I explain below. Access block is an 'all of hospital' problem and not one for Emergency Departments alone.

Problems getting patients from Emergency Departments to hospital ward

- 20.135 About 32% of patients who present to Emergency Departments in New South Wales are admitted to hospital, that is, admitted to an inpatient bed as distinct from being treated in Emergency Departments (including any of the streams within Emergency Departments such as Emergency Medicine Unit).¹²⁶
- 20.136 Many Emergency Departments experience problems getting patients who need to be admitted to the hospital for further treatment moved from Emergency Departments to a hospital ward in a timely manner. This means that, even after the Emergency Department has completed its treatment, the patient has to wait in the Emergency Department, occupying one of its beds, waiting for a bed in a hospital ward to become available.¹²⁷
- 20.137 This phenomenon is described as “access block”. Access block is another indicator used by the Department of Health to measure the performance of hospitals. For that purpose, access block is defined as the percentage of admitted patients who are admitted from the Emergency Department within 8 hours of being treated.¹²⁸ NSW Health’s target for access block is 80%,¹²⁹ meaning that a maximum of 20% of all Emergency Department patients requiring admission to hospital will wait in the Emergency Department for admission for more than 8 hours. Nothing can better illustrate the point that overcrowding in the Emergency Department is a systemic failure of the hospital itself.
- 20.138 According to medical literature, patients experiencing access block have a longer length of stay in hospital than those who are admitted within 8 hours.¹³⁰ The inability to admit patients also leads to overcrowding. Overcrowding can and frequently does have the detrimental effects on patient outcomes I referred to above.
- 20.139 “Access block” is a frequent problem in many Emergency Departments in New South Wales, in both metropolitan and rural areas.¹³¹ In the years 2002-2005, in some individual hospitals Emergency Department patients who needed to be admitted to hospital reportedly experienced access block in 40-50% of cases, reaching 60% in some hospitals.¹³²
- 20.140 The following table shows the increase in presentations to Emergency Departments over the last decade as against the percentage of patients admitted to hospital from Emergency Departments within 8 hours.



- 20.141 NSW Health says that the initiatives taken within the Clinical Services Redesign Program starting in July 2004 in 10 hospitals, and in July 2005 in all major hospitals across New South Wales, reduced access block, as depicted above.
- 20.142 The Road Trauma and Emergency Medicine Unit at the Australian National University Medical School carried out a point prevalence survey of all 89 Australian emergency departments accredited by the Australasian College for Emergency Medicine at 10:00am local time on 1st September 2008. That survey showed that the average New South Wales Emergency Department had 26.8 patients under treatment, and a further 8.1 waiting to be seen. Of those under treatment, 8 were experiencing access block.¹³³
- 20.143 “Access block” occurs due to several reasons.

Specialist to accept the patient

- 20.144 Traditionally, a patient cannot be taken to a hospital ward until a specialist doctor, or registrar to whom the specialist delegates the decision to admit, accepts the patient as coming under his or her own care and responsibility. The doctor who makes the decision or has delegated it, is known as the Admitting Medical Officer (**AMO**). Once accepted by the AMO for inpatient care, the patient becomes an “inpatient”. This ‘refer and accept’ model of admitting patients exists in most facilities. It means that the Emergency Department not only has no control over the arrival of patients, it has little control over the timing of their departure once the emergency phase of care has finished.
- 20.145 I heard that there is often resistance, on the part of inpatient teams, under pressure to find a bed, to accepting a patient from the Emergency Department. I heard that it is not uncommon for the Emergency Department to fabricate, or at least to exaggerate, clinical symptoms in an effort to “sell” the patient to an inpatient team.¹³⁴ This distortion needs to be eradicated from the system.

- 20.146 Some delays in admission are unavoidable in the present system. Others deliberately or unnecessarily impede the flow of patients from the Emergency Department to the ward. Delays occur where:
- (a) The relevant specialist or registrar cannot be contacted, or doesn't return the call from the Emergency Department in a timely manner.
 - (b) The patient suffers from a number of conditions, each of which comes under a different specialist, and each specialist refers the Emergency Department to another team. This is particularly a problem with elderly patients with multiple problems, who need multiple tests before a consultant will take them.
 - (c) The specialist asks for more tests or investigations to be carried out before they make a decision whether or not to admit the patient.¹³⁵ This situation often arises because the request to admit is made by a junior doctor within the Emergency Department and the specialist feels unable to rely on that assessment without further inquiry.
 - (d) The hospital does not have a specialist within the relevant speciality.
 - (e) The relevant ward or the hospital as a whole does not have a bed available to admit the patient.
- 20.147 Whilst in the majority of cases the existing system of admitting patients which is largely dependent on personal goodwill appears to work, it is clear that it breaks down with sufficient frequency that Emergency Department beds become full of patients who have completed treatment in the Emergency Department but cannot move to a ward. This prevents other patients from receiving treatment in the Emergency Department at all, or within reasonable timeframes.
- 20.148 In such cases, the solution to this problem appears to me to be threefold:
- (a) Authorise senior emergency physicians to admit patients where the physician considers that a sufficient assessment has been made of the patient and admission to a ward is appropriate, subject to the senior emergency physician advising the relevant specialist or registrar to whose care the patient is to be transferred of admission to the ward.
 - (b) If the specialist or registrar under whose care the patient is to be admitted cannot be contacted, authorise senior emergency physicians to admit patients to a ward only if the senior emergency physician is satisfied on making enquiries that there is adequate clinical cover on the ward to ensure the patient's safety once admitted. Further:
 - (i) The Emergency Department must send a message to the specialist or registrar notifying them that the patient has been admitted to their care.
 - (ii) There must be a mechanism for ensuring that the Emergency Department receives automatic confirmation that the specialist or registrar has received the message. This may be by way of an automatic notification of receipt of an email or text message, or a request that the specialist or registrar advise receipt.
 - (iii) If the Emergency Department does not receive confirmation within a prescribed time, for example, 4 hours, that the specialist has received the message, then the Emergency Department re-assess the safety of leaving the patient on the ward and make a further attempt to contact the specialist.

- (c) If the specialist under whose care the patient has been admitted objects to the patient being admitted to their ward, the specialist must contact the specialist who they think should take the patient, and sort it out with them directly.
- 20.149 My recommendations will not be relevant to all hospitals, particularly small rural hospitals where patients can only be admitted to one area.
- 20.150 There are a number of important caveats to what I have proposed which warrant strong emphasis.
- (a) This system requires a senior emergency physician to be satisfied that the patient has been assessed as far as reasonably possible by the Emergency Department and that the diagnosis is clear and admission to a ward is appropriate. It would be unacceptable for junior staff in the Emergency Department to use this system to admit patients to wards in an effort to clear the Emergency Department. Otherwise, inpatient wards of the hospital would become *de facto* Emergency Departments, having to order tests and complete an assessment for a patient that does not really belong in their area of care. There is evidence that “outliers” (that is, patients sent to an inpatient unit despite not being “owned” by the appropriate specialty team) act as a barrier to the admission of appropriate patients to that unit and have a longer stay in hospital than patients who are sent to the appropriate ward from the outset.¹³⁶
- (b) The system requires direct communication between the senior emergency physician and specialist (where the specialist is contactable). This will minimise the current problem I have often heard about, where the admitting team does not want to accept care until they have formed their own view about the patient. If there is a dispute about which consultant should take responsibility for the care of the patient, it should take place between consultants, and not among registrars, residents or interns.
- (c) The system I have proposed also endeavours to address the risk inherent in a patient being admitted to a ward without the specialist’s knowledge. This can lead to avoidable patient death. This is to be considered against the risk that someone does not even get into the Emergency Department because it is full of people waiting for a bed on the ward.
- 20.151 Of course, patients cannot be admitted to a ward where no bed is available. I discuss bed management elsewhere in my report.

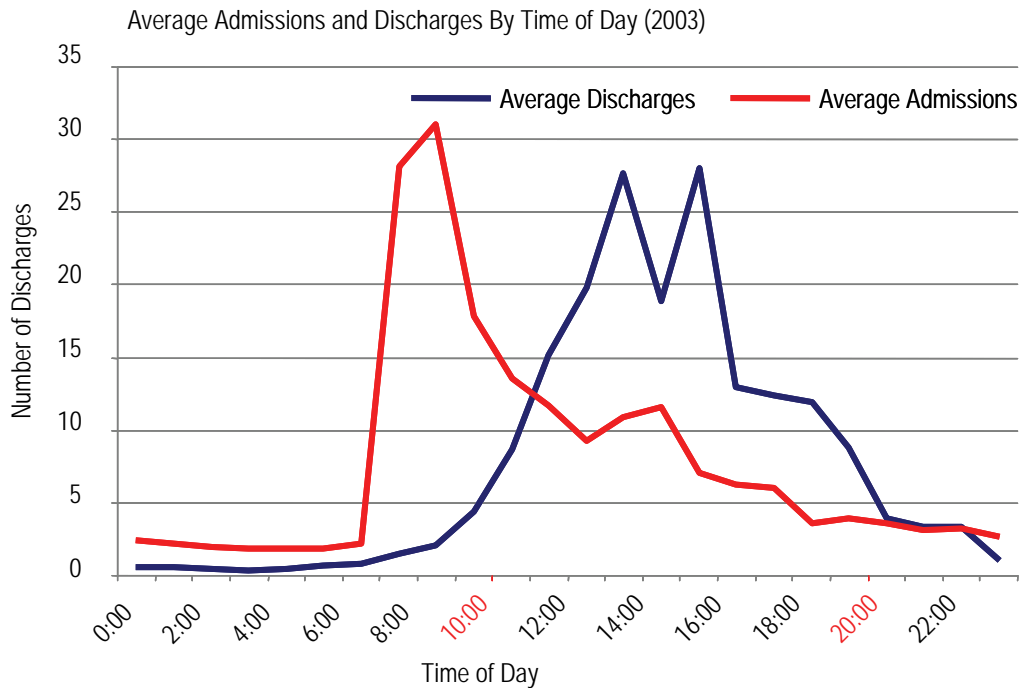
Recommendation 96: *Within 6 months, every hospital should adopt a policy which permits, subject to the conditions described above, the practice that where a patient is to be admitted to a hospital from an Emergency Department or else a Primary Care Centre, the determination of the ward to which the patient is to be admitted rests with the medical officer in charge of the Emergency Department or the Primary Care Centre, as the case may be, and not with the medical officer (or ward staff) of the department to which the patient is to be admitted.*

Delays in discharging patients from hospital wards

- 20.152 In many hospitals, patients occupying beds in hospital wards are not discharged until the afternoon. This means that beds do not become available on the hospital ward for patients coming from the Emergency Department until late in the day. Unfortunately, these beds are required from early in the morning.

20.153 Discharge is a complex problem. In hospitals across the State, the peak time for discharge of patients is at 5pm or 6pm Monday to Friday. I was told that Emergency Departments typically need access to inpatient beds between midday and 8pm.¹³⁷ Ninety per cent of inpatient unit staff is rostered during working hours Monday to Friday.¹³⁸ I was told that there is a bottleneck of patients seeking admission from the Emergency Department every evening.

20.154



20.155 Peak time for discharge patients from hospital wards needs to be in the morning. To achieve this essential outcome, there needs to be significant changes in work practices as follows:

- (a) Establishing an estimated date of discharge on the first day a patient is admitted to a ward. Then all staff can work towards this date. Currently, many tasks which need to be carried out before a patient can be discharged do not take place until the consultant makes the decision to discharge. Documenting an estimated date of discharge allows more forward planning by every member of the team looking after the patient.

Advance notice of expected discharge is particularly important where the patient is being discharged to a rural or remote location, as arrangements will often have to be made in the community for the patient's ongoing care. A nurse practitioner at Quirindi Hospital informed me that discharge planning is difficult because hospitals in major metropolitans do not liaise with her early enough for her to arrange to visit remote patients on their return to the area.¹³⁹ The same was noted in respect of Aboriginal people returning to their communities.¹⁴⁰

I was told that documenting an estimated date of discharge can be done with about 95% accuracy on the first day of admission, however I did not receive any evidence to support this assertion.¹⁴¹ It seems that an estimated date of discharge can be made in at least 95% of elective patient admissions¹⁴² (but no evidence about the accuracy of the estimate was able to be provided to the Inquiry). I was told that efforts have been made to require doctors to do this.

NSW Health policy requires that an estimated date of discharge be established at the time of admission for elective patients and within 48 hours of admission for patients admitted through the Emergency Department or transferred from critical care units.¹⁴³ I understand that there is generally poor compliance with this requirement.¹⁴⁴

One way to establish an estimated date of discharge is to require doctors to document it. On the other hand, the hospitals already hold large volumes of data about patient care by which it must be possible to work out estimated dates of discharge for different patient categories. Hospitals collect data about patient demographics, including sex and age, admission and discharge dates, procedures performed, diagnosis and the identity of treating clinicians. For elective patients, it is already a requirement for surgeons to provide on admissions forms an estimated length of stay. It should be possible for hospitals to exploit this information for the purposes of estimating a date of discharge.

I accept that establishing an estimated date of discharge is more difficult for medical, as opposed to surgical, patients. However, it is worth highlighting that what is required is an estimation to a reasonable degree of accuracy, not a pin-point projection as clearly this is not possible in every case.

The use of protocols of care which I next discuss should also allow for a reasonable (and certainly a sufficient) degree of accuracy in fixing an estimated date of discharge.

- (b) Establish protocols which permit patients to be discharged without the need for the consultant to see them. There may be particular medical conditions for which patients generally follow a predictable pathway and for which clinicians agree that discharge will, in general, occur on a particular day. The care of these patients can and, in my view, should be subject to a protocol which permits a junior doctor and in appropriate cases, senior nurses, to discharge the patient on a particular date, provided that the patient's progress has followed the anticipated pathway, or at least, that there has been no adverse change to the patient's condition from the time when the patient was last seen by the specialist.

However, establishing standardised models of care in this way requires the input of senior doctors and specific training of those junior staff who are empowered to discharge to recognise when a patient condition has departed from the norm.

I was told that, for a variety of reasons, one can expect more resistance from physicians than from surgeons to 'protocolised care' and to the requirement to give an estimated date of discharge. One of the reasons is that surgeons may have a financial incentive to increase the 'turnover' of patients. On the other hand, I was told that physicians have, in recent times, been prompted to provide high quality care more efficiently because of the increased number of patients needing their services.¹⁴⁵

There may also be general opposition from doctors to the notion that patients follow a predictable pathway and can be cared for according to protocols, for fear of introducing 'cookbook medicine'. I think that these concerns are overestimated. Empowering staff junior to the consultant to discharge patients does not mean that the consultant loses control over the care and management of a patient.

I am firmly convinced that for a number of reasons it is of the utmost importance for NSW Health to introduce standard pathways or protocols of care. These reasons can be summarised as follows:

- more efficient procedures for discharge leading to better bed use and less access block;
 - more predictable pathways of care leading to better communication with patients and understanding of their progress;
 - better safety and quality of patient care by reason of the reduction of variations from evidence-based methods of practice; and
 - permitting proper evaluation of the benefits of medical care.
- (c) Require consultants to do ward rounds in the first part of the morning so that they conclude before 11am. I was told that if consultants discharge the patient in the morning, the bed will become available earlier in the day. This was raised as an issue on a frequent basis during the Inquiry. I accept, given the frequency with which I was told this and the fact that the consultant's consent to discharge is presently required, that early ward rounds would significantly facilitate orderly and timely discharge of patients.

It seems to me, however, that requiring consultants to do ward rounds early is not always going to be a solution. Some ward rounds take 3 or 4 hours. Many consultants do ward rounds only a few times a week. In some instances, teaching rounds need to take place in the mornings as that is the time the relevant participants are likely to be available. Also, many aspects of the patient's care need to be coordinated in order for discharge to take place. Discharge plans can, and should, facilitate this coordination. It seems to me that the more effective way of facilitating discharge is to empower more junior doctors, and in appropriate cases, senior nurses, to discharge patients under well defined protocols, as explained above.

However, I do think that hospital management needs to explain to consultants, and consultants need to be open to an understanding of, the difficulties which late rounds can cause. For example, on an expected day of discharge, if the rounds are in the afternoon, one problem the Inquiry was told about was that there may not be enough time to order medication from the pharmacy to allow discharge. The patient therefore stays another night.

- (d) All processes for discharge need to be well planned and in advance. For example, if a patient cannot be discharged without a pharmaceutical prescription, processes need to be in place to ensure that the doctor responsible for that task carries it out in a timely manner. If the writing of a prescription is the only factor delaying discharge, the doctor should attend to it before the pharmacy closes. Similarly, discharge plans need to include planning for transfer of the patient to his or her next destination. I heard evidence that often there is nowhere for a patient to go immediately upon discharge. For example, Professor Nade, an experienced surgeon, pointed out that a lack of beds is often a direct consequence of inadequate planning for discharge. Often patients are told they can leave 'today' but are unprepared and so have no place to go to.¹⁴⁶ Sometimes this is because there is a lack of transitional or 'stepdown' facilities, meaning the patient has to remain in hospital. Other times, the problem is simply that the patient cannot be transferred to the appropriate place until a later time. The Inquiry received submissions that good discharge planning, that secures adequate community support, helps to minimise hospital re-admissions.¹⁴⁷ Universal documentation of estimated date of discharge, coupled with protocols empowering senior nursing or registrars to discharge patients, should assist in the planning process to reduce bottlenecks due to lack of planning.

- 20.156 Persuading senior doctors about the merit of changing their practice is, in my view, the biggest challenge when it comes to discharge processes and planning.
- 20.157 I recommend that in every hospital unit where the timing of rounds creates a problem of bed block, management must undertake a formal consultation with all visiting medical officers with a view to re-arranging the rostering of rounds to alleviate the condition of bed block in the Emergency Department. This is an instance of what I call an all of hospital problem. This consultation must proceed as a co-operative effort. I have recommended elsewhere the appointment of an Executive Clinical Director in each area health service. This clinical leader needs to be actively involved in this process which is designed, wherever possible, to adjust the working rhythms of the consultants to cope with the unsatisfactory conditions in our Emergency Departments across the whole State.

Recommendation 97: *All hospitals review their policies and work practices which affect patient discharge to ensure as far as practicable that the time and date of discharge is activated:*

- (a) *At the earliest possible opportunity; and*
- (b) *In a way which is consistently with good patient care, maximises bed availability*

Finding an available hospital bed

- 20.158 Several doctors working in Emergency Departments complained that they had to make numerous phone calls to find a bed for a patient, either in their own hospital or another hospital. This was, rightly, regarded as a poor use of their time.
- 20.159 I heard that measures need to be introduced to encourage full disclosure of empty inpatient beds to Emergency Departments.¹⁴⁸
- 20.160 The Inquiry received submissions that there should be a centralised state bed management system so that Emergency Department doctors do not have to spend hours trying to find a bed for patients.¹⁴⁹ Another benefit of standardised bed management processes is that clinicians would not have to learn local administrative procedures every time they move hospital. This applies to doctors in particular who spend many early years of their career rotating through different hospitals and departments.
- 20.161 Access block and overcrowding in Emergency Departments do not only relate to the number of attendances. They are also caused by what is happening at 'the back end' of the hospital. Where patients are ready to be discharged home or into alternate levels of care, whether it be nursing home care, rehabilitation or other step-down care, but this is not yet possible for practical reasons, they occupy inpatient beds that are needed by those awaiting admission from the Emergency Department. It is also not an uncommon problem for patients who are deemed ready for discharge from the ICU to the ward to remain in ICU for a number of days due to the unavailability of an inpatient bed.
- 20.162 They illustrate that the pressures on Emergency Departments cannot properly be assessed in isolation from what is occurring in the rest of the hospital. From what I have observed, patient flow in the rest of the system determines patient flow in Emergency Departments to a large extent. There is an interdependence in the patient journey between all of the services which a patient receives in the Emergency Department until the time of discharge and re-integration in their communities.

- 20.163 Numerous other systemic factors are reported as contributing to access block, including the increased number of hospital admissions, inpatient bed shortages, cancellation of elective surgery, federal-state funding arrangements, workforce shortages and a decline in nursing home capacity.¹⁵⁰ Also, lack of staff or beds during the night sometimes means that patients who present to Emergency Departments during the afternoon or night and who require admission to hospital cannot be admitted until the morning. This means that they inevitably spend more than 8 hours in the Emergency Department. Performance measurement according to the key performance indicator does not reveal, and actually conceals, the complex set of factors underlying access block.

'Primary Care patients'

- 20.164 There is debate about whether or not primary care patients should be treated in Emergency Departments. There is, however, no real agreement about the definition of 'primary care patient'.¹⁵¹ One component of primary care presentations is patients who could have been treated by a GP instead of an Emergency Department. They are therefore patients who self-refer and do not require rapid or complex diagnostic work up by an Emergency Department, or admission to hospital. The duration of their treatment is generally short. I accept that there is debate about who is a true primary care patient and why they may attend an Emergency Department. There is no data to show what proportion of patients using Emergency Departments in New South Wales consists of primary care patients.
- 20.165 Staff at many Emergency Departments across the state pointed to a lack of GPs, particularly after hours or available at short notice, or who bulk-bill¹⁵², as a factor contributing to the numbers of triage category 4 and 5 patients in Emergency Departments. The majority of this evidence was received in outer metropolitan, regional, rural and remote areas.
- 20.166 Others stated that 'GP patients' were not a problem.¹⁵³ The Australasian College for Emergency Medicine submitted that GP patients are not the most frequent and recurrent attenders at Emergency Departments. The College says that they are a small constant percentage of attendees who are low cost and do not spend prolonged periods of time in a treatment space. I was told that the provision of alternative services for these patients would be unlikely to significantly reduce the overall workload of metropolitan Emergency Departments. I was given a number of studies in support of this proposition.¹⁵⁴
- 20.167 The Inquiry received evidence that Categories 4 and 5 are not as straightforward as they may appear. I was told that Category 4 and 5 are a diverse group of patients and that emergency physicians worry about the simplification of Category 4 in particular.¹⁵⁵ I was told that Category 4 & 5 are regularly represented in mortality and morbidity reviews, meaning that they suffer death and adverse events.¹⁵⁶
- 20.168 I accept that Category 4 and 5 patients are not necessarily all primary care patients. The admission rates of patients in triage Categories 4 and 5 are about 21% and 7%, respectively.¹⁵⁷ By contrast, one figure quoted was that the admission rate of patients to hospital from GPs is less than 1%. Although patients in Categories 4 and 5 may be assessed as being safe to wait an hour or 2 for treatment, they sometimes have complex problems requiring investigation, diagnosis and management or admission to hospital. This highlights that triage is a measure of urgency, not complexity. Triage categories alone do not necessarily suggest that the appropriate care provider is a GP and not an emergency physician.

20.169 As I was told, GPs may, in fact, have sent some of these patients to the Emergency Department because the GP is reluctant to take responsibility for treating more complex conditions requiring specialised care, or is not set up for complex and lengthy consultations in their rooms.¹⁵⁸

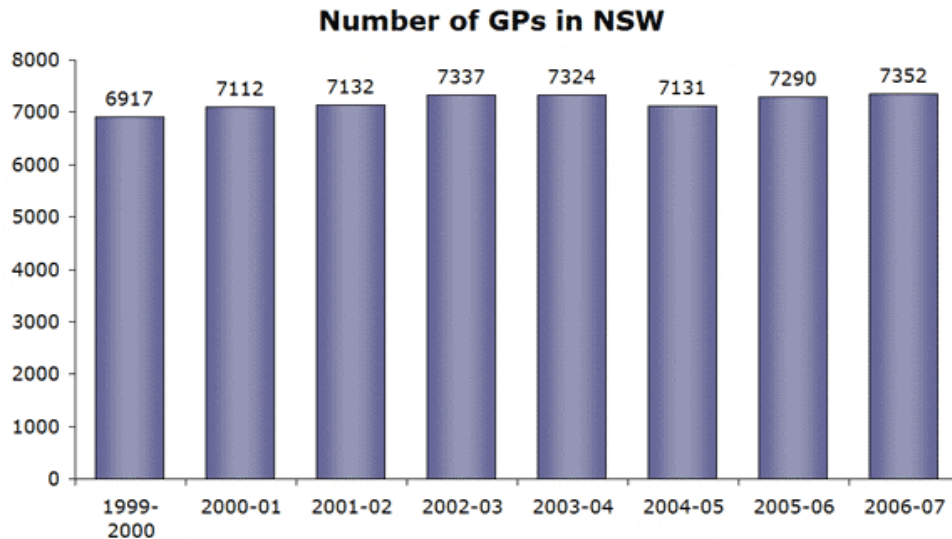
20.170 It was also submitted that patients who present to Emergency Departments at least need to be assessed there in the first instance. I was told that:

Post hoc judgments as to whether some patients could have been effectively managed by their GP or someone else fail to take account of the complexities of the patients' presenting complaints.¹⁵⁹

Shortage of GPs

20.171 In 2006/2007, there were 7352 GPs in New South Wales.¹⁶⁰

20.172 The number of GPs in New South Wales, and Australia as a whole, has remained fairly stable for some years, even though the population is growing and getting older.¹⁶¹

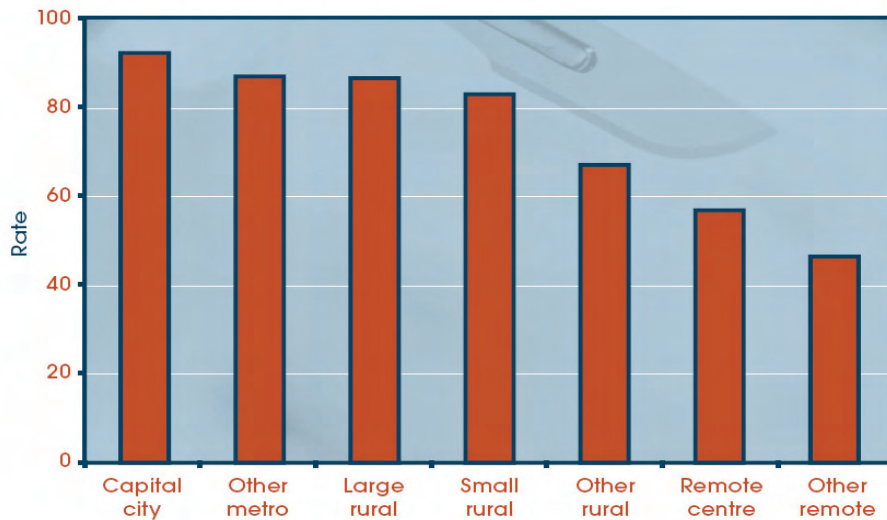


Source: Primary Health Care Research and Information Service - www.phcris.org.au

20.173 I was told that the ratio of GPs to patients in the Sydney metropolitan area is about 1:550 and that it is about 1:1800 in some areas in the west of Sydney.¹⁶² The number of GPs per 100,000 people by geographical region throughout Australia is as follows (at

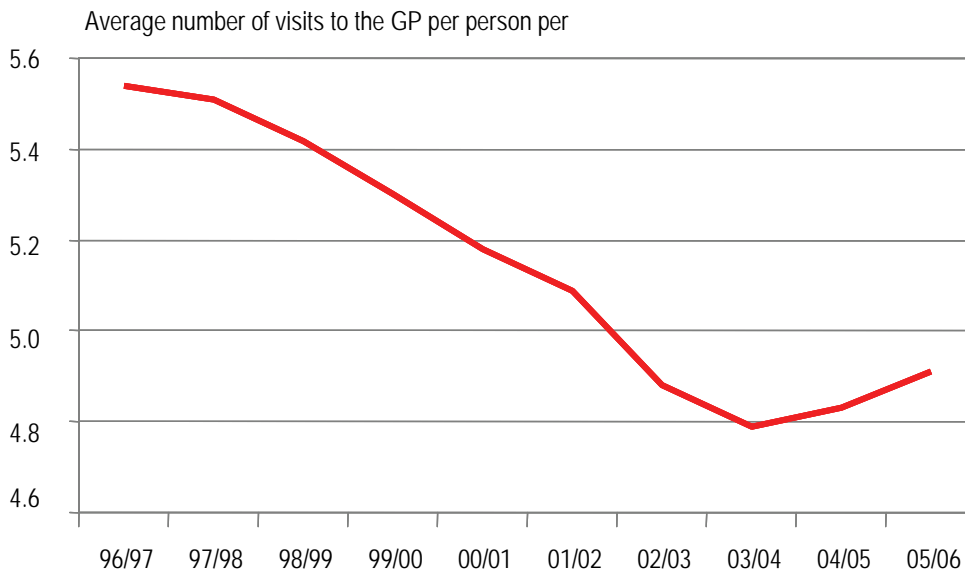
June 2007).¹⁶³

Figure 2: GPs per 100,000 people by geographical region



20.174 In 1996/97, more than 80% of visits to GPs were bulkbilled.¹⁶⁴ This figure of 80% declined rapidly over the next 7 years. Since 2003/04, the proportion of GP visits which are bulkbilled has been rising again, due to incentives introduced by the Australian Government for GPs to bulkbill. The GP bulk billing rate in New South Wales in the June quarter 2008 was 84%.¹⁶⁵ Bulkbilling is less common in rural and remote areas than in cities.¹⁶⁶

20.175 The number of visits to the GP per person has declined over the past 10 years in Australia.¹⁶⁷



20.176 A report commissioned by the States and Territories in 2007 on the Australian Government's performance on health care concluded that:¹⁶⁸

- People find it harder to see a GP than 10 years ago. There are not enough GPs to deal with the growth in population and they are concentrated in major cities.
- The cost of seeing a GP has risen over the past 10 years, as the Australian Government's schedule fees have not kept pace with inflation and fewer GPs bulkbill.

- 20.177 This puts more pressure on Emergency Departments, particularly in outer metropolitan, regional and rural areas. A report of the Independent Pricing and Regulatory Tribunal of NSW in 2003 noted that the decrease in the number of GPs, bulk-billing rates and availability of after-hours GP services between 1996/1997 and 2001 led to increasing length of hospital stays. This suggests that reduced access to GP services contributes to more and longer hospitalisations as patients present to hospital in crisis and with greater complications than if they see a GP earlier.¹⁶⁹

After-hours GP clinics co-located with Emergency Departments

- 20.178 To address the problem of overcrowding in Emergency Departments, some hospitals have established an after-hours GP clinic next to the Emergency Department. In other cases, private businesses have set up clinics nearby. The term after hours refers to the provision of services outside standard business hours. However, the after-hours period differs depending on each clinic. The clinic at Ryde Hospital, for example, is open between 7pm and 10pm Monday to Friday and between 10am and 10pm on Saturdays and Sundays.
- 20.179 Although adjacent to Emergency Departments, after hours GP clinics are not funded from the State budget. GPs providing services in these clinics bill the Commonwealth through Medicare. They are not employed by NSW Health.
- 20.180 Triage staff at Emergency Departments expressed to me that they are reluctant to refer patients attending the Emergency Department to a co-located GP clinic, despite the fact that such clinics might be very close in distance to the Emergency Department.¹⁷⁰ Staff said that they would be reluctant to turn away a person who had sought the help of the Emergency Department. Of course, currently, public hospitals are *required* to treat all patients free of charge who present to the Emergency Department (with the exception of some small rural hospitals), even if another setting might provide equal or more appropriate care. Although Emergency Department staff might advise a person who attends for care that treatment is also available in an alternative setting, if the patient decides to remain in the Emergency Department, the public hospital has no choice but to provide free treatment.
- 20.181 I was told that only a small percentage of patients who are informed by Emergency Departments that they have the option to attend a co-located GP clinic take up the option, even when they are told that treatment will be available more quickly at the clinic¹⁷¹. It seems to me that most patients who present to triage at Emergency Departments are well aware of the existence of the GP clinic and that, having made the choice to go to the Emergency Department, they are reluctant to change their choice.
- 20.182 I am not aware of any New South Wales studies showing the impact of the presence of an after hours GP clinic adjacent to the Emergency Department on the number of patients presenting to the Emergency Department. It is no doubt too early to obtain reliable data. After hours GP clinics were first established in 2004. Most of the presently operating clinics commenced operation after the 2006/07 State Budget allowed for up to 10 after hours GP clinics to be established.¹⁷² (Although the State may provide infrastructure for and manage after hours clinics, as I have discussed above, the GPs are funded through the Medicare system. The GPs "bulk-bill" the Commonwealth Government for each occasion of services provided.)
- 20.183 NSW Health informed the Inquiry that evaluations carried out in Victoria and internationally of after hours GP clinics co-located with public hospitals do not, on balance, find a reduction in attendances at the Emergency Department. It said however that the findings do suggest that these clinics reduce the workload of Emergency

Department medical staff. The evaluation carried out in Victoria indicated that after-hours GP clinics were contributing to a reduction in the growth in demand for after-hours primary care type services in Emergency Departments.¹⁷³ However, the data did not demonstrate a clear and direct impact from newly established co-located clinics. It was found that the co-located clinics were not being used to capacity because of insufficient redirection of patients by the Emergency Departments and poor public awareness of the clinics.

- 20.184 Several submissions to the Inquiry highlighted that co-located GP clinics do not address the problems of access block and overcrowding in Emergency Departments as those problems relate primarily to a lack of inpatient beds.¹⁷⁴ I was told that an adjacent after hours GP service will generally lead to some reduction in Category 5 patients and a small reduction in Category 4, but no substantial overall reduction in the number of patients presenting to the Emergency Department.¹⁷⁵ I was told that a GP clinic helps in reducing the number of Category 5 patients but is a very expensive solution for a small percentage of patients.¹⁷⁶ In fact, it is said that the presence of a GP clinic at a public hospital can lead to increased presentations from patients who previously considered hospitals appropriate only for emergencies.¹⁷⁷ I have not been provided with any evidence which would support or contradict this assertion. It would seem logical however that better management of primary care patients within the hospital setting will make attendances at Emergency Departments more attractive.

Commonwealth Scheme for GP super clinics

- 20.185 Not to be confused with after hours GP clinics adjacent to Emergency Departments, the Commonwealth Government has committed to the establishment of so called "GP super clinics".¹⁷⁸ The aims of these clinics are to:
- encourage GPs to practice in parts of Australia where there are identified shortages; and
 - deliver more services to the community including allied health services and place a stronger focus on preventative health services and chronic disease management.
- 20.186 There are to be 31 GP Super Clinics across Australia, 8 of which are to be located in New South Wales at Blue Mountains, Grafton, North Central Coast, Port Stephens, Queanbeyan, Riverina, Shellharbour, and Southern Lake Macquarie.¹⁷⁹
- 20.187 GP Super Clinics are an attempt at improving care coordination by bringing together a number of primary care professionals under one organisational structure. Some are not convinced that the introduction of GP Super Clinics will solve the capacity pressures on Emergency Departments, or hospitals in general. One commentator has drawn attention to studies showing that the main effect of coordinated care is to uncover unmet need and identify new cases that require hospital treatment.¹⁸⁰ It is said that the real agenda of GP Super Clinics is to facilitate the expansion of Medicare to cover the allied health sector, thereby transferring the cost to generation X and Y taxpayers¹⁸¹.
- 20.188 On the issue of demand for emergency services, the Australian Medical Association in its submission on the Federal Government's consultation paper on GP Super Clinics stated¹⁸²:

"[T]he draft materials must not convey the impression that GP Super Clinics will keep people out of Emergency Departments. Despite claims by State/Territory Governments, there is no credible evidence to support the contention that large numbers of patients who could otherwise visit a GP are clogging emergency departments. Our understanding is that GP manageable presentations at

Emergency Departments represent about 10 per cent of presentations, but about 1 per cent of the resources consumed. The Government needs a good regional analysis of the clinical cases that present to Emergency Departments who could be managed in primary care to assist in the development of appropriate clinical programs and options."

- 20.189 It is also said that given the shortage of GPs, there is little to be gained from creating so-called Superclinics which will 'cannibalise' the existing practices, in terms of staffing. Even if GP-led preventative health alleviates the strain on the hospital system, the morbidity of chronic illness occurring later in life will still mean the patient requires hospital care, though at a later stage in life.¹⁸³
- 20.190 It is not any part of my Inquiry to consider and evaluate these submissions. The topic of GP Super Clinics does not fall clearly within my Terms of Reference. More importantly, the benefits and consequences of these clinics can not as yet be evaluated. Any discussion about their effects is largely prediction based and inevitable involves a degree of speculation. However, it will be necessary for NSW Health to monitor the effects of these clinics once they begin to operate, and evaluate their effect on the public hospital system over time.

Price considerations

- 20.191 Under its funding agreement with the Commonwealth Government, NSW public hospitals are required to provide medical services in Emergency Departments free of charge.¹⁸⁴ That is, all treatment at an Emergency Department is to the cost of the State government.
- 20.192 By contrast, where a patient goes to a GP for treatment, the GP may bulk-bill the cost of the consultation with Medicare or require payment from the patient for which the patient can then obtain a partial refund from Medicare,
- 20.193 These different arrangements send price signals to patients. During the course of the Inquiry, the question has been raised whether overloading in Emergency Departments by non-urgent cases can be cured, in part, by requiring this group of patients to make a financial contribution to their treatment. This is however impossible under the Australian Health Care Agreements. Under the funding arrangement with the Commonwealth, employees of New South Wales public hospitals cannot access Medicare benefits and the State is not entitled to raise a charge in respect of services provided to public patients, with certain exceptions such as for dental services.¹⁸⁵
- 20.194 In any event, a recent study on demand for emergency services found no evidence to suggest that financial costs of visiting a GP contribute to demand on Emergency Departments.¹⁸⁶ Some say that a user fee would not be appropriate as it may deter some patients from attending Emergency Departments or delay their treatment. In my view, it would simply legitimise the attendance of GP type patients at Emergency Departments.
- 20.195 Rather than extracting payment from patients attending Emergency Departments, a sensible solution is for payment to be made by the Commonwealth to public hospitals for primary care patients. However, assuming that a manageable definition of primary care patients is possible, and those factors for which the State is responsible, being downstream treatment capacity, can be factored into the calculation of the fee, this would increase accountability and reduce blame shifting between governments. In due course, it may be necessary for a review to be undertaken to determine whether measures of this kind had the consequence of adversely affecting the existing practices

of GPs or else had the effect of increasing demand on Emergency Departments for the reason that improved management of the primary care patients makes Emergency Departments more attractive for these patients.

- 20.196 An alternative is for there to be recognition, by both State and Commonwealth governments, that some patients can and should be diverted to more appropriate settings either within hospitals or else to community based facilities. That is, that Emergency Departments can lawfully and appropriately divert certain patients to alternate settings for treatment, such as co-located GP or primary care clinics or community services where they exist, in lieu of providing treatment within an Emergency Department when that is not clinically required. A convenient rule of thumb for commencement of such referrals would be patients who are not in need of urgent care (ie the third category to which I have earlier referred) .

Conclusion

- 20.197 The evidence supports the conclusion that whilst some patients presenting to Emergency Departments may well be seeking primary care rather than being truly in need of emergency care, those primary care patients are not solely responsible for overcrowding in Emergency Departments in general. There are a number of causes for this which I have referred to above.
- 20.198 On the other hand, presently about 60% of patients attending at Emergency Departments do not require immediate or emergency care. Clinically they can all wait for an hour (at least) in the waiting area before anybody commences an examination and treatment of them. Performance statistics show that in NSW about half of these patients wait for considerably longer periods than 1 hour without any measured significant adverse consequences. I find it hard to accept that these patients, although they may require admission to hospital, need to be seen in an Emergency Department, by highly experienced and trained emergency physicians.
- 20.199 It is quite clear to me from my discussions with Emergency Department staff, in both rural and metropolitan areas, and from the evidence received by the Inquiry about the pressures on Emergency Departments, that a lack of access to GPs impacts on the number of patients presenting to Emergency Departments. It is also evident, including from the data available, that a significant proportion of patients attending Emergency Departments are 'primary care patients', that is, patients who are not determined clinically to be in need of immediate or emergency care. In my view, these patients should be treated in a separate area within the hospital, a Primary Care Centre, and I wish to make recommendations about this.
- 20.200 My recommendations are as follows:

Recommendation 98: *The principles by which Emergency Departments should operate include, but are not limited to:*

- (a) *That the provision of emergency care is to be determined by clinical condition, and is not one based on, or determined by, patient demand;*
- (b) *A recognition that the performance of Emergency Departments is inextricably linked with the performance of the whole of the hospital;*
- (c) *An acceptance that Emergency Departments are not the necessarily the only portal for an unplanned admission to hospital.*

Recommendation 99: *Within 18 months, Emergency Departments, so designated, ought be limited to providing care for only those in need of immediate or emergency care which requires the services of highly skilled emergency teams led by specialist emergency physicians. This will ordinarily include those presently in categories 1, 2 and 3 of the Australian Triage Scale, but not those ordinarily within categories 4 and 5.*

Recommendation 100: *Such patient care performance criteria as measure the timeliness of access to services in Emergency Departments do so by reference to only two categories namely the provision of immediate care (which is the existing category one of the Australasian Triage Scale) and a second category of emergency care (which combines the existing categories 2 and 3 of the Australian Triage Scale) being care which needs to be provided within a maximum of 30 minutes. The benchmark for both of these categories should be 100%.*

Recommendation 101: *Within 18 months, where a hospital has an Emergency Departments, it should establish a Primary Care Centre which would provide services for all patients who attend the hospital seeking urgent or unplanned care and who are not determined clinically to be in need of immediate or emergency care.*

Workforce issues

- 20.201 Emergency specialists are critical to the efficient and effective functioning of Emergency Departments. I heard evidence throughout my Inquiry that there is a shortage of them. I was told that only a few staff on each shift “know what they are doing” and that the number of inexperienced staff leads to interruptions and delays, as well as a heavy supervisory burden on senior doctors.¹⁸⁷ The Inquiry received submissions that vacancies among emergency specialists and registrars impact on the effectiveness of Emergency Departments.

The emergency medical workforce

Australasian College for Emergency Medicine

- 20.202 The Australasian College for Emergency Medicine is the medical college concerned with training and examination of specialist emergency physicians in Australia and New Zealand and the ongoing maintenance of professional standards of fellows of the college. It is one of the younger medical specialist Colleges in Australia, founded in 1984.
- 20.203 To become a fellow of the Australasian College for Emergency Medicine (called “**FACEM**”), a doctor must complete:¹⁸⁸
- (a) 2 years of basic training, as must all graduates (that is, the intern year and a second postgraduate year),
 - (b) a year of provisional training, including a 6 month term in emergency medicine; and
 - (c) 4 years of advanced training including 30 months training in emergency medicine and 18 months in other disciplines, including paediatric experience. Progression

to advanced training requires structured references from supervising specialists and participation in the trainee selection process. Doctors doing advanced training are termed registrars.

20.204 There were 257 Fellows of the Australasian College for Emergency Medicine in New South Wales in September 2008.¹⁸⁹

20.205 In its submission, the College noted that second only to the Northern Territory, New South Wales has the lowest ratio of Fellows (**FACEMs**) to patients treated in Emergency Departments in Australia. I was given the following information by way of illustration:¹⁹⁰

State	Number of FACEMS (Sept 2007)	Population (millions)	Number of ED presentations 2005-2006 (1000s) (larger public hospitals)	FACEMs per 10,000 ED Presentations
NSW	234	6.5	1672	1.4
VIC	254	4.9	1200	2.1
QLD	171	3.9	816	2.1
SA	56	1.5	329	1.7
WA	101	1.9	420	2.4
TAS	29	0.5	110	2.6
NT	8	0.2	111	0.7
ACT	17	0.3	99	1.7
Totals	870	19.7	4757	1.8

20.206 In 2003, the Australian Medical Workforce Advisory Committee, established by the Australian Health Ministers' Advisory Committee, reviewed the specialist emergency medicine workforce and found that it was undersupplied. The Australian Medical Workforce Advisory Committee recommended that a minimum of 44 new trainees enter the emergency medicine advanced training program in NSW each year from 2004 until 2012 (out of a recommended additional 130 new trainees nationally). It recognised that additional training positions may require additional funding.¹⁹¹ The number of trainees entering advanced training in emergency medicine in New South Wales during 2007 was 28.¹⁹² The number of trainees entering advanced training in Australia annually since 2002 was: 2003 - 116; 2004 - 122; 2005 - 123; 2006 - 149; 2007 - 120¹⁹³.

20.207 The most recent report of the Medical Training and Review Panel¹⁹⁴ concluded that, although the overall supply of medical doctors is rising, the number of advanced training placements in emergency medicine is below the number recommended by the Australian Medical Workforce Advisory Committee. Since 1997, there has been a decrease of 23.3% in the total number of advanced training placements in emergency medicine (a decrease of 140 trainees nationally).¹⁹⁵

20.208 In 2004, the Auditor General noted that shortages of Emergency Department staff in New South Wales hospitals including specialist emergency doctors were affecting the ability of the health system to increase capacity.¹⁹⁶

20.209 Strong objective evidence for a shortage of doctors comes from data on vacant hospital medical posts (although I recognise that a reference to vacancies only identifies deficiencies by reference to established hospital positions funded by government). The latest report of the Medical Training and Review Panel published in 2008 for the first

time provides data on the number of accredited training positions per facility and specialty and the number of those positions which are filled (as well as the reason for any unfilled positions). Unfortunately, as the Panel reported, New South Wales did not provide data.¹⁹⁷ A survey of public hospitals conducted in 2004 showed that vacancies are prevalent in emergency medicine, with a total of 500 vacancies in New South Wales in June-July 2004.¹⁹⁸ In 2007, a survey conducted by the Workplace Research Centre at the University of Sydney found that 42% of the positions designated for emergency medicine advanced trainees (i.e. registrars) in New South Wales are filled by non-training doctors, including locums, overseas trained doctors and career medical officers.¹⁹⁹ Some positions are not filled.

- 20.210 The Inquiry was also provided with a survey of emergency specialist positions conducted in New South Wales in June 2007 which found that out of 239.35 FTE positions in level 3 to 6 emergency departments (ie the departments in the larger hospitals), 44.1 were vacant (ie about 18.5%)²⁰⁰.
- 20.211 NSW Health told the Inquiry that it has made significant progress in recruiting emergency specialists in an environment of limited local supply. In October 2007, it announced the addition of a further 33 positions for emergency physicians in New South Wales. NSW Health informed the Inquiry that between November 2007 and August 2008 36.45 FTE specialists were recruited to emergency department positions, including both staff specialists and visiting medical officers²⁰¹. Of these, 30.45FTE were new specialists, made up of trainees taking up specialist positions upon completion of their training, specialists from interstate and specialists from overseas. Some of the trainees were previously working in a locum capacity pending specialist positions becoming available in the location of their choice. NSW Health said that there has been a net increase of 25.65 FTE emergency specialists. The Australasian College for Emergency Medicine told the Inquiry that the College's NSW faculty is currently surveying Emergency Departments in NSW regarding the actual changes in specialist numbers as it does not accept the NSW Health figures²⁰².
- 20.212 Although I have not in a position to conduct an independent investigation into the accuracy of these figures, I have no reason to doubt them. It is fair to say that I have observed a significant element of distrust and a near breakdown in the relationship between various individuals, bodies and groups within NSW Health and the Australasian College of Emergency Medicine. It would quite inappropriate for me to express any view on the history of the relationship. I would only say that the adversarial nature of the relationship, exemplified by this most recent disagreement over the numbers of emergency specialists working within NSW Health is unhelpful and does not advance the cause of good and effective patient care. All concerned need to review the relationship and make concerted efforts to restore it to a greater degree of harmony.
- 20.213 Although there is currently a lack of reliable data nationally about the medical workforce, it is relatively clear that there is not a sufficient number of emergency medicine advanced trainees coming through the training programme to meet the needs of Emergency Departments. Exacerbating this problem, I was told that there is a high drop-out rate of advanced trainees from the College's training program²⁰³ (16 emergency medicine advanced trainees discontinued training nationally in 2007 out of a total of 79 from all specialties²⁰⁴). If the standards and requirements for the satisfactory completion of training remain as they presently are, then so far as I can see this shortage of candidates coming through the program is unlikely to change in the foreseeable future. If this is so, NSW Health will need to consider what other options there are for the effective staffing of Emergency Departments.

Other Emergency Department doctors

- 20.214 In addition to Fellows of the Australasian College for Emergency Medicine, there is a large number of medical practitioners working in Emergency Departments such as:
- (a) emergency medicine registrars or advanced trainees, of which there are 176 who have an address in New South Wales. It is assumed that the majority of them are undertaking advanced training positions;²⁰⁵
 - (b) career medical officers,
 - (c) locums, and
 - (d) junior medical officers in their early postgraduate years. All interns are required to complete a rotation in an Emergency Department of 10 or 11 weeks.

In rural areas, Emergency Departments are often staffed by GPs, specialists in other disciplines, and in some cases nurses many of whom hold First Line Emergency Certificate qualifications.

- 20.215 In 2005, the Medical Training and Education Council (predecessor to the Institute of Medical Education and Training) undertook a review of emergency medicine training in New South Wales. The review found that the emergency specialist to population ratio in New South Wales is below the national average (1:46,423, compared to 1:40,404 nationally)²⁰⁶. It found that hospitals without emergency specialists were staffed by other doctors including Career Medical Officers, Multiskilled Medical Officers, Senior Resident Medical Officers, GP VMOs and locums.
- 20.216 A doctor does not have to be a Fellow of the Australasian College for Emergency Medicine to be fairly described as a senior (or experienced) Emergency Department doctor. Career Medical Officers and GPs with extensive emergency medicine or critical care experience and/or other postgraduate qualifications also fit this description. The Australasian College for Emergency Medicine recognises this, particularly in view of the current completion rates within the College training program, but says that the eventual goal should be to provide access to Fellows to all patients presenting to Emergency Departments in Australasia.²⁰⁷ It says that the involvement of a Fellow of the College is optimal,²⁰⁸ primarily because medical specialists who have completed the Fellowship have met defined standards of competency and professional practice. This proposition is hard to resist once one accepts as I have discussed earlier in this chapter, that there is a need to stream patients in a way which ensures that only those who need immediate or emergency care and treatment are seen in Emergency Departments. I would not be prepared to accept the proposition as a universal truth as Emergency Departments currently operate.

How many emergency specialists are needed to staff Emergency Departments?

- 20.217 The difficulty in determining whether, and if so to what extent, there is a shortage of emergency specialists is exacerbated, or perhaps caused, by the lack of consensus about underlying demand, the appropriate models of care operating in Emergency Departments and appropriate level of workforce response. Nevertheless, there seems to be clear evidence that there are shortages in overall numbers of emergency specialists and trainees. The real question is the extent of the shortage and the appropriate distribution.
- 20.218 The Australian Health Workforce Advisory Committee reported in 2006 that there is no accepted formula or simple measure to work out the number of medical staff needed in an Emergency Department.²⁰⁹ The Australian Medical Workforce Advisory Committee

made recommendations in 2003 about the number of emergency doctors required to staff Emergency Departments of varying casemix and acuity. Those recommendations were that there should be 11-16 emergency specialists for Emergency Departments in major referral hospitals and 6-8 for Emergency Departments in major rural and regional hospitals.²¹⁰ Although the Inquiry did not review in detail the Emergency Department medical staff profile in every hospital, I was told²¹¹, and accept, that those recommendations are not currently met.

- 20.219 The issue as to appropriate staffing levels in Emergency Departments is a live one. In early 2008, the New South Wales Emergency Department Workforce Reference Group (established following industrial processes between the Australian Salaried Medical Officers' Federation and NSW Health) made a recommendation to the NSW Ministerial Emergency Care Taskforce about clinical staffing levels in Emergency Departments. The Inquiry was informed²¹² that that recommendation is for specialist staffing levels greater than that recommended by the Australian Medical Workforce Advisory Committee in 2003, depending on the workload variables of each Emergency Department. The Inquiry was informed that this leads to a need for an extra 160 emergency specialists²¹³.
- 20.220 The Parliamentary Inquiry into North Shore Hospital recommended in December 2007 that NSW Health expedite the work of the Emergency Department Workforce Reference Committee and the Ministerial Emergency Care Taskforce in establishing optimum levels for Emergency Department workforces, including specialists, registrars and nurses, who are currently working in Emergency Departments. I was told by NSW Health that although the above recommendations were made to the Ministerial Emergency Care Taskforce in early 2008, NSW Health's consideration of those recommendations is awaiting my report about the models of care that should operate in Emergency Departments.
- 20.221 In a process separate to that referred to above by the Emergency Department Workforce Reference Group, the Australasian College for Emergency Medicine has published guidelines on the base full time equivalent staffing levels by emergency specialists for Emergency Departments based on annual patient presentations.²¹⁴ The College says that the number of attendances is a crude estimation of workload and activity demand, even when combined with triage categories.²¹⁵ Although research is continuing into the development of reliable and accurate tools to measure true emergency department workload and activity, the College says that until such tools are developed, the calculation of the workforce can only be made with existing statistics such as attendance numbers. The model is based on a number of assumptions, including that all patients regardless of triage category classification or acuity have senior medical input and appropriate levels and skill-mix of nursing staff are in place.
- 20.222 The question whether all patients require senior medical input is open to debate. In support of its submission, the College noted that in the United States, emergency physician review of every emergency patient is mandated by several States and that in the United Kingdom and Ireland, establishing emergency physician staffing has been a high level objective for the last 5 years. The College advocates an "integrated, patient centred clinical team approach", in which emergency physicians undertake only those tasks that they can do, supported by a team performing necessary support tasks. The College submitted that using emergency specialists' skills in this way will allow them to work much more productively and efficiently and lessen the impact of workforce shortages and distribution problems.
- 20.223 I agree that the time of senior specialist doctors ought be freed up to allow them to carry out the tasks for which they have specialist training. However in my view this does not

require them to have input into every case that presents to the Emergency Department. I explain this further below.

- 20.224 It is clear that the optimum level of Emergency Department workforce needs to be established by NSW Health after close consultation with the Emergency Department Workforce Reference Group. This requires NSW Health to identify, and make transparent, current staffing levels and profiles in all Emergency Departments around the State. A process then needs to be put in place to develop a workload tool for determining appropriate medical staffing levels in Emergency Departments. This needs to take into account the appropriate skill mix to enable optimal use of the skills of all staff in Emergency Departments, including specialist staff and all support staff. To do this, it is necessary to examine the roles of all Emergency Department support staff on the basis of best practice to identify the key elements of the Emergency Department staffing profile. This should be done by NSW Health in cooperation with the Emergency Department Workforce Reference Group.

Why the shortage?

- 20.225 I was told that the shortfall in numbers of emergency specialists is related to the following factors.
- 20.226 First, the working environment of Emergency Departments leads to burn-out. Consequently, there is a high drop out rate from the College's 4 year advanced training program relative to other specialist training programs.²¹⁶ 16 out of 79 advanced trainees who discontinued their training in 2007 (Australia-wide) were emergency medicine trainees²¹⁷. I was told that a number of those who leave the program opt for work in intensive care or anaesthetics or to practice as locums. I do not think that job satisfaction should be underestimated when considering, and ultimately finding solutions for addressing, the shortage of emergency specialists. A range of factors adversely affect the job satisfaction of emergency doctors and ultimately the willingness of existing trainees to remain in, and prospective trainees to join, the Emergency Department training program.
- 20.227 Secondly, Fellows of the Australasian College for Emergency Medicine claim that they are not paid commensurately with other specialists. In 2005, the Medical Training and Education Council (the former Institute of Medical Education and Training) identified this factor as a systemic issue contributing to the shortfall in emergency specialists.²¹⁸ Although advertisements for emergency specialist positions in other States, such as Queensland, offer much higher remuneration than the equivalent positions in New South Wales,²¹⁹ the Inquiry did not receive any evidence that the existence of superior conditions north of the border has had an adverse impact on the emergency specialist workforce in New South Wales.
- 20.228 Thirdly, I was told by the Department of Health that, like all Colleges, the Australasian College for Emergency Medicine plays a role in controlling the number of available training positions and the accreditation of overseas emergency medicine doctors.
- 20.229 In order for an Emergency Department to be accredited for training by the Australasian College for Emergency Medicine, it must have a minimum of 2.5 FTE Fellows (for a training period of 6 months) and satisfy certain other criteria. In 2005, the Australasian College for Emergency Medicine increased the number of FACEMs that must work in an Emergency Department before it can have any emergency specialist trainees from a single FTE Fellow to 2.5 FTE Fellows, with effect from 1 January 2006. The effect was that 4 Emergency Departments in New South Wales lost accreditation²²⁰.

- 20.230 NSW Health submitted that this change in accreditation requirements reduced the ability of NSW public hospitals to produce doctors who qualify to be a Fellow of the Australasian College for Emergency Medicine. The position of the College, on the other hand, is that the training requirements were revised because it became clear that a single Fellow could not undertake the administrative, leadership, teaching and clinical roles required for an adequate training environment.
- 20.231 It ought be said that the numbers set out by the College for accreditation purposes are below the recommendations for staffing levels made by the Australian Medical Workforce Advisory Committee to which I referred above. They are also well below the FTE staffing levels recommended by the College for providing appropriate direct clinical or clinical support coverage.²²¹ If the Australian Medical Workforce Advisory Committee recommendations regarding staffing levels were met, the College's accreditation requirements ought not be contentious.
- 20.232 The Inquiry received a submission from doctors at Hornsby Ku-ring-gai Hospital to the effect that that hospital's Emergency Department is vulnerable to losing its accreditation.²²² It has 2.5 FTE emergency specialists, even though the Australian Medical Workforce Advisory Committee recommended 6 to 8 FTE specialists for a department of that size. The hospital had to seek 'Area of Need' status in order to be able to recruit its current Director of Emergency Medicine from overseas. Area of Need status enables the recruitment of suitably qualified overseas-trained doctors on a temporary basis, where there has been difficulty recruiting a local doctor with general registration on a permanent basis. The hospital also relies on 3 specialists from inpatient teams to provide part time support to the Emergency Department. It seems to me that the real issue for that hospital is whether it has appropriate staffing levels to provide appropriate clinical care, not whether it will lose its accreditation.
- 20.233 Fourthly, the Australasian College for Emergency Medicine also has input into the accreditation of overseas trained doctors where overseas trained doctors seek to practise medicine in New South Wales as specialists in emergency medicine.
- 20.234 While the College has an obvious but indirect role in workforce supply because it accredits facilities for training, and fixes the standards for qualification, NSW Health determines whether or not there is funding for positions for registrars and fellows and thereby itself can within the parameters of accredited facilities directly control the number of emergency doctors working in Emergency Departments. I discuss the roles of NSW Health and the specialist colleges at more length in Chapter 7.
- 20.235 Finally, a relevant factor when considering the emergency workforce is the number of Emergency Departments throughout the State. In my view, there are too many Emergency Departments in metropolitan Sydney, Newcastle and Illawarra and a small workforce is spread too thinly. I set out my views and recommendations in this regard in Chapter 26.

Recommendation 102: *The current framework of collaboration between NSW Health and the Emergency Department Workforce Reference Group be continued in order to, by consensus:*

- (a) *Identify and publish current staffing levels and profiles for each existing Emergency Department;*
- (b) *A workload tool for determining appropriate staffing levels for Emergency Departments;*

- (c) *A plan identifying the appropriate number and location of emergency medicine trainees which ought to be funded by NSW Health.*

Changing roles

- 20.236 Traditionally, I am told, patients are seen first by an intern, then junior medical staff and then a senior doctor if required.²²³ I was told that this sequence should be reversed, as the earlier the senior doctor sees the patients the more effective the treatment, with benefits to the patient as well as to costing, both in time and money.²²⁴ The early intervention of senior staff leads to more appropriate treatments being commenced and only the necessary tests being ordered. In some cases, it may allow treatment and discharge immediately or immediate admission. I have no doubt that, if there were enough senior doctors available to do this, then it would be an ideal scenario.
- 20.237 I am also told by the Australasian College for Emergency Medicine that a senior doctor should see all patients in an Emergency Department.²²⁵ Again, in an ideal world with enough senior doctors, this is arguable, although I doubt that an experienced emergency nurse would not be able to make as valuable a contribution to individual patients in many of the less serious cases which come to Emergency Departments.
- 20.238 The problem, as I see it, is that Emergency Departments in NSW public hospitals in 2008 cannot be described as the ideal world. Against the constraints imposed by reality, I am of the view that a more innovative approach has to be taken.
- (a) There simply are not enough senior doctors to see all patients, nor are there likely to be sufficient numbers in the foreseeable future.
- (b) I do not accept that a senior doctor **needs** to see all patients attending the Emergency Department. There are a range of patients, conditions and acuity that come to Emergency Departments. Many are not in a sufficiently serious clinical condition to warrant the attention of a specialist. Many conditions can be dealt with by a career medical officer, an experienced nurse, a social worker, a physiotherapist and so on.
- 20.239 I have seen a number of very successful examples of the use of a range of health professionals in Emergency Departments. At St Vincent's Hospital, for example, a senior experienced nurse handles cases which do not require the intervention of an emergency specialist such as those needing dressings, and/or plasters. A physiotherapist principally attends to the diagnosis and treatment including the strapping of soft tissue injuries such as strains.²²⁶ At Concord Hospital, an advanced practice nurse is available 24 hours a day to see patients after triage to take blood, arrange x-rays and tests. This ensures that results arrive by the time a doctor sees the patient.²²⁷ Hornsby Hospital uses a 'right person for the job' approach, including strategic use of enrolled nurses, assistants in nursing and registered nurses to accomplish tasks in the Emergency Department.²²⁸
- 20.240 As one doctor said to me:²²⁹
- "[If] somebody has a sprained or broken wrist, the nurse can bring that person in; give them simple first aid; give them some pain killers, up to narcotics, organise the X-ray and then they come back and we say, "Yes, look you've got a broken wrist, we can do this for you". ... Whereas before, previously, the person would sit around for 2 hours waiting for a doctor to come and say exactly the same thing."

- 20.241 In my view, models of care should be developed which will allow defined tasks to be carried out by staff other than doctors, such as senior nurses and allied health professionals where appropriate. Some patients may be able to be seen and discharged without consulting a senior emergency doctor. Others will simply have their care expedited because the appropriate health care professional completes necessary preliminary tasks before a senior doctor attends to the patient.
- 20.242 It is necessary to analyse the roles of all health professionals working in Emergency Departments, including medical, nursing, pharmacy and allied health roles, to determine and define what their appropriate roles and professional input should be.

Other workforce issues

- 20.243 I have dealt with the following workforce issues elsewhere in my report.

Locums and overseas doctors

- 20.244 Outside of major metropolitan hospitals, Emergency Departments are often dependent on locums and overseas doctors for staffing. Locums pose particular problems in hospitals, in terms of continuity of care and cost. I have dealt with these problems in Chapter 7. Overseas doctors also require some care and attention from NSW Health, which I have discussed in Chapter 7.

Support staff

- 20.245 Perhaps in the Emergency Department more than anywhere else in the hospital, it is vital to free up experienced doctors and nurses to attend to patients, rather than allowing their time to be taken up by administrative tasks. During my visits to Emergency Departments, I was told that emergency specialists in particular are frequently taken away from important clinical tasks to undertake tasks that more junior clinicians or clinical support staff could carry out. A study provided to the Inquiry indicated that doctors in Emergency Departments are subject to high levels of interruption²³⁰.
- 20.246 In my view, every Emergency Department in every tertiary hospital should have a dedicated communications officer. Numerous Emergency Departments already have a communications officer and all find it a valuable, time saving resource.²³¹ A communications officer is responsible for answering telephone calls, paging people and organising tests and following up results. Having a communications officer frees up doctors' time for clinical services and prevents constant interruptions from direct patient care. Matching skill-sets to tasks in this way ultimately results in lower labour costs and therefore the availability of more resources..

Recommendation 103: *A clinical support officer be rostered for duty as a communications officer for no less than 16 hours per day at every Emergency Department.*

Rural

- 20.247 Small rural hospitals have a completely different set of problems. Most Emergency Departments in small rural areas have no on-site doctors, but call local doctors to the Emergency Department when needed. I discuss this in Chapter 6.

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- ² Australian Institute of Health and Welfare, *Australian Hospital Statistics 2006-07*, May 2008, Australian Institute of Health and Welfare, Canberra, Table 2.7.
- ³ Letter from NSW Health to Special Commission of Inquiry, 23 September 2008.
- ⁴ Australian Institute of Health and Welfare, *Australian Hospital Statistics 2006-07*, May 2008, Australian Institute of Health and Welfare, Canberra, Table 5.5.
- ⁵ Booz, Allen, Hamilton, *Key Drivers of Demand in the Emergency Department*, December 2007, Booz, Allen, Hamilton, p.45.
- ⁶ Booz, Allen, Hamilton, *Key Drivers of Demand in the Emergency Department*, December 2007, NSW Health, North Sydney, p 45., p.45.
- ⁷ Booz, Allen, Hamilton, *Key Drivers of Demand in the Emergency Department*, December 2007, NSW Health, North Sydney, p.65.
- ⁸ Paxton Partners, *Analysis of Emergency Admission Data - Discussion Paper*, July 2007, Paxton Partners.
- ⁹ Booz, Allen, Hamilton, *Key Drivers of Demand in the Emergency Department*, December 2007, NSW Health, North Sydney.
- ¹⁰ Paxton Partners, *Analysis of Emergency Admission Data - Discussion Paper*, July 2007, Paxton Partners at 10.
- ¹¹ Dr Ronald Hawkesford, Armidale hearing, 26 March 2008, transcript 913.11.
- ¹² Joint Select Committee on the Royal North Shore Hospital, NSW Parliament, *Report on Inquiry Into the Royal North Shore Hospital*, December 2007, Sydney, page xix.
- ¹³ Dr Mary McCaskill, The Children's Hospital, Westmead hearing, 15 May 2008, transcript 2937.7.
- ¹⁴ Australasian College for Emergency Medicine, *Policy on the Australasian Triage Scale*, reviewed March 2006.
- ¹⁵ Joint Select Committee on the Royal North Shore Hospital, NSW Parliament, *Report on Inquiry Into the Royal North Shore Hospital*, December 2007, Sydney, p. xiv, recommendation 10.
- ¹⁶ Hughes, Professor Clifford and Walters, Professor William *Report of Inquiry Into the Care of a Patient With Threatened Miscarriage at Royal North Shore Hospital on 25 September 2007*, October 2007, p.14.
- ¹⁷ Jason Mullavey, Nepean Hospital hearing, 8 April 2008, transcript 1363.23.
- ¹⁸ Meeting with Jana Horska and Mark Dreyer, 6 May 2008. Ms Horska was handed a paper about waiting and assumed that she would be next. She was told that she would be seen within between one and two hours but was not told what triages were or what triage level she was.
- ¹⁹ Information provided during visits to St George Hospital on 21 February 2008 and Liverpool Hospital on 26 February 2008.
- ²⁰ Information provided during visit to Kempsey District Hospital on 27 March 2008.
- ²¹ Information provided during visit to St George Hospital on 21 February 2008.
- ²² Jason Mullavey, Nepean Hospital hearing, 8 April 2008, transcript 1360.4; Submission of Professor Sydney Nade, 22 February 2008, SUBM.013.0001.
- ²³ Submission of Zoe Satherley, 14 April 2008, SUBM.065.0013.
- ²⁴ Kylie Stark, Sydney Children's Hospital hearing, 19 May 2008, transcript 3073.46.
- ²⁵ Australasian College for Emergency Medicine, *Policy on the Australasian Triage Scale*, reviewed March 2006.
- ²⁶ Information provided during visit to St George Hospital on 21 February 2008.
- ²⁷ Confidential Westmead hearing, 26 May 2008, transcript 36.18.

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- 28 Confidential Westmead hearing, 26 May 2008, transcript 36.18; see for example, 'Number of Patients Attending Emergency Departments by Triage Category and Hospital - April – June 2008', NSW Health publication dated 02 September 2008.
- 29 Confidential Westmead Hospital hearing, 26 May 2008, transcript 38.9.
- 30 Information provided during private session on 16 October 2008.
- 31 Letter from NSW Health to Special Commission of Inquiry, 5 November 2008, attaching The Emergency Nurses Advisory Group, *Clinical Initiatives Nurse Guidelines*, November 2002; And see Cashin, A et al, "Clinical initiative nurses and nurse practitioners in the emergency department: What's in a name?", (2007) 10 Australasian Emergency Nursing Journal 73, p.74.
- 32 Letter from NSW Health to Special Commission of Inquiry, 5 November 2008, attaching *Clinical Initiatives Nurse Guidelines*, The Emergency Nurses Advisory Group November 2002, Sydney South West Area Health Service Guidelines for the role of the CHW Ed Clinical Initiatives Nurse November 2005, Emergency Accredited Registered Nurse Position Description for Manly Hospital and Nurse Initiated X-Ray guideline for the Northern Beaches Health Service.
- 33 Cashin, A et al, "Clinical initiative nurses and nurse practitioners in the emergency department: What's in a name?", (2007) 10 Australasian Emergency Nursing Journal 73, p.76.
- 34 Dr Mary McCaskill, The Children's Hospital at Westmead hearing, 15 May 2008, transcript 2938.33.
- 35 Information provided during visit to Liverpool Hospital on 26 February 2008; Mary McCaskill, The Children's Hospital at Westmead hearing, 15 May 2008, transcript 2938.33.
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- 37 Hughes, Professor Clifford and Walters, Professor William *Report of Inquiry Into the Care of a Patient With Threatened Miscarriage at Royal North Shore Hospital on 25 September 2007*, October 2007.
- 38 Australasian College for Emergency Medicine, *Policy on the Australasian Triage Scale*, reviewed March 2006.
- 39 Department of Health and Ageing, Australian Government, *The State of our Public Hospitals, June 2008 Report*, 2008, Commonwealth of Australia, Canberra, p. 46. These percentages are Australia wide for 2006-07.
- 40 Department of Health and Ageing, Australian Government, *The State of our Public Hospitals, June 2008 Report*, 2008, Commonwealth of Australia, Canberra, p. 46. These percentages are Australia wide for 2006-07, pp. 46 and 47.
- 41 Australasian College for Emergency Medicine, *Policy on the Australasian Triage Scale*, reviewed March 2006. The Australasian College for Emergency Medicine has set a recommended performance indicator for the proportion of patients that should be seen within the relevant waiting time
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- 43 Steering Committee for the Review of Government Service Provision, *Report on Government Services 2008*, Volume 2, 2008, Commonwealth of Australia, Canberra, p. 10.25.
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- 45 Australian Institute of Health and Welfare, *Australian Hospital Statistics 2006-07*, May 2008, Australian Institute of Health and Welfare, Canberra, p. 94.
- 46 Dr Kathryn Porges, Gosford hearing, 10 March 2008, transcript 59.46-60.4; Confidential Westmead hearing, 26 May 2008, transcript 35.14-36.2; Dr Ronald Hawkesford, Armidale hearing, 26 March 2008, transcript 915.5-9.
- 47 *Australian hospital statistics 2006-07*, Australian Institute of Health and Welfare, Table 5.3.
- 48 Confidential Westmead Hospital hearing, 26 May 2008, transcript 39.28.

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- 49 Confidential Concord Hospital hearing, 24 April 2008, transcript 24.14.
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- 52 Dr Peter Roberts, Hornsby hearing, 11 March 2008, transcript 203.36-42; Submission of Dr Andrew Hooper, 30 March 2008, SUBM.008.0017 at 21; Submission of the Australasian College for Emergency Medicine, March 2008, SUBM.027.0007 at 8; Submission of Dr Stephen Barratt, 28 March 2008, SUBM.035.0088 at 101.
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- 64 Department of Health and Ageing website, <http://www.health.gov.au/internet/main/publishing.nsf/Content/casemix-ED-Triage+Review+Fact+Sheet> (accessed September 2008).
- 65 Jelinek G, "Triage: Coming of age" (2008) 20 *Emergency Medicine Australasia* 196 at p.197.
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- ⁷⁴ Confidential Bankstown Hospital hearing, transcript 83.30.
- ⁷⁵ Dr Gina Watkins, private Sydney Children's Hospital hearing, 19 May 2008.
- ⁷⁶ Fitzgerald G, "Triage" in Cameron P et al (eds), *Textbook of Adult Emergency Medicine*, 2000, Churchill Livingstone, New York, pp. 584-588; McCallum T, "The Clinical Practice of Emergency Department Triage: Application of the Australasian Triage Scale – An Extended Literature Review Part 1: Evolution of the ATS", (2006) 9 *Australasian Emergency Nursing Journal* 155-162; Travers D et al, "Five-Level Triage System More Effective Than Three-Level in Tertiary Emergency Department", (2002) 28(5) *Journal of Emergency Nursing* 395, pp. 395-400; Gerdtz M et al, "Optimizing Triage Consistency in Australian Emergency Departments: The Emergency Triage Education Kit", (2008) 20 *Emergency Medicine Australasia* 250-259; Wuerz R et al, "Reliability and Validity of a New Five-level Triage Instrument", (2000) 7(3) *Academic Emergency Medicine* 236-242; Wuerz R et al, "Implementation and Refinement of the Emergency Severity Index", (2001) 8(2) *Academic Emergency Medicine* 170-176.
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21 Community health

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What is community health?

- 21.1 NSW Health has adopted the term “Primary and Community health” to describe the overlapping primary health care and community health sectors and services as a single integrated and cohesive structure.¹ In this chapter, I also use the term “community health” to refer to primary and community health services collectively.
- 21.2 According to the NSW Health *Integrated Primary and Community Health Policy 2007-2012*, primary health care refers to universally accessible, generalist services such as general practitioners and community and early childhood nursing services, that address the health needs of individuals, families and communities across the life cycle. For most people, primary health services are the first point of contact with the health care system.² Private practitioners provide the majority of primary health care services.³
- 21.3 Community health refers to a range of community-based prevention, early intervention, assessment, treatment, health maintenance and continuing care services delivered by a variety of providers. These services are focused on the social and environmental determinants of health. Community health services predominantly operate from a social model of health in which improvements in health and wellbeing are achieved by directing efforts towards addressing the social and environmental determinants of health.⁴ The NSW public health system provides the majority of community health services. Community health has also been described as “ambulatory” care.
- 21.4 Generally, community health services are provided on either an episodic or else an ongoing basis. This may be compared to hospital acute care, which is generally episodic or short-term care provided to an individual. The primary and community health sector engages an extensive range of service providers. Community health services may involve a mixture of generalist and more specialised services.
- 21.5 Community health has an important role to play in the treatment of patients with chronic and complex conditions (which I discuss in Chapter 3) because such patients often require their care to be coordinated across a number of provider-driven boundaries, and after discharge from acute services and referral to specialist services.
- 21.6 I have chosen to report on and make recommendations about the provision of community health services for a number of reasons. One is that there are obvious benefits which flow to hospitals from having systems which obviate or reduce the need for admissions to hospital where possible. As well, a system which has the effect of shortening inpatient stays where appropriate, by providing services in the home or in the community will have a beneficial effect on the availability of hospital services. Innovations in technology and the delivery of care mean that it is now possible to provide more acute care services in the home environment which is preferable from the patient’s perspective and better for patient care more generally.
- 21.7 Over the course of this Inquiry, it has also become clear to me that hospital-based acute care is most effective when it is integrated with community-based health care. It seems that when integration does occur it is often through the individual efforts of a local champion or champions (rather than as an embedded program). As one witness stated, patients currently bear the onus of ensuring the integration of their own healthcare.⁵

21.8 The following statement was made to the Inquiry about integrating community and health care:

"Community and hospital health care are usually more effective when fully integrated, though these components may well be best based at and accessed from different sites...This is not an argument for the separate identity and provision of community based health care, but for resetting the balance between hospital and community components of integrated health services, and shifting the centre of gravity of such services towards more accessible community health services."⁶

21.9 Another reason why my Inquiry although into acute care services in public hospitals cannot ignore community health is the existence of the forces putting pressure on acute care. There are two: the first is our ageing population; the second is the rising burden of chronic disease in the community.

21.10 When it comes to community health services, the majority of the evidence received by the Inquiry related to the care of:

- the elderly;
- those suffering from chronic and complex conditions;
- the mentally ill; and
- the severely disabled.

21.11 The *NSW State Plan* identifies the reduction of hospital admissions "for people who should not need to come to hospital" by 15% over 5 years as a target.⁷ The *State Health Plan* identifies the strengthening of primary care and continuing care in the community as a strategic direction to achieve this goal.⁸ I discuss this goal further below.

21.12 Community health services are funded by the NSW public health system, the Commonwealth Government and non-government organisations.

- The NSW public health system provides the majority of community health services. The amount of funding provided by the State Government for primary and community based services in its 2008-09 budget is \$1.0241 billion.⁹
- The Commonwealth Government also provides community health services, which are mainly funded under the portfolio of the Department of Health and Ageing, which relates to "Primary Care" (namely, the outcome that Australians have access to high quality, well-integrated and cost-effective primary care).¹⁰ This portfolio was allocated \$896.84 billion in 2007-08 and is estimated to be resourced in the amount of \$982.86 billion in 2008-09.¹¹ This includes a number of initiatives such as the GP Super Clinics Program, the development of a National Primary Health Care Strategy, new preventative health care and chronic disease items under Medicare, the National Health Call Centre Network, and primary care education and training for GPs.¹²
- Non-government organisations, including charities, also provide community health services in NSW.

Advantages of community health over hospital care

- 21.13 There are several advantages to delivering health care in the community.
- 21.14 First, patients are happier if treated in the community. The results of the NSW Health *Patient Survey* in 2007 confirm this; patients receiving community health services had a higher rate of satisfaction (96%) with their care than any other patient group.¹³
- 21.15 Second, available data indicates that it is more cost effective to treat patients in the community than in a hospital.
- A study of the former Macarthur Health Service's Acute Ambulatory Care Service (**MACS**) published in 2005 found that episodes of care in MACS cost less than equivalent episodes of inpatient care for selected diagnoses. Overall, a saving of 63% could be made from the combined top 10 types of cases treated if there was total substitution of inpatient care with ambulatory care. If inpatient care was partially substituted, savings would be in the order of 50%.¹⁴ The study is co-authored by Dr Stephen Wilson, who explained to me that he had carried out a study showing that it was possible to take 10% of patients out of acute care and deliver that care in the community for 50% of the cost.¹⁵
 - According to the NSW Auditor-General's recent Performance Report *Delivering Health Care out of Hospitals* (September 2008), out of hospital programs cost less than treatment in hospital. It states that an evaluation of ComPacks in 2004 showed a reduction of 787 days of hospital care for the sample of 47 patients, which was equivalent to over \$250,000 in costs.¹⁶ However, the Auditor General's report notes that NSW Health needs to ensure that it has up to date and comprehensive information on the costs of its out of hospital services. Importantly, it also highlights that out of hospital programs are **not** a means of cutting hospital staff or reducing bed numbers.¹⁷
 - NSW Health also told the Inquiry that cost of equivalent treatment in the community equates to about half of the cost of that treatment when delivered in acute care beds in hospitals.¹⁸
- 21.16 Third, treatment in the community takes the pressure off hospitals occupancy rates and staff workload. A reduction in community health services has ramifications for Emergency Departments and hospital services. The Inquiry received evidence to this effect from a number of clinicians. I was told that a loss of community health facilities removes effective filters on hospital presentations.¹⁹ I was told that a small deterioration in the quality of community mental health care can "swamp" Emergency Departments and inpatient units because the proportion of acute mental health patients who are treated in the community is much greater than the number of mental health inpatients.²⁰
- 21.17 The Inquiry received a number of submissions which were to the same effect as the following evidence:
- "...we need to build the capacity of community health to deal with both acute, subacute and community care. I see a health system as involving preventive and population health as a foundation, the good management of illness, and at the acute end the use of both hospitals and the community for that care - not just hospitals."²¹

- 21.18 I was given examples of the relationship between the existence of effective community services and the demands made on hospital for patient admissions. I was told at the Tweed Heads hearing that a cardiac failure liaison nurse had, until recently, successfully managed patients in the community, thereby reducing avoidable hospital admissions. Since the nurse's resignation in January 2008, the position has been "frozen" due to budgetary constraints. I was told that there has been an increase in avoidable hospital admissions as a consequence.²²
- 21.19 I was told that reliance by the public upon the Emergency Department to provide primary and/or community health care after hours and on weekends, is unsustainable:
- "...we can't add beds ad infinitum into the future. With the way the population is growing, there needs to be more in the home and providing services. The Emergency Departments have become sort of default centres for many things which are not really our core business. The patient from a nursing home whose suprapubic catheter falls out Friday afternoon ends up taking up a bed in our Emergency Department, but it is not really an emergency. There is no where else to go."²³
- 21.20 One witness gave evidence that if he was designing a health system for metropolitan Sydney "from a clean slate", it would include 6 to 10 major hospitals (compared with the present number - 40) with a network of primary and community healthcare centres around them.²⁴ I took this evidence to be emphasising the point that providing care in the community setting would be preferable to providing care in an acute care setting for many of the conditions which are presently treated in the hospital system.
- 21.21 It is said that most health care is in fact delivered in the community.²⁵ Over 90% of the population have direct contact with a primary or community health service each year.²⁶ NSW issued its first policy covering the primary and community health sector as a whole in 2007.²⁷ It articulates a goal of integrating the primary and community health sectors as well as their relationship and interface with the acute care services sector and population health services sector.
- 21.22 The Auditor-General's recent report into the delivery of health care out of hospitals in New South Wales made the following assessment:²⁸
- Overall, NSW Health has an effective approach to out of hospital care.
 - Area health services and hospitals have developed programs which can provide clinical outcomes which are as good for patients as in-hospital care and can reduce the time they spend in hospital. They have operated for several years and show considerable potential.
 - NSW Health has data to show that costs for out of hospital programs are lower than in-hospital care. However, some of the data are several years old, and some include only a fraction of the types of patients and conditions which the programs are treating. Hence costs may not reflect the way that programs currently operate.
 - While patients achieve good health outcomes, NSW Health needs more consistent measures of the quality of care it provides.
- 21.23 This report suggests, and I agree, that there are real advantages in its provision of health care in the community. But more careful and thorough evaluation is needed.

Problem of co-ordinating services

- 21.24 The Inquiry received submissions, which I accept, that an integrated approach to service provision is crucial.²⁹ Ideally, there should be a seamless transition from community health to hospital care and back to community health. To my observation, this is not always the case.
- 21.25 The impediment to effective integration was identified in the following evidence:
- “We have the Commonwealth-funded community services gravitating to maintenance care and elective services, as they should, and hospitals gravitating to acute care, and somewhat of a gap, which we continually see when we get to the point of discharging patients - a gap... towards subacute care, a gap to community care, and difficulties in communication at that level.”³⁰
- 21.26 The Inquiry received submissions to effect that the acute care system is “chronically clogged” with significant numbers of patients awaiting beds in less acute settings or sufficient community services to enable them to be discharged home.³¹
- 21.27 At Bankstown Hospital I was told that discharge is frequently delayed by reason of a lack of community nurses to meet the demand for follow-up care.³²
- 21.28 I was told that the provision of community health services is fragmented and that the division between Commonwealth and State funding arrangements for those services contributes to and exacerbates a complex system.³³ I was told that the outsourcing of community health services to non-governmental organisations creates further difficulties for the integration of services. It was submitted to the Inquiry that a systemic, integrated approach is needed to ensure greater efficiency in discharging patients from hospital and preventing admissions.
- 21.29 I was told that the current community health “packages” (or services) which permit early discharge from hospital only cater to a proportion of patients. The following factors also commonly impede discharge into the community:
- (a) long waiting lists for appropriate support services or residential facilities;³⁴
 - (b) patients refusing placement in a facility;
 - (c) patients who require assessment of their capacity to give informed consent to discharge options;
 - (d) delays with completion of home modifications;
 - (e) difficulty in coordinating various independent services to provide adequate support
 - (f) family conflict or unresponsiveness as to the organisation of placements; and
 - (g) patients who do not have family to assist in the securing of services / placements.³⁵
- 21.30 Poor integration of hospital and community services appears in part to be due to a lack of knowledge about the available services. I was told that, by reason of the diversity of funding arrangements for community health services, and the diverse mix of community health services provided in each community, each with its own eligibility criteria, it requires a great deal of local knowledge and experience to identify a community health service that is suitable for a patient, and arrange for the patient to receive a suitable package of community health services on discharge from hospitals.³⁶

21.31 A social worker within the North Coast Area Health Service made the following comments about the impediments in the current system:

"To put it bluntly, the organisation and delivery of particularly community services is a mess, given the fragmentation of service provision, because of the ad hoc 'add-on' approach to 'fixing' systemic problems, which is complicated by the Commonwealth / State funding arrangements, the arbitrary division of responsibilities between different government departments (e.g. health, aged, disabilities, Vets), and the practice of 'out-sourcing' specific services to a proliferation of non government and private for profit organisations.

Staff in NSW Health do a valiant job trying to make the 'system' work for the benefit of patients and their families, however, the current community service landscape is inherently complex and inefficient and requires the Herculean efforts of dedicated health workers to secure the timely provision of an appropriate mix of services to prevent hospitalisations or to enable timely discharges from hospital."³⁷

21.32 In 2007, NSW Health engaged KPMG, in the context of the Aged and Chronic Care Project under the Clinical Services Redesign Program, to identify the processes and steps in the patient pathway and problems with regard to access and patient flow for patients aged 65 years and over (or 45 years for Aboriginal people) and chronic care patients. The themes identified included the following:

- lack of a "one stop shop" to access information about the available community services;³⁸
- lack of prioritisation criteria for community-based packages and services which are allocated on a "first in first served" basis;
- variable knowledge among the Emergency Department staff about appropriate community-based services to which patients could be referred;³⁹
- patients referred to a wide range of community health services and programs through a variety of sources including hospitals, GPs, specialists, community services and via self-referral. Each service has its own criteria for referral and referral pathways between services were not always firmly established;
- duplication in services and diagnostics in the Emergency Department because of poor access to GP and community health records,⁴⁰ and poor communication between the Emergency Department and GPs to prompt review of medications after an episode of care;⁴¹
- poor inter and intra-hospital communication in relation to bed management which reduced planned direct admissions; and
- inadequate discharge planning because of a lack of input from all relevant professionals, inconsistent approaches to medication management, over-reliance on the nursing unit manager as a point of contact and coordinator, and poor transfer of information.⁴²

21.33 What this study does identify is the many ways in which the provision of acute care services in hospitals and community health care interact. To allow acute care services to function efficiently, hospitals need effective community health services and facilities.

21.34 The Inquiry received evidence about the same issues, particularly about delays in discharge as a result of limited coordination between hospital and community services.

Current programs

- 21.35 The range of community health services presently available has been described as an “acronym soup”.⁴³
- 21.36 Community Acute/Post Acute Care (**CAPAC**) is the term used in NSW to refer to a range of programs delivering selected types of acute and post acute care to suitable, consenting patients in their home as an alternative to inpatient (hospital) care. CAPAC encompasses a range of programs which have been developed in response to identified local needs, for example:
- Hospital in the Home (**HITH**), a program in which nursing and allied health staff provide acute care at home including, for example, intravenous antibiotics, wound dressings, or home oxygen. See Chapter 3 on chronic, complex & elderly patients.
 - Post Acute Care (**PAC**), a Victorian Department of Human Services program which also provides post hospital recuperative supports for patients in NSW who reside along the Victorian border.
 - Acute Post Acute Care (**APAC**)/GP shared model of care providing support for acute conditions such as deep venous thrombosis (DVT), pneumonia and cellulitis in the community on the Central Coast of NSW and the Northern Beaches of Sydney.⁴⁴
- 21.37 NSW Health’s Clinical Services Redesign Program identifies that “successful CAPAC services are characterised by the provision of comprehensive, holistic, multi-disciplinary patient-centred care 24 hours a day by dedicated teams of hospital and community based staff”.⁴⁵ It states that clear organisational and clinical governance systems, procedures and clinical practice guidelines that take account of patient acuity, medical accountability, latest clinical evidence and delivery of quality outcomes are essential.
- 21.38 The provision of CAPAC services varies across area health services with respect to the type of services, and the extent to which they are, available. CAPAC receives referrals from a variety of services including directly from Emergency Departments, medical specialists, GPs, hospital inpatient or outpatients units. An example of the provision of CAPAC services is the administration of intravenous antibiotics to a resident of an aged care facility by a community health nursing service after referral by a GP. The community health nurse visits the nursing home to administer the antibiotics and works in partnership with the nursing home staff, providing education and support where appropriate. The resident must see her or his GP before cessation of treatment.⁴⁶ In other words, there is appropriate medical review of community health nursing services which means that there is a need for clear and formalised links between GPs (and other health providers) and CAPAC service providers. CAPAC services are not available in every hospital. CAPAC services are generally short term (5 to 14 days). Currently NSW Health is providing CAPAC services to around 17,000 patients each year.⁴⁷
- 21.39 NSW Health has established funding agreements with area health services for CAPAC services and other specified out of hospital services, including ComPacks, Rehabilitation for Chronic Disease and Healthy at Home, which I outline below.⁴⁸
- 21.40 Sub-acute community care may be provided in what are known as “packages”. The following is an overview of the range of community service packages that are available in NSW (including both State and Commonwealth initiatives):

- “Healthy at Home” (formerly the Sub-Acute Fast Track Elderly Care pilot program) is a pilot program which provides integrated community care for people aged over 65 years (over 45 years for Aboriginal and Torres Strait Islander people) with emerging acute care needs. It provides a combined assessment by a health clinician and a ComPack’s case manager (see next item) within 48 hours of referral, fast tracking of diagnostics and assessment, and up to 6 weeks of case management to set up access to long-term patient and carer support.⁴⁹ The NSW Auditor-General recently recommended that these pilots be continued until it is more clearly demonstrated that they reduce Emergency Department attendances and costs.⁵⁰ The program includes a telephone referral service staffed by nurses and other clinicians to out of hospital care services. The Auditor-General’s recent report noted that while there is evidence that CAPAC, Rehabilitation for Chronic Disease and ComPacks can reduce attendances at hospital and length of stay, it was not yet possible to say whether Healthy at Home can reduce attendances at hospital and hospital length of stay.⁵¹ The Auditor-General’s report notes that the “Healthy at Home” pilot had received only 55% of its target number of referrals (being 195 referrals per month) since March 2006.⁵²
- Community Packages (**ComPacks**) are for patients who need 2 or more community services for up to 6 weeks after discharge from hospital to ensure that they can return home safely. ComPacks allows for early discharge from hospital. Suitable patients are generally referred to Compacks by hospital staff such as social workers or discharge planners.⁵³ Services are brokered by a case manager. Examples of services include:⁵⁴
 - (i) domestic assistance, such as cleaning, washing and ironing, help with shopping, transport to appointments, and meals;
 - (ii) personal care, such as bathing, dressing, eating and personal grooming;
 - (iii) social support, such as visiting services or accommodation advice; and
 - (iv) health care related assistance including falls management, dementia support services, home modifications and maintenance.

The ComPacks program is funded by area health services and run by Community Options, a non-government organisation.⁵⁵ As at 19 February 2008, 11,247 ComPacks had been provided (Table 1).⁵⁶ NSW Health informed the Inquiry that it plans to increase the use of ComPacks across all area health services.⁵⁷
- “Rehabilitation for Chronic Disease” services help the patient self-manage their condition. They may be delivered in hospitals, at home or in community clinics by GPs, rehabilitation teams or community health professionals. They teach patients how to monitor their symptoms and reduce their risk factors.
- Home and Community Care Program (**HACC**). The HACC Program is a joint State - Commonwealth program administered in NSW by the Department of Ageing, Disability and Home Care. It is designed to assist frail older people and younger people with a disability in their homes, and provides services such as transport, meals, social support, counseling, and home modification and maintenance. NSW Health also provides community nursing services, allied health and centre-based day care services under the program.⁵⁸
- Aged Care Transitional Intervention Program (**ACTIP**) is for persons aged 65 years and over (Aboriginal and Torres Strait Islanders, 45 years and older) who have recently suffered an illness/injury or a reduction in their level of independence and would benefit from a period of extra care in their home of up to 8 weeks, including nursing care, special equipment, physiotherapy or Occupational Therapy.⁵⁹

- Program of Appliances for Disabled People (**PADP**) provides equipment and rapid access to assistive devices and equipment such as electric beds and wheelchairs for patients with high level needs and disabilities.⁶⁰ Area health services are responsible for the funding and efficient and effective operation of PADP at the local level and NSW Health provides direction, allocates the PADP budgets on the basis of the Resource Distribution Formula, and ensures accountability through the development of performance criteria.

21.41 Federally funded programs include:

- Community Aged Care Packages (**CACPs**) are individually planned and coordinated packages of community aged care services. They are designed for older people living in the community who require case management of their care services because they have complex needs. Recipients of CACP services would otherwise be eligible for low level residential care.⁶¹
- Extended Aged Care at Home (**EACH**) and Extended Aged Care at Home Dementia (**EACH Dementia**) are packages of aged care services for older people with complex needs, and aim to provide care in the home which is equivalent to high-level residential care.⁶²
- Transitional Aged Care (**TAC**) provides short-term and active management for older people at the conclusion of a hospital episode. Aged Care Assessment Team (**ACAT**) approved recipients receive nursing support, low intensity therapy or rehabilitation, personal care, medical support and case management.⁶³
- Home Medication Review (**HMR**) is funded through Medicare Australia. HMR, also known as Domiciliary Medication Management Review provide a home visit from a pharmacist, in collaboration with the patient's GP, to comprehensively review the patient's medication regimen and report back to the GP. After this, the GP and patient agree on a medication management plan.⁶⁴

21.42 This suite of services, Federal and state (which may not be exhaustive) no doubt seems complex and confusing to readers of this report, it must seem impenetrable to patients and, I suspect, to the various community health providers themselves.

21.43 In the recent report referred to above, the Auditor-General noted that NSW Health has not provided the public with clear goals, objectives or targets for its out of hospital programs and has little publicly available information on how they work or what they are intended to achieve.⁶⁵ I agree with this assessment.

21.44 A number of witnesses gave evidence about the lack of suitable community services for patients for patients after discharge. I was told that existing packages, such as Community Packages (ComPacks), Extended Aged Care at Home (EACH) packages and Community Aged Care Packages (CACPS) do not meet demand because they serve only specific patient groups or the level of care is not appropriate.⁶⁶ I was also told that there is an absence of suitable packages for high needs patients.⁶⁷

21.45 The Inquiry was informed that home care is usually only provided for a very short period of time, or only once a week or fortnight, and that there is currently a 10 month waiting list for Extended Aged Care at Home (EACH) packages at the hospital.⁶⁸

21.46 Some say that Care Navigation units which have recently been conceived to divert non-urgent non-life threatening clinical presentations from Emergency Departments will only partially address "the issue of focus of care".⁶⁹ It is said that to be really effective, Care Navigation programs need to cover the whole patient journey, including the services provided in the community. I was told that the process should be controlled from community-based navigation nodes with "in-reach" nodes in the hospitals.⁷⁰

- 21.47 The Inquiry received a submission from senior members of the Neurosciences Division at Royal Prince Alfred Hospital, an allied health team member and a rehabilitation specialist. They said that:⁷¹
- there is a real shortage of nursing home facilities for the younger population and this impacts adversely on discharge;
 - there is a lack of appropriate placement outside the acute care setting for acquired and organic brain injured patients (including meningitis);
 - waiting times for access to community services have increased and seem to be becoming longer. Patients who could be discharged home without some outside assistance are now forced to remain in hospital;
 - there is a need for State-wide policies for accepting patients back to “in-area” for rehabilitation. I was told that due to geographical boundaries, if patients are sent to a public rehabilitation hospital out of the Royal Prince Alfred area, the patient is “bumped around” on the waiting list as “in area” patients take precedence;
 - allied health is under resourced and this impacts directly on acute care patient’s length of stay. As a minimum, it is said, and I agree, that allied health professionals ought be replaced during their leave periods; and
 - there is a need to relocate rehabilitation facilities back to acute care facilities so that the patient is not required to remain for lengthy periods in the acute care setting until all medical issues are resolved and rehabilitation can commence.
- 21.48 Other submissions also highlighted that expeditious recruitment of allied health staff should be required, within established timeframes.⁷² I was told that access to allied health and support services (such as community nursing, meals on wheels) on weekends would facilitate discharges on weekends and have a flow-on effect in terms of the efficiency of acute care services. In an ideal world, community-based services should obviously be available on weekends.⁷³
- 21.49 I have the sense that out of hospital care is even less accessible in rural areas. The Auditor-General’s recent report noted that 70% of out of hospital services are being delivered in metropolitan area health services.⁷⁴
- 21.50 As noted earlier in this chapter, the NSW State Plan sets a goal of 15% by way of reductions in hospital “separations”. The 15% reduction relates to 8 conditions: cellulitis, community acquired pneumonia, chronic obstructive pulmonary disease, bronchitis and asthma, red blood cell disorder and transfusions, deep vein thrombosis, urinary tract infection and acute non-surgical pain. I was told that these conditions were chosen as they have the greatest number of admissions to hospital and the effectiveness of treatment at home is supported by robust clinical evidence.⁷⁵
- 21.51 NSW Health informed the Inquiry that although the Acute Care Task Force reports that up to 70% of these 8 “diagnosis related groups” could be managed appropriately by way of CAPAC services, current community based service capacity would not support a 70% target at this time.⁷⁶ I was told that the Sustainable Access Plan Agreement between NSW Health and area health services contains a stretch goal of a 30% reduction in admissions for these 8 diagnosis related groups and that funding arrangements to area health services for CAPAC services have been revised for 2008/2009 to support achievement of this goal.
- 21.52 I accept that a 30% reduction represents a “stretch goal”. That is, a goal which stretches the area health service to provide the funding and staffing resources to achieve the target. But it needs to be recognised that to help reduce the demand on public hospital services, and to allow for the current limited financial resources of NSW

Health to approach an adequate level, a lot more remains to be achieved over and above the “stretch goal”.

- 21.53 If a significant reduction in demand is not achieved, then, on current projections the public hospital system will not be able to cope. There needs to be a change in thinking so that the question becomes not what services are available in the community to supplement acute care in public hospitals but rather, what hospital services are needed to support health care in the community.

Recommendation 104: *NSW Health should articulate the goals of its out of hospital programs and make this information as well as information about how each program operates or what they are intended to achieve publicly available.*

Recommendation 105: *NSW Health should ensure that community health services are available as far as practicable on weekends and after-hours to facilitate discharge, improve the efficiency of the acute care system and patient care in both the hospital and community settings.*

Problems with delivery of services

- 21.54 Although perhaps insignificant when compared with some of the other problems drawn to the Inquiry’s attention, I heard about a range of practical problems in the delivery of community health services, each of which has important practical consequences for the workforce. They are worthy of investigation and review. These included:
- (a) A lack of parking entitlements for community health nurses, such that time is spent finding car spaces and appointments are truncated to move cars in order to avoid parking fines;⁷⁷
 - (b) Problems with access to cars from car pools, which may include pools with other departments. Also cars may be relocated to remote compounds so that community health workers cannot access them urgently if need be;⁷⁸
 - (c) Problems with accessing patient records on the road.⁷⁹ This also reinforces the need for an Electronic Medical Record.
- 21.55 None of these problems is insurmountable, but it would be useful for minds to be turned to these issues and practical solutions found state-wide so that community health can be delivered as efficiently as possible.

Importance of Electronic Medical Record to community health

- 21.56 There are currently no well developed information systems in community health. I was told that the current system is now old technology and difficult to maintain.⁸⁰ The system needs to be updated so that it can interact with records from a number of discrete services, being mental health, general practice, community health and aged care.⁸¹
- 21.57 At HealthOne Centres, the red book entitled “My Health Record”, which is a paper record, is being issued to enrolled patients. I was told that Sydney West Area Health Service was in the process of trialling a web-based electronic health record called “Health e-link”.⁸² I was also told while visiting HealthOne that community nurses have

problems accessing clinical notes because they do not have portable devices capable of accessing the internet and have to continually return to the centre to collect patient information.⁸³

- 21.58 Community psychiatrist Neil Philips told the Inquiry that being able to access hospital files in electronic form, in particular discharge summaries and pathology reports, would be of great benefit to community mental health.⁸⁴
- 21.59 NSW Health informed the Inquiry that it intends to implement an information technology initiative linking the community health sector with the acute sector beginning in July 2010 to be implemented by July 2015 at a cost \$110 million.⁸⁵ NSW Health informed the Inquiry that it has completed a substantial business case associated with the community health record. Broadly speaking, the record will cover mental health, community health clinics including HealthOne clinics and hospital-based community health, but exclude GPs. I was told that the software will be compatible with Medical Director, which is the program used by most GPs to access electronic medical records.⁸⁶ I deal with information technology in Chapter 14 of the Report.
- 21.60 The Inquiry was informed that the aim of the community health system redevelopment is to improve management of patients in the community, particularly aged, chronic disease and mental health patients, and to improve information flows between the acute and non-acute sectors, which it is hoped will reduce acute length of stay.⁸⁷ In my opinion there is a real and urgent need for an electronic medical record that is fully compatible across the acute care and community health sectors.
- 21.61 Ideally, hospitals should be able to access community health records in relation to a patient, and vice versa. This avoids the need to take repeat histories from the patient and the risk of missing vital information, particularly if the patient is not in a position to provide a detailed history on arrival at the hospital.
- 21.62 The hospital electronic medical record should automatically generate an advice to community health providers when a patient is admitted to hospital, given that community health providers may be able to provide highly pertinent information to the hospital, or assistance. It should also generate an advice on discharge to the community health provider so that the community health provider knows what treatment has been received, what medications the patient is taking, and their treatment plan.

Governance structure for community health

- 21.63 It seems to me that there is currently no clear governance structure for community health in NSW. KPMG identified in its *NCAHS Aged and Chronic Project* that there is “no clearly articulated position on the role, priority and focus for community health services”.⁸⁸ This suggests to me, also, an absence of proper governance structure.
- 21.64 Submissions were made to the Inquiry that after NSW Health transferred the funding of community health services from regional structures to public hospitals in 1986, it failed to protect these services from “resource skimming and poorly controlled expropriation by their new guardians”.⁸⁹

“While State health administrations have been starved of funds, they find it difficult to resist pressure from politicians, the public and clinicians to allow high-tech acute hospital intervention services to run over budget. They are too easily tempted to make up the shortfall by taking funding from low profile areas like community health services and management of “chronic” conditions.

In health burden and outcome terms, this is irrational and totally contrary to available evidence.”⁹⁰

- 21.65 It said that there needs to be a “resetting of the balance between hospital and community components of integrated health services”.⁹¹ I was told that:

“A growing international expert consensus, based on a promising though limited evidence base suggests that contemporary versions of community health services should be placed in the centres of their communities, closely linked to, or co-located where possible, with community based primary health care and human services, and functionally integrated with their corresponding hospital based services.”⁹²

- 21.66 The Inquiry was told about new models applying in other countries, such as England, where I was told that polyclinics co-located with GPs on local shopping high streets are being established to provide most health, medical and surgical interventions. It is said that many more interventions and occasions of services for follow-up care would occur in the home by staff from the polyclinics.⁹³

- 21.67 I was also told about the use of multidisciplinary practice groups in community health centres in Ontario, Canada. Dr Bernard Lawless,⁹⁴ described how community care is organised in Ontario after-hours to avoid Emergency Department presentations, duplication of services, and to improve continuity of care:

“They have started things called family health teams and community health centres. These are practice groups which are multidisciplinary in nature - there will be a physician, a nurse practitioner, a nurse, a dietician, a physiotherapist, a pharmacist, all working together as a team. There will be a number of family physicians who work on the team - five, six, seven, depending on the size - and they will roster a number of patients to their team. In the evenings, or through the night, that team also takes calls for those patients. So those patients who are rostered to those teams can access those physicians who are on call as opposed to always having to go to the emergency department.”⁹⁵

- 21.68 A question which was drawn to my attention during the course of the Inquiry relates to how community health services ought be organised and provided. I was told that there is a tension between hospitals and community health services in terms of where the organisation for community services resides.⁹⁶ I was told that hospitals generally do not have a good understanding of the range of services in the community, which impedes an appropriate integration of hospital and community services. One symptom of the different perspectives that I was told about is that the hospitals will generally refer to community health services as being “outreach” services, whereas community workers use the term “in-reach” to refer to hospitals.⁹⁷

- 21.69 I was told that an efficient coordinated service working in the community will be more effective in ‘reaching into’ the hospital than a hospital-based system which brokers community health services.⁹⁸ Experience with the ComPacks program, which is managed in the community, is said to be evidence of this. I was told:

“If you can effectively weave together that space in the community, then the management of the patient can start and end in the community with periods of hospital stay necessary where you maintain continuity of care by having a case manager who actually tracks the patient through that brief period of stay in the hospital.”⁹⁹

- 21.70 Professor Mary Chiarella, Professor of Nursing at the University of Sydney, says that there are incentives attached to community-based 'care navigation':
- "...with discharge planning, one of the exemplars that I have been picking up...is that having your discharge planners based in the community is actually better than having them based in the hospitals. They have a vested interest in making sure that it is right because they are the ones who will actually end up with the discharge plan, as it were. Working from the outside in with discharge planning is something that is happening in very few places in New South Wales...".¹⁰⁰
- 21.71 Other witnesses also told the Inquiry that a coordinator of patient care is better placed in the community than in a hospital because, on average, the length of stay in hospital is short, which does not give the coordinator the opportunity to provide continuity of care.¹⁰¹ I was told that a lack of resources in community health means that the increasing need for community health services is not being met.¹⁰²
- 21.72 Some say that there is a need for an overarching governance structure for community health services that involves shared responsibility between the Commonwealth and State governments, and operational management by general practitioners, existing community health services and hospital specialists.¹⁰³
- 21.73 In my view, there is a clear opportunity and need at the present time to streamline access to and the organisation of community health services and to integrate the acute setting with community health services more effectively. Ideally this would involve a single point of access to State and Commonwealth community care programs for patients and hospital-based and community-based health-care providers. Obviously the implementation of such a system would require significant collaboration between the state and Federal governments. In my view, governments need to improve the availability of community health services. It became clear to me during the course of the Inquiry that inefficiencies in the acute care system arise when hospitals are left to fill the gaps in other settings, particularly community services (in the broad sense identified at the beginning of this chapter).
- 21.74 During the course of this Inquiry, I have not been provided with sufficient information to enable me to make recommendations about how community health services ought best be coordinated and organised. I make recommendations in Chapter 3 about the proposed program for chronic complex and elderly patients. My view is that care coordination should be functionally located in the community and that this work should be integrated with the acute sector.
- 21.75 It is my view that community health services which are the responsibility of area health services need to be organised in the community, as a single cohesive unit in the same way in which a hospital is organised as a single cohesive unit in terms of the different departments and services provided.
- 21.76 What is needed is a virtual hospital, where patients are enrolled, just as they are admitted to a physical hospital. Their care is overseen by the community health worker (a coordinator or navigator) who access programs and services for the patient (just as would occur in hospital where services are sought and provided).
- 21.77 Interaction with general practitioners and specialists where necessary could occur seamlessly.

- 21.78 An organisation with this type of structure can then have proper systems for ensuring that the workforce is adequate in numbers and experience. Importantly, evaluation of the programs would be simplified.
- 21.79 Although, a short and necessarily general exposure of my view on a possible governance model, what NSW Health needs to do is to review it, together with other governance model options to determine what would be the most appropriate.

Recommendation 106: *NSW Health within 18 months is to review and determine the most effective and appropriate structure for the governance in each area health service of the staff and programs delivering health services in the community.*

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- ² NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 1.
- ³ NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 1.
- ⁴ NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 1.
- ⁵ Dr Sharon Miskell, Royal North Shore Hospital hearing, 2 April 2008, transcript 1267.33-34.
- ⁶ Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 98.
- ⁷ NSW Government, *State Plan: A New Direction for NSW*, 2006, Premier's Department, Sydney, http://www.nsw.gov.au/stateplan/pdf/State_Plan_complete.pdf (17 October 2008) p. 78.
- ⁸ NSW Health, *State Health Plan*, 2007, NSW Health, North Sydney, http://www.health.nsw.gov.au/pubs/2007/pdf/state_health_plan.pdf (24 November 2008).
- ⁹ NSW Treasury, *Budget Estimates 2008-09* (Minister for Health), http://www.treasury.nsw.gov.au/_data/assets/pdf_file/0012/11424/bp3_12health_n.pdf (29 September 2008), p. 12-3.
- ¹⁰ Minister for Health and Ageing, *2008-09 Health and Ageing Portfolio Budget Statements*, 2008, Commonwealth Government of Australia, Canberra, pp. 6, 115.
- ¹¹ Minister for Health and Ageing, *2008-09 Health and Ageing Portfolio Budget Statements*, 2008, Commonwealth Government of Australia, Canberra, p. 115.
- ¹² Minister for Health and Ageing, *2008-09 Health and Ageing Portfolio Budget Statements*, 2008, Commonwealth Government of Australia, Canberra, pp. 109-113.
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- ¹⁴ Wilson S, Shorten B and Marks R, "Cost the ambulatory episode: implications of total or partial substitution of hospital care", (2005), 29 (3) *Australian Health Review* 360-365.
- ¹⁵ Dr Stephen Wilson, St Vincent's Hospital hearing, 30 April 2008, transcript 2500.38-2501.3.
- ¹⁶ The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 29.
- ¹⁷ The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 28.
- ¹⁸ NSW Health Briefing, 2 June 2008.
- ¹⁹ Associate Professor Alan Rosen and Dr James Telfer, Royal North Shore Hospital hearing, 13 March 2008, transcript 362.16-19.

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- 20 Dr Neil Phillips, Concord hearing, 24 April 2008, transcript 2124.35-40 and 2125.22-30; submission of Dr Neil Phillips, 24 April 2008, SUBM.048.0133 at 141-142.
- 21 Dr Stephen Wilson, St Vincent's Hospital hearing, 30 April 2008, transcript 2497.
- 22 Emily Hunston and Madeleine Green, Tweed Heads hearing, 29 April 2008, transcript 2356.23-28.
- 23 Dr Simon Battersby, Gosford hearing, 10 March 2008, transcript 162.41-163.2.
- 24 Confidential Sydney Children's Hospital hearing, 19 May 2008, transcript 25.8-36.
- 25 NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 6.
- 26 NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 6.
- 27 NSW Health, *Integrated Primary and Community Health Policy 2007-2012*, PD2006_106, p. 6.
- 28 The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 18.
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- 30 Dr Stephen Wilson, St Vincent's Hospital hearing, 30 April 2008, transcript 2497.30-37.
- 31 Confidential submission, 14 April 2008, SUBM.055.0003 at 4.
- 32 Confidential Bankstown hearing, 13 May 2008, transcript 35.18-27.
- 33 Submission of Ian Dall, 28 March 2008, SUBM.039.0003.
- 34 Submission of Nadia Schweizer et al, 28 March 2008, SUBM.050.0031.
- 35 Submission of Ian Dall, 28 March 2008, SUBM.039.0003 at 3-4.
- 36 See for example, KPMG, *NCAHS NSW Clinical Redesign Program, Aged Chronic Care Diagnostic Report, Phase 1*, March 2007, KPMG.
- 37 Submission of Ian Dall, 28 March 2008, SUBM.039.0003.
- 38 KPMG, *NCAHS NSW Clinical Redesign Program, Aged Chronic Care Diagnostic Report, Phase 1*, March 2007, KPMG, p. 32.
- 39 KPMG, *NCAHS NSW Clinical Redesign Program, Aged Chronic Care Diagnostic Report, Phase 1*, March 2007, KPMG, p. 34.
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- ⁵⁰ The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 30.
- ⁵¹ The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 26.
- ⁵² The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 34.
- ⁵³ NSW Health, *Clinical Services Redesign Program: Compacts*, July 2006, NSW Department of Health, North Sydney, p. 21.
- ⁵⁴ NSW Health, *Clinical Services Redesign Program: Compacts*, July 2006, NSW Department of Health, North Sydney, p. 13.
- ⁵⁵ KPMG, *NCAHS NSW Clinical Services Redesign Program, Aged and Chronic Care, Phase 3, Implementation Planning*, June 2007, KPMG; The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, The Audit Office of New South Wales, September 2008, p. 21.
- ⁵⁶ Letter from NSW Health to Special Commission of Inquiry, 25 February 2008, p.13;

Table 21.1 ComPack allocation per AHS as at 19 February 2008

NSCCAHS	2233
SESIAHS	1564
SSWAHS	2324
SWAHS	1118
NCAHS	996
HNEAHS	974
GWAHS	731
GSAHS	1307

- ⁵⁷ Letter from NSW Health to Special Commission of Inquiry, 25 February 2008, p.13.
- ⁵⁸ KPMG, *NCAHS NSW Clinical Services Redesign Program, Aged and Chronic Care, Phase 3, Implementation Planning*, June 2007, KPMG, p. 83.
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- ⁶⁵ The Audit Office of New South Wales, *Delivering health care out of hospitals: Department of Health*, September 2008, The Audit Office of NSW, p. 18.
- ⁶⁶ Submission of Ian Dall, 28 March 2008, SUBM.039.0003 at 3.
- ⁶⁷ Submission of Bernadette Woods, 16 April 2008, SUBM.031.0302 at 302.
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- ⁶⁹ Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 122.
- ⁷⁰ Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 98.

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- 71 Submission of Nadia Schweizer et al, 28 March 2008, SUBM.050.0031 at 31.
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- 73 Submission of David Rhodes on behalf of the HNEAHS Area Allied Health Committee, 20 May 2008, SUBM.049.0074 at 75-76.
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- 75 Letter from NSW Health to Special Commission of Inquiry, 19 September 2008.
- 76 Letter from NSW Health to Special Commission of Inquiry, 19 September 2008.
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- 78 Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 115; Dennis Quinn, Wagga Wagga hearing, 22 April 2008, transcript 2025.20-36; Information provided during visit to St George Community Mental Health Service on 3 September 2008.
- 79 Information provided during visit to HealthOne, Mt Druitt on 7 July 2008.
- 80 NSW Health Briefing, 31 March 2008, transcript 85.5-12.
- 81 NSW Health Briefing, 31 March 2008, transcript 85.12-15.
- 82 Information provided during visit to HealthOne, Mt Druitt on 7 July 2008.
- 83 Information provided during visit to HealthOne, Mt Druitt on 7 July 2008.
- 84 Dr Neil Phillips, Concord hearing, 24 April 2008, transcript 2130.3-6.
- 85 NSW Health Briefing, 23 October 2008, transcript 23.46-24.24.
- 86 NSW Health Briefing, 23 October 2008, transcript 25.25-26.18.
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- 88 KPMG, *NCAHS NSW Clinical Services Redesign Program, Aged Chronic Care Diagnostic Report, Phase 1*, KPMG, March 2007, p. 3.
- 89 Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 108.
- 90 Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 108.
- 91 Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 98.
- 92 Submission of Associate Professors Alan Rosen, Roger Gurr and Paul Fanning, 24 August 2008, SUBM.091.0096 at 98.
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- 95 Dr Bernard Lawless, Experts conference, 16 September 2008, transcript 157.40-158.5.
- 96 NSW Health Briefing, 28 May 2008, transcript 20.24-27.
- 97 NSW Health Briefing, 28 May 2008, transcript 20.27-35.
- 98 NSW Health Briefing, 28 May 2008, transcript 20.39-43.
- 99 NSW Health Briefing, 28 May 2008, transcript 21.
- 100 Professor Mary Chiarella, Experts conference, 16 September 2008, transcript 174.12-23.
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- 102 Dennis Quinn, Wagga Wagga hearing, 22 April 2008, transcript 2027.1-33.
- 103 Dr Stephen Wilson, St Vincent's Hospital hearing, 30 April 2008, transcript 2498.40-2500.29.

22 Mental health

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- 22.1 In this chapter, I will review the extent of mental illness in NSW, how patients presently receive treatment, and how this should be improved.
- 22.2 I have already dealt with the vital topic of child and adolescent mental illness in Chapter 5.

Extent of mental illness in NSW

- 22.3 According to the World Health Organization, 'mental health' can be thought of in the following terms:

"[Mental health is] a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community."¹

- 22.4 Mental illness is described in the *National Mental Health Plan 2003-2008* as a clinically diagnosable disorder that significantly interferes with an individual's cognitive, emotional or social abilities.²
- 22.5 According to a report by the Australian Institute of Health & Welfare (2006-07), mental illness is responsible for 13.3% of the total burden of disease in Australia and, therefore, is clearly one of the most significant conditions of the nation.³
- 22.6 In the most recent survey on the incidence of mental illness in Australia (released on 23 October 2008), *The National Survey of Mental Health and Wellbeing* (2007),⁴ mental illness is categorised into 3 categories described in the table below. Based on the incidence of each category of mental illness found by the survey, I have estimated the number of people in NSW suffering from a mental illness, also in the table below.

Table 22.1 Incidence of mental illness in NSW

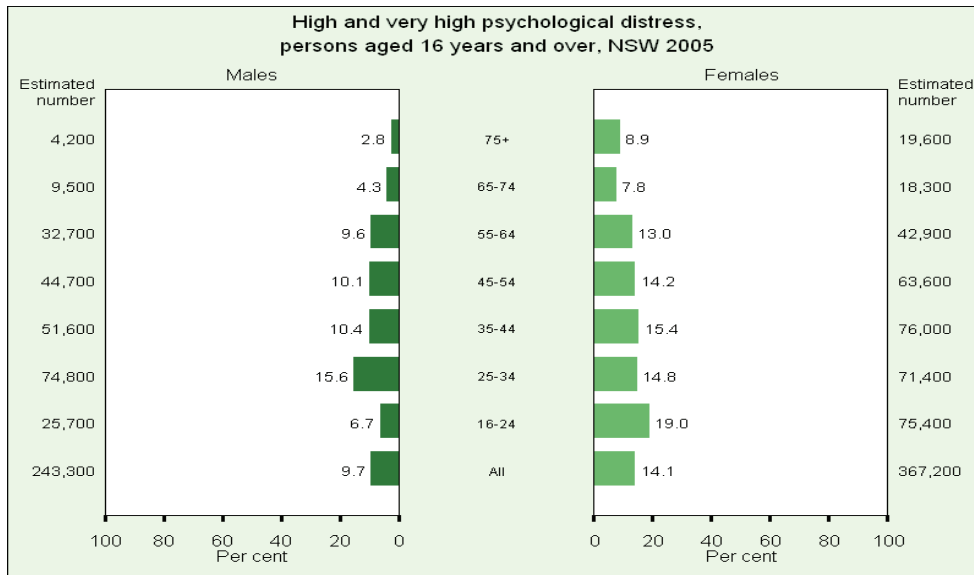
Category	Description	Incidence	NSW sufferers
Anxiety disorders	Disorders that involve feelings of tension, distress or nervousness, such as panic disorder, social phobia, agoraphobia, post-traumatic stress disorder and obsessive-compulsive disorder.	14.4%	1,000,368
Affective disorders	Disorders that involve mood disturbance or change in affect, such as bipolar affective disorder, depressive episode and chronic depression. Most of these disorders tend to be recurrent.	6.2%	430,714
Substance Use disorders	Harmful use or dependence on drugs or alcohol.	5.1%	354,297
TOTAL		20%	1,389,400

- 22.7 The categories of mental illness used in *The National Survey of Mental Health and Wellbeing* are new. Severe mental illness is likely to fall within the "affective disorders" category. In the last nationwide survey, conducted in 1998, only 2.5% of Australians were found to have severe mental illnesses such as severe forms of schizophrenia and bipolar disorders, severe depression and anxiety. The increase to 6.2% in this recent survey is attributable to a change in the definition of the category, rather than a 250% increase in severe mental illness.

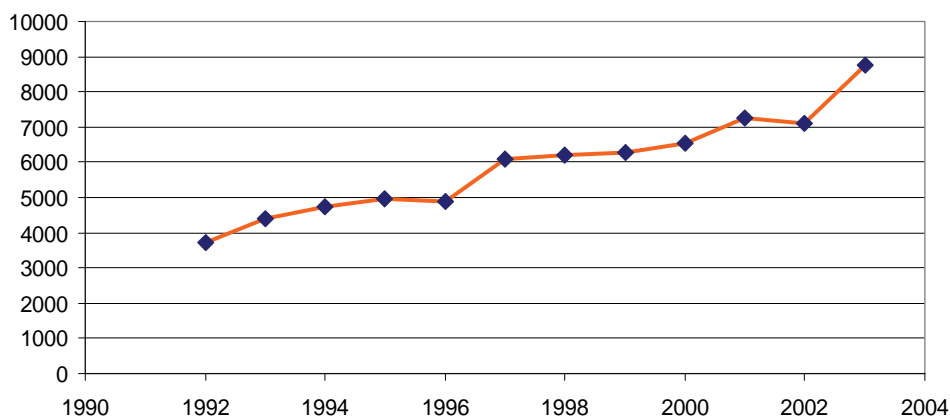
22.8 I have already highlighted, in Chapter 5, the high incidence of mental illness and substance abuse amongst younger age groups.

22.9 There are some indications that the incidence of mental illness is increasing.

- (a) The *National Health Survey* of 2004-05 indicated that adult psychological distress, which is the presence of anxiety and depressive symptoms, is increasing.⁵ According to NSW Health, the reasons for this increase are most likely to include “a mix of broad social changes including a decrease in social supports and social capital, increasing socio-economic inequality, and changes in patterns and rates of drug and alcohol use.”⁶



- (b) The number of patients who are ‘scheduled’ (see below) by doctors under the *Mental Health Act 2007* (or its predecessor legislation) has increased markedly in recent times.⁷



‘Scheduling’ refers to the involuntary admission to and detention in a mental health facility. It occurs after a person is taken to hospital against their wishes and a doctor completes a Schedule 1 Certificate under the *Mental Health Act 2007*, confirming that the person examined is a mentally ill person who is either suffering from a mental illness or else is ‘mentally disordered’.⁸

- (c) As referred to below, the attendances of patients with mental illness at Emergency Departments has increased in recent years in excess of population growth.

Drug & alcohol abuse

- 22.10 Drug and alcohol abuse and other mental illnesses frequently co-occur.
- People who are alcohol dependent are more likely to suffer from other mental health problems, and people with mental health problems are at particular risk of experiencing problems relating to alcohol.⁹
 - Similarly, people who misuse drugs are more likely to have a mental disorder (31% of people who misused drugs nearly every day had an affective disorder).¹⁰
- 22.11 I heard evidence from a number of psychiatrists that, in recent years, there has been a significant growth in mental illness in NSW public hospitals caused by, or associated with, drug and alcohol abuse.¹¹ It is estimated that over half of new presentations to mental health services in Australia have substance use problems in addition to a mental illness or disorder.¹²
- 22.12 Alcohol remains the biggest problem, responsible for 79.2% of the total health cost attributable to drug and alcohol use combined. (In comparison, illicit drugs account for only 8.1% of health costs.)¹³ I have referred, in particular, to the growing incidence of alcohol abuse amongst young people in Chapter 5.
- 22.13 Of particular concern is increasing alcohol abuse amongst young people. A recent report issued by NSW Health showed a 55% increase in the past 7 years in Emergency Department visits for alcohol-related problems in 10-17 year olds and a 130% increase for 18-24 year olds. On average, 3 children aged 10-17 present to Emergency Departments each day with alcohol problems. The report was based on data collated by 44 Emergency Departments across NSW, which covered two-thirds of the state's population.¹⁴

History of mental health treatment

- 22.14 To understand the treatment of mental illness in NSW today, it is important to appreciate the historical context.

The Richmond Report

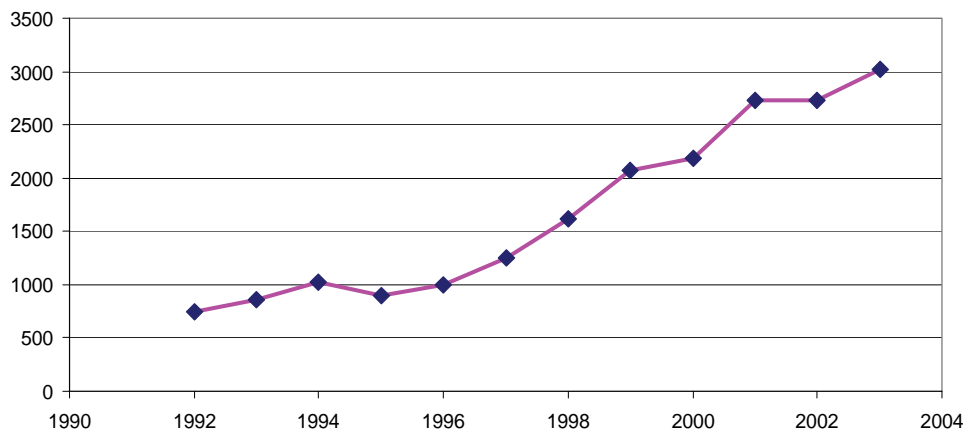
- 22.15 The 1983 report by David Richmond, *Inquiry into Health Services for the Psychiatrically Ill and Developmentally Disabled (the Richmond Report)*, recommended that, given the benefits of modern drugs for the treatment of mental health, as a general rule it was no longer necessary to keep people in asylums.¹⁵ This part of the report (which I will call 'Part A') was wholeheartedly embraced and institutions were closed.¹⁶
- 22.16 The second part of the report, which I will call 'Part B', set out a model of care for treating mental illness in the community. Richmond said that patients from institutions needed to receive continuing care in the community, with access to mental health services within integrated community networks, and suitable small-scale accommodation. According to the report:

"... at least initially, funding must be earmarked for these services to provide adequate community facilities and that the needs of these groups should be given higher

priority than previously in the distribution of health resources. ...

"The minimum necessary specific earmarked funding to stimulate the provision of community based services and facilities for both mental health and developmental disability services is \$9 m per annum over the next three years. This represents about half of one percent of the total hospital budget in N.S.W. Without this level of funding it would be extremely difficult to make any positive progress towards the desirable services considered necessary to more effectively meet client needs.¹⁷

- 22.17 It is a matter of history, that 'Part B' was never successfully implemented. Many mentally ill people, who in previous times received institutional care, ended up living on the streets and in boarding house style accommodation without access to professional psychiatric care or stable, suitable housing.
- 22.18 As a result, the number of mental health attendances to Emergency Departments slowly increased, as did the number of 'scheduled' admissions. Scheduling by police increased by approximately 500% between 1992 and 2003.¹⁸



- 22.19 During the course of my Inquiry, the Richmond Report was criticised for contributing to the rise in homelessness among the mentally-ill. However, it seems to me that the problem was not in the Richmond Report, but the failure to implement the recommendations to establish the step-down facilities and supported accommodation in the community which it called for.

Treatment of mental illness in NSW

- 22.20 People suffering from mental illness in NSW receive treatment in a variety of ways. (I have already discussed the treatment of mental illness in rural and remote areas in Chapter 6).

Referral by GP to psychiatrist

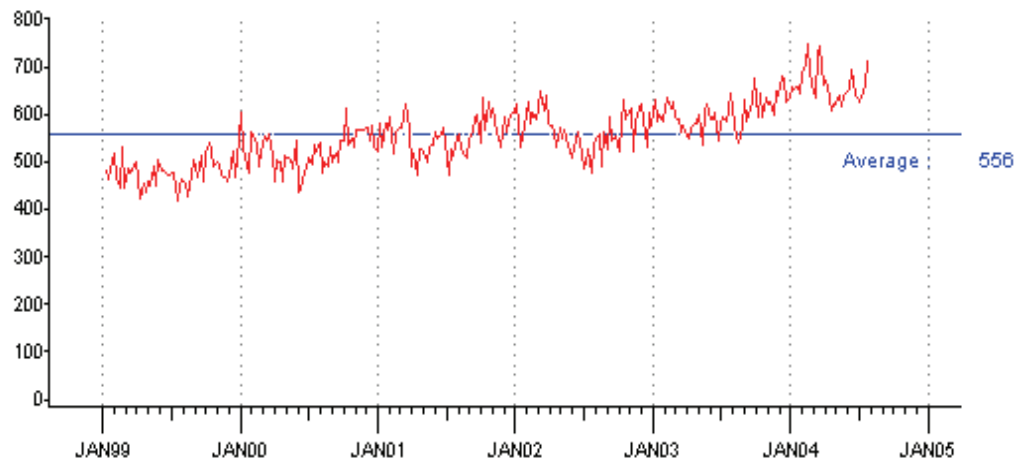
- 22.21 The patient may be referred by their GP to a psychiatrist or psychologist. By and large, the GP, psychologist and psychiatrist are paid by the Commonwealth through the Medicare scheme, with a top-up payment by the patient in many cases.¹⁹

- 22.22 According to NSW Health, there are 648 doctors working in psychiatry in NSW, 364 (56%) of whom work only or mainly in the private sector, 244 (37.6%) of whom work in the public sector, with the remainder working in both the public and private sectors.²⁰

Emergency Departments

- 22.23 A patient may go to the Emergency Department suffering from a mental illness, drug or alcohol abuse, or medical problems such as injuries sustained by self-harm or a violent psychotic episode.
- 22.24 Mental health presentations to Emergency Departments have increased in recent years in excess of the population growth rate.²¹

Emergency visits recorded in the NSW Emergency Department Data Collection
 Measure : Number of visits per week
 : from 10 January 1999 to 25 July 2004
 Indicator : Mental health (excl. drug/alcohol dependence/psychoses)
 Health service level : All NSW



Warning: For July 2004, data were not yet available for 1 of 46 (2%) hospitals

Source: NSW Emergency Department Data Collection (HOIST), NSW Health Department

Produced : 10 August 2004

- 22.25 In 2005-06, there were 53,360 mental health-related occasions of service in Emergency Departments in NSW public hospitals.²² This is about 3.4% of Emergency Department presentations.²³ This figure doubles when primary substance abuse problems and medical complications of deliberate self-harm are included.²⁴
- 22.26 The patient may also be taken to the Emergency Department involuntarily by either:
- police or ambulance officers after scheduling in the community, or
 - community mental health services.
- 22.27 Depending on the hospital, the patient may be:
- accommodated in a mental health safe assessment room,
 - admitted to an on-site Psychiatric Emergency Care Centre (“PECC”),
 - if neither facility is available, treated in the main body of the Emergency Department, or
 - transferred to a mental health inpatient unit.

22.28 I have discussed safe assessment rooms and PECCs further below, together with particular problems experienced by patients with a mental illness in the Emergency Department.

Inpatient mental health unit

22.29 The patient may be admitted to an inpatient mental health unit, either through the Emergency Department or, in some cases, directly. Some inpatient mental health units have Intensive Care Units.

22.30 In 2005-06, more than 26,000 overnight admissions were made to inpatient mental health units in NSW.²⁵

22.31 The average length of stay of a patient in an inpatient mental health unit is 20 days.²⁶ For child and adolescent patients (up to 17 years old), the average length of stay is 18.3 days.²⁷

22.32 After discharge from an acute inpatient mental health unit, 10.8% of patients are re-admitted within 28 days.²⁸ NSW Health monitors re-admission rates to measure how well it is providing support (and whether that support is appropriate) to people who return to living in the community after leaving an acute mental health facility. The *State Plan: A new direction for NSW* has a target to reduce the proportion of adults re-admitted within 28 days to the same facility with an acute mental health problem to below current levels, which have remained between 10 and 12% over the last 6 years.²⁹

22.33 Admission to an inpatient mental health unit may be voluntary or involuntary. Involuntary admission to, or confinement in a forensic mental health facility may occur because of things done by, or orders made by the courts, members of the NSW Police Service or doctors using powers under the *Mental Health Act 2007*.

22.34 Only specified inpatient mental health units may receive involuntary admissions. Such facilities are subject to an order, like a licence, by the Director General of the Department of Health.³⁰ The consequence of this is that smaller hospitals that are not authorised to receive involuntary patients must arrange for the transfer of such patients to a larger facility authorised to receive them. In rural areas, this means that patients are transported long distances, sometimes with police escort, to larger centres such as Dubbo or Broken Hill. I have discussed the difficulties which this causes in Chapter 6.

Community mental health

22.35 The patient may receive treatment from a community mental health service. This commonly occurs in 3 ways:

- at a community mental health centre,
- by a mobile assessment team, or
- through a community-based residential service.

22.36 I was pointed to evidence that treatment for mental illness in the community results in greater patient satisfaction, reduced re-admission rates to inpatient mental health units, shorter lengths of stay in hospital, and decreased homelessness and unemployment.³¹

22.37 I discuss problems being experienced in the community mental health below.

Community mental health centres

- 22.38 Community mental health centres provide ongoing case management, mental health assessment, treatment and referral. Patients who receive case management are more likely to remain in contact with services, are more accepting of treatment, and stay fewer days in hospital.³²
- 22.39 Most patients attend community mental health centres on a voluntary basis. Some are required to attend under a Community Treatment Order, which is an order made by the Mental Health Review Tribunal or a magistrate that the patient must accept such treatment so that they may be discharged from inpatient mental health unit.³³
- 22.40 At a community mental health centre, patients may see a case manager, a doctor or attend a clinic at which medications are dispensed and monitored.³⁴
- 22.41 Community mental health centres may also provide outreach or domiciliary care.
- 22.42 In 2004-05, community mental health services made approximately 2.3 million clinical interventions.³⁵

Acute mental health crisis teams

- 22.43 Acute mental health crisis teams provide mental health services to patients in the community who whilst suffering from a mental illness has an acute crisis or episode which requires consultation and treatment. They generally deliver that consultation and treatment in the patient's home or in the Emergency Department.
- 22.44 I was told that these teams provide an excellent service to patients in their homes who have suffered acute relapses, which are often unpredictable.³⁶ Teams may include social workers, nurses, psychiatrists, psychologists or occupational therapists. Sometimes the team will bring a patient into hospital for admission, although this is the last resort rather than the first step.³⁷
- 22.45 Acute mental health crisis teams may be hospital or community-based.
- Such a service may be accessed, for example, by a telephone call to St George Hospital between 8am and 10.30pm, 7 days per week.³⁸
 - I was told that the 24 hours a day and 7 days a week crisis team model is being used to great effect at Royal North Shore Hospital.³⁹
 - 24-hour crisis teams also form part of the successful 'SHIPS' program in Orange (see box below).⁴⁰
 - I was told by clinicians at Ryde Community Mental Health, who operate such teams, that when care is provided in the home the carers can be involved in the care plan. On the other hand, admission to the Emergency Department can lead to a completely different journey for the patient.⁴¹
- 22.46 I heard strong support for this model from psychiatrists⁴² and carers of mental health patients alike,⁴³ although I heard that there has been a movement away from mobile visiting teams on some area health services.⁴⁴ One psychiatrist provided me with some costings, which indicate that the cost of bringing someone into the hospital using ambulance and police, a mental health worker callout, a GP and possibly a transfer is about \$6,000 for a week's stay, together with the non-financial costs of distress suffered by the patient and their family.⁴⁵ Whilst I have not independently verified the accuracy of this cost, on the totality of the material before me, I am satisfied that it is substantially accurate. It is certainly sufficiently accurate to be able to say that the model of having

community based acute care teams is much more cost effective than the alternative of letting patients with acute mental illness be attended to as an emergency patient is.

- 22.47 According to NSW Health, patients receiving care from acute mental health crisis teams are:
- more likely to remain in contact with services,
 - less likely to be admitted to inpatient mental health units and have shorter lengths of stay if they are admitted,
 - more likely to be living independently and less like to become homeless or unemployed, and
 - express higher levels of satisfaction with services.⁴⁶

Community-based residential services

- 22.48 Some accommodation is provided in the community for those suffering from mental illness. The community-based residential services are staffed by mental health professionals and can provide specialised treatment, rehabilitation and care to patients.

The Satellite Housing Integrated Programmed Support ("SHIPS") program is based in the centre of Orange in an old home-style building with 9 to 10 beds and additional respite accommodation for carers. Patients typically stay there for 3 weeks. There is a registered nurse on duty 24/7, with access to a psychiatric registrar at the Bloomfield Hospital in Orange. All patients are registered with GPs with training in psychiatry and a consultant psychiatrist is allocated to each patient.⁴⁷ There are also a number of satellite houses with various levels of support; the most dependent patients are housed in the core house, while many others may be housed at home or in a mixture of housing which is rented or owned by the SHIPS program. There is also a 10-bed farmlet approximately 10 minutes drive from Orange, which has a nursery attached to it where patients can work, and where respite accommodation for carers is provided. The SHIPS program has been running successfully in Orange for some 20 years, in which time thousands of patients have benefited from the service.⁴⁸

- 22.49 I have discussed the shortage of such accommodation further below.

A struggling area

- 22.50 It is worth noting that, in the latest NSW Health Patient Survey, mental health patients had the lowest satisfaction with their experiences in the NSW Health system. Only 64% of mental health patients were satisfied with their care, compared to 88% of patients overall.⁴⁹
- 22.51 I am not surprised. My overall impression of the treatment of mental illness in NSW, at least by the public hospitals, is that it is an under-resourced, over-stretched part of the public hospital system which is presently in 'catch up' mode in terms of increasing funding, training and recruiting additional workforce, and building more facilities.

Resources available for the treatment of mental health

Funding

- 22.52 For the last few years, mental health services have accounted for about 8% of the total NSW Health budget. In the 2008-09 financial year, the NSW Government budgeted an

annual expenditure of \$1,092 billion for mental health services, being 8.3% of the budget.⁵⁰

22.53 The money is spent, according to the most recently available figures, as follows:

Table 22.2 Recurrent expenditure for public sector mental health services (\$'000), NSW, 2005-06⁵¹

Mental health expenditure	2005-06 (\$,000)	% of total expenditure
Psychiatric hospitals	189,480	21%
Psychiatric units at public hospitals	271,282	30%
Community mental health services	309,866	35%
Residential mental health services	24,866	3%
Other expenditure	95,899	11%
Total	891,394	100%

22.54 Mental health has also received additional funding in recent years. In its report, *NSW: a New Direction for Mental Health* (2006), the NSW Government announced additional funding of \$939 million over 5 years from 2006-07 to 2010-11, being:

- \$338 million in additional recurrent funding, the majority of funds going to community based mental health services (\$279 million);
- \$263 million in additional recurrent funds previously announced; and
- \$338 million for major capital works.⁵²

22.55 Some of this additional funding will be used in the following programs:

- \$10 million to expand university-based research;
- \$28.6 million to develop tertiary mental health treatment services for young people;
- \$37.3 million to expand specialist community mental health teams to provide assessment and treatment for older people with mental illness and age-related mental health problems; and
- \$26.3 million for a 24-hour NSW mental health telephone advice, triage and referral service, staffed by mental health clinicians.⁵³

22.56 I am told that, by the end of this year, NSW Health will employ an additional 65 mental health staff. This figure will be doubled in 2009-10 to provide out-of-hours emergency and acute community response across NSW.⁵⁴ Other initiatives include a recently established mental health telephone access service, which is operated by a mental health nurse providing advice, triage and referral.⁵⁵

22.57 The Commonwealth has also contributed \$1.8 billion dollars over 5 years to NSW mental health as part of the *National Mental Health Plan (2003-2008)*.⁵⁶

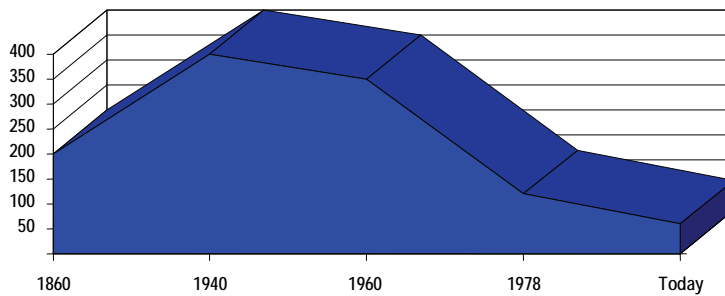
22.58 The final report of the Senate Standing Committee on Community Affairs Inquiry into mental health services in Australia, *Towards recovery: mental health services in Australia* (25 September 2008),⁵⁷ recommended that the Australian Government, in consultation with state and territory governments and mental health stakeholders, develop a new national mental health policy document to succeed the *National Mental Health Plan 2003-2008*. The Committee recommended that the new plan have,

"clear service and funding targets... as a means to articulate what a community-based, recovery-focussed mental health system in Australia should comprise."⁵⁸

22.59 The Senate Inquiry was commissioned to assess the commitments and contributions by governments to the *National Action Plan on Mental health 2006-2011*, agreed upon at the July 2006 meeting of the Council of Australian Governments (COAG), and to address any possible remaining gaps or shortfalls in funding, and in the range of mental health services which are available. The key shortfalls identified by the Committee were in housing and supported accommodation, community-based mental health services, education and employment for people with a mental illness, co-morbidity services, acute care and workforce supply to the mental health sector.⁵⁹

Lack of inpatient beds

22.60 During the 1960s and 1970s, there was a large reduction in the number of inpatient beds in NSW as mental health patients were de-institutionalised following the discovery of drugs which assisted in the treatment of mental illness. As can be seen from the below graph (showing the number of NSW mental health inpatients per 100,000 population), this decline continued for many years, encouraged in part by the Richmond report.



22.61 As already mentioned, in the 1990s, the reduction in inpatient beds led to an increase in the number of mental health patients going to Emergency Departments for care, and as a result of being 'scheduled'.⁶⁰

22.62 It is clear to me that, and NSW Health seems to accept that, NSW has reduced the number of mental health beds by too many and efforts are now being directed to re-opening facilities and building new facilities.⁶¹ In 2006-07, 97 new beds were opened, bringing the total number of mental health beds in NSW to 2,316. An additional 351 beds have been approved.⁶² The Productivity Commission's *Report on Government Services* (2008) indicates that inpatient mental health services in NSW have increased in recent years as follows:

Table 22.3 Inpatient mental health beds and staff in NSW (per 100,000 population)⁶³

	2004-05	2005-06
Inpatient beds	31.7	33.5
Direct care staff employed in inpatient settings	48.9	52.1

22.63 The evidence to this Inquiry was that there is an overwhelming shortage of acute mental health inpatient beds in NSW. The lack is particularly acute in rural areas, as I have discussed in Chapter 6.

22.64 I was told that it is often impossible to get a bed for someone who urgently needs admission,⁶⁴ and that people are regularly refused admission even when taken to the

inpatient unit by the Emergency Department, police or community mental health workers.⁶⁵

22.65 Community mental health clinicians at Ryde Community Mental Health told me that their biggest problem is access to inpatient beds. Whilst they had the lowest re-admission rate to inpatient units in the area health service, “when you need a bed you need it at that moment”. The lack of inpatient mental health beds means that patients in the Ryde area are frequently taken by ambulance to Wyong for an inpatient bed. I was told that 9 patients attached to the community mental health service were currently in general ward beds at Royal North Shore Hospital.⁶⁶

22.66 Long stay beds, in particular, are in short supply:

“... increasingly mental health has become, rather than a recovery service, absolutely a crisis service. Compared to the old days when it was relatively easy to get into hospital, now it's very difficult for a consumer, unless they're in an extreme crisis or suicidal, to get into hospital.”⁶⁷

22.67 Staff at Prince of Wales Hospital have resorted to requesting a patient be scheduled in order to obtain a bed, even though the patient is, in fact, voluntary.⁶⁸

Delays in discharging inpatients

22.68 I also found that inpatient units were unnecessarily full because there were inefficiencies in discharging patients, for the following reasons:

- Given the shortage of beds, patients sometimes have to travel to an inpatient mental health unit some distance away from their home. This causes problems obtaining transport to return these patients home on discharge.⁶⁹
- Aged Care Assessment Team assessments were very slow, delaying a patient's discharge and placement in an aged care facility.⁷⁰
- There is a lack of sub-acute accommodation, that is, housing that provides a level of care somewhere between a patient's home and an inpatient mental health unit. I have discussed this further below.
- There is a lack of community mental health services to continue to treat the patient in the community. This means that the patient cannot be discharged until they are very well. I was told that this is a problem at Cumberland Hospital, which has a 25% re-admission rate within 28 days largely due to a lack of community services to follow up patients. The standard rate for re-admission within 28 days is 10% across NSW.⁷¹

22.69 There is clearly a pressing need for more sub-acute accommodation in the community. The Richmond Report recommended it 25 years ago. As outlined, it was a cost-effective and elegant solution. The lack of implementation of that strategy over those intervening years has led to the current most unsatisfactory position. One solution may be to employ ‘patient flow co-ordinators’ within community mental health services and inpatient mental health units to improve patient flow.⁷² Another would be to establish much more suitable community based accommodation with the necessary support staff.

Unsuitable facilities

- 22.70 Many of the mental health facilities I visited or heard about were not particularly suitable for their function.
- At Cumberland Hospital, the mental health Intensive Care Unit was housed in an old geriatric unit. This presented safety problems, and required a higher staff ratio to ensure patient safety.⁷³
 - At Westmead Hospital, the inpatient psychiatric ward is not on the ground floor (it is on the 4th) and not suitable for mental health patients. There are many hanging points, doors open the wrong way, the wrong type of glass has been used, and an unsuitable mix of patients is housed together. There is also a psycho-geriatric ward on the 4th floor, which is unsuitable for mental health patients. A large sum, estimated at \$30,000 a week is spent on specialist nurses to supervise patients closely because of the unsuitability of the environment.⁷⁴
 - The building at James Fletcher Hospital in Newcastle is extremely old. The general wards are of poor standard and not well laid out. Boronia House, for elderly patients, is so old that it has become below standard.⁷⁵
- 22.71 Carers and family of patients also told me that the architecture of modern mental health units is inappropriate for people with acute mental health conditions.⁷⁶ Nurses' stations tend to be situated at the back of wards so that access and egress cannot be monitored, and outside areas are too small, unprotected from the sun, and lacking in privacy and security.⁷⁷ Due to layout and difficulty in supervision, I was told that the theft of patient's clothes and personal effects is not uncommon.⁷⁸ Facilities often lack other services patients need, such as medical attention, occupational therapy, education, training and recreation.⁷⁹
- 22.72 I have also heard evidence that across NSW, drug and alcohol services are almost invariably in the most "ramshackle building out the back", which affects both health professionals and the behaviour of their clients.⁸⁰ I was told that Royal Prince Alfred Hospital's drug and alcohol facilities were closed in 2001 and, so far, a new facility remains in the planning stage with no funding available to re-build.

Drug & alcohol treatment

- 22.73 In 2007-08 there were 285 active specialist drug and alcohol facilities in NSW. A further 5 facilities are scheduled to commence operations in 2008.⁸¹
- 22.74 In 2006-07, these facilities provided 37,945 courses of treatment for drug and alcohol abuse in NSW.⁸² Alcohol was the most common principal drug (45%), followed by cannabis (19%), heroin (13%), and amphetamines (13%).⁸³ Half of the courses of treatment concerned more than one drug.
- 22.75 Despite this, I was told that there is general a lack of drug and alcohol facilities across NSW. I heard evidence of:
- a lack of detoxification services,⁸⁴
 - a limited number of mental health nurses with appropriate training in drug and alcohol issues;⁸⁵ and
 - waiting lists of 3 to 6 weeks for drug and alcohol services.⁸⁶

- 22.76 I heard, in particular, that young men face a particularly slow recovery from drug abuse. This accorded with my observations when visiting inpatient mental health facilities. Several mental health workers, particularly at Cumberland Hospital, suggested that such young men be placed in a separate stream in inpatient mental health units where they are provided with meaningful activities to assist in their slow recovery process.⁸⁷
- 22.77 I heard evidence at Cumberland Hospital that it is very difficult to arrange drug and alcohol treatment in the community for patients after they are discharged. This can be problematic for patients who are ordered to stay in mental health units under the *Inebriates Act 1912*. It was submitted to me that the stigma of being an inpatient in a mental health facility makes it difficult to find a place within alcohol rehabilitation programs.⁸⁸

Mental health in the Emergency Department

- 22.78 Mental health patients contribute significantly to the workload in the Emergency Department,⁸⁹ not only in terms of the number of attendances, but also in the demands they make on the time of clinicians. (At Liverpool Hospital, which has a high volume of Emergency Department mental health presentations, I was told that people go to the Emergency Department because there are an inadequate number of psychiatrists in the community mental health centres.⁹⁰)
- 22.79 The intrinsic nature of an Emergency Department is likely to prove an overstimulating environment for many mental health patients, leading to an exacerbation of their symptoms. As well, when an Emergency Department is overcrowded, with patients waiting for assessment or admission in corridors, there is a real prospect of over stimulation of patients attending with mental health conditions.⁹¹
- 22.80 From the evidence I heard, and the hospitals which I visited, it seems to me that there are only a small number across NSW which have suitable facilities for mental health patients in the Emergency Department. These facilities can take either of 2 forms:
- safe assessment rooms; and
 - PECCs.

Safe assessment rooms

- 22.81 A safe assessment room is a separate, secure room in the Emergency Department where mental health patients can safely stay while they are assessed and treated. Safe assessment rooms have a number of design features which reduce the chance of self-harm to the patient as well as offering safety to staff working with the patient, for example, two exit doors that swing outwards,⁹² minimal furnishings and no hanging points,⁹³ an observation window, medical equipment is secured in a locked cupboard, the room may be sound-proofed, and there may be an access door for NSW Police or Ambulance officers to escort patients directly into the safe assessment room.⁹⁴
- 22.82 NSW Health told the Inquiry that there are only 11 safe assessment rooms in NSW Emergency Departments, as follows.⁹⁵

Table 22.4 Safe Assessment Rooms and their location in NSW⁹⁶

Area health service	Hospitals	No.
Northern Sydney Central Coast	Royal North Shore, Hornsby, Gosford	3
Sydney South West	Canterbury, Bankstown	2

North Coast	Coffs Harbour	1
Hunter New England	Tamworth, John Hunter	2
Greater Southern	Albury	1
Greater Western	Bathurst, Orange	2

- 22.83 In the course of my extensive visiting program I saw a number of single rooms in Emergency Departments which are used for the assessment of mentally ill patients. Clearly, these rooms don't comply strictly with the guidelines of NSW Health.
- 22.84 Overall my observation was that there was a general lack of safe assessment rooms in Emergency Departments across metropolitan Sydney,⁹⁷ and a severe shortage in regional and rural areas.
- 22.85 This has implications for the safety and comfort of mental health patients, as well as other patients attending the Emergency Department, and staff. The result is that staff are forced to "make do" by using other parts of the Emergency Department for mental health assessments, such as negative pressure rooms or multipurpose rooms, which are not at all suitable because they were not designed and laid out to protect the patients and staff. And they were not designed to provide an empathetic environment conducive to the treatment of the patient.
- 22.86 Even in hospitals with safe assessment rooms, I heard that the rooms are often occupied with people presenting with the effects of drug and alcohol abuse and so may not be available when required.⁹⁸

Recommendation 107: *Within 18 months, each hospital which operates an Emergency Department should establish a safe assessment room at a location, if not adjacent to, then proximate to the Emergency Department.*

Psychiatric Emergency Care Centres

- 22.87 PECCs are typically a 4 to 6 bed unit to which patients may be admitted at any time of the day or night for short-term observation, stabilisation and treatment. PECCs are generally co-located with, or else nearby to, the Emergency Department. A PECC is staffed by specialist mental health nurses and doctors, although it is necessary for those teams to develop and maintain a close liaison and working relationship with the staff in the Emergency Department.
- 22.88 Patients presenting to the Emergency Department are triaged and assessed prior to transfer to the PECC to ensure that they are suffering from a condition which is suitable for treatment in a PECC and that there are no physical conditions which require medical intervention or review. PECCs generally provide:
- faster access to specialist mental health assessment and care; and
 - improved safety for patients, health professionals and the public⁹⁹
- A PECC will, once instituted, generally result in reduced short stay admissions to inpatient mental health units and also assist in reducing the waiting times in Emergency Departments.¹⁰⁰
- 22.89 At present, PECCs are in the 4 largely metropolitan area health services. A PECC has been approved for Wollongong, which is to open in December 2008, and others are planned including Prince of Wales Hospital and Royal North Shore Hospital.



- 22.90 An evaluation of PECCs by NSW Health¹⁰¹ suggests that PECCs are a good model. According to the study, PECCs resulted in:
- high patient and carer satisfaction;
 - improved assessment quality and clinical documentation;
 - episodes of patient aggression being reduced;
 - episodes of absconding by patients being reduced by two-thirds;
 - reduction in the average time spent by a mental health patient in the Emergency Department to 2 hours;
 - an increase in the number of mental health patients being admitted to hospital in less than 8 hours after first arrival at the Emergency Department from 39% to 69%;¹⁰²
 - high levels of staff satisfaction in the Emergency Department and mental health inpatient units; and
 - comparable costs with other mental health services.¹⁰³
- 22.91 I generally heard positive reviews from clinicians.
- A community psychiatrist, Dr Neil Phillips, described PECCs as a fantastic resource, which gives mental health patients a much quicker turnaround in hospital.¹⁰⁴ Dr Phillips said he likes the PECC model because it allows one to observe a patient for a few hours, or over a long weekend when it is normally very difficult to get patients into an inpatient unit, as well as feed the patient, make them comfortable, examine their complexities, and save the expense of a longer term inpatient admission.
 - Dr Gordian Fulde, the Director of the Emergency Department at St Vincent's Hospital, Darlinghurst, told me that the PECC at that hospital had significantly improved the treatment of patients suffering mental illness who attended at the hospital and that, having the PECC immediately adjacent to the Emergency Department had led to better co-operation between mental health staff and the staff in the Emergency Department with the result that patient care had been improved.¹⁰⁵
 - Staff at St George Hospital told me that PECCs have improved mental health access enormously.¹⁰⁶

- PECC staff are experienced in the assessment of mental health presentations, so triage is conducted more efficiently.¹⁰⁷
 - The PECC environment is more conducive to allowing clinicians the capacity to talk to patients and calm them down, be sympathetic to their psychiatric needs, and adequately administer medication particularly when compared with a typical Emergency Department.¹⁰⁸
- 22.92 In contrast, a senior staff specialist from Royal Prince Alfred Hospital expressed concern that Emergency Department trainees lost valuable exposure to mental health patients. He also thought that streaming mental health patients into PECCs may perpetuate a stigmatisation of mental health as an illness within the medical profession as something that is dealt with by “someone else.”¹⁰⁹ Whilst this may be an unintended adverse consequence of the establishment of PECCs, it is a relatively minor one when compared with the significant benefits obtained by patients.
- 22.93 To my observation, PECCs worked very well, and appeared to be embraced wholeheartedly by the staff in Emergency Departments which had them. There was reluctance by some, but only a few, Emergency Department staff to having this model of care implemented. Having listened to the reasons for this reluctance being articulated I must say that, although expressed with vigour, they seemed quite unpersuasive to me.
- 22.94 PECCs are only suitable as a model of care in hospitals which have the necessary staffing levels to maintain the 24 hour, 7 day a week shift roster which is necessary to have patients being cared for in a PECC. They are not well suited for rural and remote settings, where many Emergency Departments are not fully staffed for all shifts but rather are covered by staff who are carrying on with other duties and supplemented by on-call staff.¹¹⁰
- 22.95 Nonetheless, there are several major regional hospitals which have the necessary staffing levels but do not have a PECC, such as Coffs Harbour Hospital. I was told by an Emergency Department doctor at Coffs Harbour that on several occasions over the last 6 months, there have been acutely disturbed mentally ill patients residing in Coffs Harbour Emergency Department for 2 or 3 days at a time as the in-patient mental health unit is full.¹¹¹
- 22.96 I am told by NSW Health that consultation liaison nurses will be provided to Emergency Departments which do not have PECCs, targeting patients with co-existing drug and mental health issues.¹¹² Consultation liaison services aim to improve health outcomes, reduce readmissions to the Emergency Department, reduce length of hospital stay, and facilitate access to drug and alcohol and mental health services (including inpatient withdrawal services, and inpatient and outpatient drug and alcohol and mental health services within Area Health Services).¹¹³ In NSW, consultation liaison services are provided by a range of clinicians which includes Staff Specialists, Registrars, Clinical Nurse Consultants, Clinical Nurse Specialists, Registered Nurses, Social Workers and Psychologists. Dedicated Drug and Alcohol consultation liaison services are also provided in 5 Area Health Services in response to increasing numbers of substance affected patients attending Emergency Departments and the extensive resources required to safely manage these patients.¹¹⁴
- 22.97 While consultation liaison nurses will no doubt assist in dealing with the problems posed to mental health patients and staff alike in the Emergency Department at present, I do not think it is a substitute for providing the valuable facility of a PECC widely across NSW.

Recommendation 108: *Within 18 months, each hospital which does not have a psychiatric emergency care centre (PECC) within a peer group down to and including B2 – Major Non-Metropolitan Hospital and which operates an Emergency Department, ought also to establish a psychiatric emergency care centre (PECC) at a location, if not adjacent to, then proximate to the Emergency Department unless there is easy access to a PECC located at another hospital within a reasonable transfer distance.*

Direct admission to inpatient mental health unit

22.98 It is not clear to me why a mental health patient suffering an acute episode cannot go directly to an inpatient mental health unit, assuming that the patient has been admitted to that unit for treatment previously, and also assuming that the patient does not have a medical condition which requires emergency treatment.

22.99 I was told that all such patients must go through the Emergency Department in case the patients also have medical needs which necessitate emergency diagnosis and treatment. Whilst I accept that, in some cases, a mental health patient may also have emergency medical needs, I do not think this ought mean that all mental health patients known to the system should first present to an Emergency Department which may be quite busy and present a generally unsuitable environment for mental illness, with the consequent stress this imposes on the patient and others making use of the Emergency Department.

- 22.100 A number of hospitals in NSW do admit directly to inpatient mental health units.
- All scheduled patients who are brought to Prince of Wales Hospital by police are taken directly to The Kiloh Centre, which runs a 24-hour a day, 7 days a week admission service.¹¹⁵ Staff want to keep it this way.¹¹⁶
 - A triage nurse at Liverpool Hospital can send patients directly to the inpatient mental health unit without admission to the Emergency Department.¹¹⁷
 - In Goulburn, patients may by-pass the Emergency Department and be admitted directly to the Chisholm Ross Centre where they will be examined for physical problems.¹¹⁸
 - Similarly, in Wagga Wagga, staff said they preferred patients known to the community mental health team to be admitted straight to the inpatient unit.¹¹⁹
 - The Macquarie Hospital at Ryde will accept patients directly into their acute unit.¹²⁰
 - The Cumberland Hospital at Westmead accepts some patients directly into its ICU where they are brought by members of the NSW Police Service;¹²¹ and
 - Bloomfield Hospital at Orange also has facilities for the direct admission of patients into their acute in-patient unit.¹²²

Recommendation 109: *Mental health patients re-presenting to a mental health inpatient facility or psychiatric emergency care centre (PECC) be admitted to that facility without prior admission to emergency unless, in the opinion of a triage nurse or medical officer in emergency, that person requires specialist emergency medical care.*

Drug & alcohol abuse patients in the Emergency Department

- 22.101 The number of patients who attended Emergency Departments in NSW public hospitals who were principally diagnosed as having problems relating to mental and behavioural disorders due to psychoactive substance use rose 16% from 2004/05 to 2005/06 (9,343 to 10,827).¹²³
- 22.102 Patients suffering from drug and alcohol abuse problems also account for an increasing number of assaults on hospital staff. Between 1996 and 2006, there was a 65.1% increase in the number of hospital assaults which were classified as being “mental-health related” (from 19.2% of all assaults in 1996 to 31.7% of all assaults in 2006). Of mental-health related hospital assaults in 2006:
- 24% involved drug-use,
 - 25.3% involved alcohol, and
 - 21.1% involving both drug and alcohol.¹²⁴
- 22.103 The recent “ice” epidemic poses particular safety and security issues in Emergency Departments. “Ice” users most frequently present in inner-city hospitals in Sydney, such as St Vincent’s Hospital (see box below) but I heard of similar experiences throughout rural NSW including Kempsey Hospital.

At St Vincent’s Hospital, there has been a large influx of ‘ice’ (crystal methamphetamine hydrochloride) users to the Emergency Department. A study in 2006 found that 39% of ‘ice’ users were scheduled for mental health treatment compared to 19% of other drug presentations.¹²⁵ The study found that ‘ice’ use tended to be ongoing, rather than an episodic “party drug.” Approximately 20% of users had some form of personality disorder, and 25% displayed psychosis. Notably, many ‘ice’ users posed a serious security threat. They were more agitated, violent and aggressive than patients with other drug problems.

- 22.104 The increase in ‘ice’ presentations must be taken into account in the design of Emergency Departments so that they are safer, and they must be adequately staffed by clinicians and skilled security staff.¹²⁶ I also discuss this in Chapter 26.

Community mental health

- 22.105 Generally, patients with mental health problems are better treated in the community, save for a crisis situation which patients require admission to an inpatient mental health unit. By treating patients in the community, the workload of public hospital staff is lessened to enable them to concentrate on caring for those who need care in hospitals. Associate Professor Alan Rosen told me at Royal North Shore Hospital,

“As soon as you move a crisis from the home where you can have everybody who is involved in that crisis assessed together, working together, deciding what is to happen together and looking at the crisis interpersonally, as soon as you move it into the Emergency Department, you suddenly have to start using clinical symptoms as currency. If you don’t heighten your clinical symptoms, you will not get seen in living memory there, so that is a start. Plus you don’t have your own props around; you can’t see the person in context. Every time we have to move an assessment from the community to the hospital, we are already starting to fail.”¹²⁷

- 22.106 Certainly, I would have to say, having visited 13 inpatient mental health units during the course of my Inquiry, that whilst considerable efforts have been made to make such facilities comfortable for patients, they are not nice places to be.¹²⁸ Many features required for the safety of patients and staff are not particularly nurturing. If patients can be treated in the home environment, this is a much preferable option.
- 22.107 I was directed to studies and experience which indicate that people are more likely to recover and have a better quality of life when they are supported in the community. This translates into decreased admission and re-admission rates, and more cost-effective treatment.¹²⁹
- 22.108 Notwithstanding the many clear advantages of treatment in the community, I heard evidence of a real and disturbing lack of resources and difficulties in accessing such treatment.

Lack of resources

- 22.109 I heard compelling evidence that specialist psychiatrists working in community mental health services are overloaded with patients. I was told that many are resigning or have plans to leave.¹³⁰ Psychiatrists and psychologists told me that they have inadequate time to provide any form of treatment to patients beyond recommending the best form of pharmacological therapy.¹³¹
- 22.110 I was told of community mental health services being down-graded from teams which are available around the clock to provide assistance to acutely mentally ill patients to staff who work from 9am to 5pm during the week (and not on week-ends) apparently due to a lack of resources.¹³² I was told that services are stretched to the point where more community mental health workers, and more sub-acute and non-acute beds, are desperately needed.¹³³
- 22.111 Community mental health services in the Illawarra seem particularly badly off.¹³⁴
- I was provided with figures that indicate that the area health service receives \$104 per capita for mental health patients which was said to be the lowest in NSW. Less than 5% of the area's non-acute inpatient requirements are currently met.
 - The facilities were overcrowded and unsuitable. The Community Mental Health Centre did not even have consultation rooms in which to meet with patients.
 - I was told that each case manager should typically have, and be expected to deal with and supervise about 20 clients, but at Wollongong Community Mental Health, case managers have about 35 clients each. There are another 250 to 270 clients waiting for a case manager, and the centre receives about 8 to 10 new referrals each day. They cannot hire more case managers due to funding constraints.
 - The psychiatrist at Wollongong Community Mental Health sees 15 to 20 patients a day, which allows only 15 to 20 minutes a patient.
 - Morale was at extremely low levels. I was told that there have been many resignations by psychiatrists. A senior case manager reported having trouble sleeping due to worries about case management loads and resignations by medical staff. One woman, who has been a case manager for 20 years, became visibly upset when talking about the lack of support for case managers and their patients.
- 22.112 Community mental health services in the St George were somewhat better off, but still under considerable pressure.¹³⁵

- The Rockdale Community Mental Health Centre's recent onset psychosis team has 14 patients on its waiting list, although they are not supposed to have anyone on the waiting list. The approximate waiting time is 2 months. They have 125 patients but were only set up to have 80.
 - Adult community mental health has 91 clients waiting for case managers.
 - The St George Adult Community Mental Health Service has a large number of staff vacancies, although I was told this was due to recruitment problems rather than funding problem. There are 50.23 full time equivalent employees across adult community mental health in the St George area, with 11 vacancies. I was told that the service has not been fully staffed for at least the last 7 years.
 - I was told that the current caseload level is huge and that the service is in crisis mode.
- 22.113 I was told, and accept, that a deterioration in the provision of mental health treatment in the community will result in an increased load of mental health patients in the Emergency Department, PECCs and inpatient mental health units.¹³⁶
- (d) A registered nurse at Prince of Wales Hospital said:
- "There's not enough staff to take on patients who require ongoing case management and the acute care team end up as a *de facto ad hoc* case managers."¹³⁷
- (e) Another nurse from Wollongong Hospital told me that a lack of community mental health services has the effect of increasing the prospects of a patient being re-admitted to an inpatient mental health unit. Without follow-up by case managers, patients inevitably "bounce back repeatedly" to the hospital.¹³⁸
- 22.114 Although approximately 38% of mental health spending is on community mental health services, representatives from the Royal Australian and New Zealand College of Psychiatrists told me that to maximise the best outcomes for patients and to provide the most cost effective models of care for mental health patients, the expenditure on community health services ought be closer to 60%.¹³⁹
- 22.115 In 2004-05, across Australia 51% of total state and territory mental health spending was directed to community-based services compared with 29% at the beginning of the National Mental Health Strategy in 1993.¹⁴⁰
- 22.116 In contrast, in 2005-06 NSW spent only 41% of recurrent expenditure for public sector mental health services on community mental health, residential mental health and grants to non-government organisations combined. This compares unfavourably with Victoria where in that year 64% of recurrent public sector expenditure on mental health was spent on equivalent services.¹⁴¹
- 22.117 The Senate Standing Committee on Community Affairs (2008)¹⁴² made 8 recommendations in regard to service gaps and shortfalls in mental health services, including that in negotiating the next Australian Health Care Agreement, the Australian and state and territory governments should agree on "*mechanisms to ensure that community-based mental health services are prioritised in state mental health spending.*"¹⁴³

Inaccessibility

- 22.118 The accessibility of a community mental health service to patients is obviously very important.

- 22.119 When community mental health was first developing in NSW under the Australian Assistance Plan of the early 1970s, buildings were purchased near transport and community hubs such as shopping centres.
- 22.120 Now, in some areas, community mental health centres are being moved back onto hospital sites, which some leading clinicians in community mental health strongly resist. They argue that hospital-based services reduce accessibility to patients in the community and increase the likelihood of admission.¹⁴⁴ Hospital based emergency contacts are more than 3 times more likely to be admitted to an inpatient mental health unit than if the contact is in the community.¹⁴⁵
- 22.121 A mental health patient in Lismore suggested that there needs to be co-ordination of mental health resources with a shopfront facility to provide easy access for clients.¹⁴⁶
- 22.122 There are some advantages to having community mental health services co-located with the hospital. The Royal Australian and New Zealand College of Psychiatrists has no official position on the issue, however it has told the Inquiry that psychiatrists spend a lot of time travelling, at significant cost, from medical to non-medical sites.¹⁴⁷ The College told the Inquiry that co-location of community mental health services at Sutherland Hospital (formerly at Caringbah) is estimated to have gained the equivalent of up to 2 full time staff as a result of less travelling time, despite initial reservations to the move among some professionals in the field.¹⁴⁸
- 22.123 It was submitted to me that decisions about where mental health services should be provided should be evidence-based.¹⁴⁹

Lack of sub-acute accommodation

- 22.124 As I have discussed earlier, the Richmond Report recommended the closure of psychiatric hospitals and that patients should instead be housed in small-scale supported accommodation in the community. This supported housing appears to me to be the “missing link” in the systems and services available to care for the mentally ill.
- 22.125 I was frequently told during the Inquiry, by patients, carers and clinicians alike, that there is a lack of accommodation for mental health patients who can no longer stay in their homes with their families, but who do not need to be admitted to an inpatient mental health unit. Residential accommodation with 24-hour supervision by skilled staff is also needed to provide patients with a few weeks to regain their living skills, recover, and allow their families time to recuperate.
- I was told that patients are being discharged to homelessness due to a lack of sub-acute accommodation.¹⁵⁰
 - I was told that there is no crisis accommodation or private single room accommodation in the Liverpool area.¹⁵¹
 - A psychiatrist at Prince of Wales Hospital explained that the lack of such accommodation compromises patient flow in inpatient mental health units.¹⁵²
 - Another psychiatrist gave evidence at Bankstown Hospital that there are not enough long stay beds for mental health in NSW, from boarding houses through to acute care facilities.¹⁵³ I have seen this shortage in the Illawarra region, where there are only 10 long stay beds,¹⁵⁴ and at Macquarie Hospital.¹⁵⁵
 - Psychiatrists at Royal North Shore Hospital said that a lack of 24-hour staffed hostel accommodation contributes to the pressures on the Emergency Department. Currently, these patients can stay in the Emergency Department for up to 48 hours and sometimes longer.¹⁵⁶

- The Director of the Alcohol and Drug Service St Vincent's Hospital said NSW lacks sufficient step down beds for patients with mental illness, and alcohol and drug problems who have largely recovered from an acute illness but are not yet able to manage independently back in the community.¹⁵⁷

22.126 Such accommodation as is available is largely provided by the NSW Department of Housing. This poses its own problems, as was explained to by Dr Neil Phillips at the hearing at Concord Hospital:

"I am sick, to be honest, of filling out an inappropriate form for the Department of Housing, trying to get a seriously mentally ill person housed, writing a letter, basically a begging letter, saying, "Please provide some accommodation", and then having it knocked back, because the decisions are made in the Department of Housing... without consultation with mental health professionals... We have a major problem of people in unsuitable, dangerous accommodation or no accommodation at all... We need some accommodation actually run within mental health services so that we can house someone when we need so that we can provide some care outside the home but not in the hospital."¹⁵⁸

22.127 There have been some recent successes on this front.

22.128 In a 3 year pilot Integrated Services Project (2005), the Commonwealth Department of Health and Ageing, the NSW Department of Housing and NSW Health have developed a successful step-down model for adults with challenging behaviour. The project has 3 homes in Sydney linked to behaviour support services, including a mental health nurse, and provides a 3 month assessment period with individualised case management.¹⁵⁹

Housing and Accommodation Support Initiative

22.129 By far the most successful initiative in this field at the moment is the Housing and Accommodation Support Initiative (**HASI**), which received universal acclaim during this Inquiry.¹⁶⁰ The only criticism made of it was that there was not enough of it!

22.130 HASI involves NSW Health funding non-government organisations to send staff into patients' homes to provide daily support, such as medication monitoring. As well, clinical teams are available to visit as a backup where there is a significant change in a patient's condition.¹⁶¹ NSW Health funds "packages" of care ranging from approximately \$10,000 to \$70,000 per recipient per annum.¹⁶² An estimate of recurrent program costs per participant per year for 100 participants was \$57,530 in the first year of the program (2003).¹⁶³ NSW Health told the Inquiry that it now costs \$29 million in recurrent funding to non-government organisations per annum to support the 1,000 patients enrolled in the program, that is, an average cost of \$29,000 a year.¹⁶⁴ This is substantially less than the average cost per recipient pre-HASI. Based on the NSW Health Costs of Care Standards 2004-05, it was estimated that over \$4 million per year in potential health care costs were saved by providing the HASI program to the first 100 participants.¹⁶⁵ Due to the success of the program, NSW Health is attempting to move patients who have resided in mental health facilities for more than 20 years into HASI placements. NSW Health told the Inquiry that as at 13 November 2008 a total of 1076 HASI places had been rolled-out across the State.¹⁶⁶

22.131 The Stage 1 Evaluation Report of HASI found:

- 84% of participants experienced reduced hospitalisation rates and duration of stay;
- participants spent 81% less time in hospital, which meant a saving of, on average, 70 days per person per year;

- 73% were participating in social and community activities;¹⁶⁷
 - 43% were working and/or studying.
- 22.132 Whilst HASI is alleviating the accommodation problem to an extent, there remains a large gap between what HASI provides, and the need for the services.¹⁶⁸
- 22.133 The Senate Standing Committee on Community Affairs (2008), recommended that these services be substantially increased:
- "The committee recommends that state and territory governments substantially increase funding to establish more long-term, step-up and step-down community-based accommodation for people with mental illness that is linked with clinical and psycho-social supports and rehabilitation services."¹⁶⁹
- 22.134 In my view, this warrants close consideration.

Treatment of other medical problems

- 22.135 I heard disturbing evidence of the problems which mental health patients have in obtaining medical care for other illnesses and injuries.
- 22.136 A study done in Western Australia illustrates the problem.¹⁷⁰ The study found that people with mental illness had a 2.5 times higher mortality than the general population. This is equivalent to a life expectancy in the 50-59 age group, which is similar to general populations living in developing countries.¹⁷¹
- 22.137 The authors of the study say this indicates that the mentally ill are treated inequitably by the general health system:
- "There is more to the issue than lifestyle factors. The comparison of procedure rates, hospitalisation rates, and death rates, strongly suggests that health services have not met the physical health needs of people with mental illness. This could be due to issues of access, stigma, lack of appropriate services, and communication difficulties ..."¹⁷²
- 22.138 The authors say, and I agree, that there is no reason to believe that there are major differences in mental health care and service delivery in Western Australia compared with NSW.
- 22.139 The study is consistent with evidence I heard during my Inquiry.
- (a) Alexandra Rivers of the Schizophrenic Fellowship of NSW told me that poor physical health in mental health patients is caused by the side effects of medications, and also to the difficulties they experience managing their daily lives. Poor diet and physical exercise levels, and substance abuse, are common.¹⁷³
 - (b) According to NSW Health, people with schizophrenia are more likely to suffer from heart disease and diabetes, and are more than twice as likely to die from respiratory infections such as influenza. They are also more likely to have high rates of health risk behaviours such as smoking.¹⁷⁴
 - (c) I was told of a 44 year old man suffering from chronic schizophrenia, who was admitted to the Emergency Department at Concord Hospital with pneumonia and was diagnosed with advanced lung cancer.¹⁷⁵ He died of the disease 10 days

later. His family wrote to the Inquiry recommending annual physical check ups for community mental health service clients.

- (d) I was also told of a man suffering from schizophrenia who was seriously injured when hit by a car. The man was referred by his GP to an orthopaedic specialist for treatment of his injuries.¹⁷⁶ The specialist cancelled the appointment, saying that it would be better if the patient was seen by the fracture clinic at a major metropolitan hospital where “all of his problems” could be taken care of. The orthopaedic registrar eventually saw the patient 143 days after the accident, by which time it was highly unlikely that the bones would heal. Grafts were needed on both the leg and arm. However, no follow-up consultation was offered. Unhappy with his care in the public hospital system, the patient is now being treated by 2 orthopaedic specialists in a private hospital and is awaiting surgery.

22.140 Doctors and nurses working in inpatient mental health units also reported difficulties getting doctors from elsewhere in the hospital to come to the inpatient mental health units and treat the medical conditions of patients.

- When visiting Cumberland Hospital in May 2008, I was told of the difficulty obtaining medical officers to attend the Riverwood Ward.¹⁷⁷
- At Bankstown Hospital I was also told of the difficulties staff experienced in getting clinicians to attend to medical problems at the inpatient unit.¹⁷⁸

22.141 The difficulties encountered by mental health patients in obtaining treatment for other medical problems is exemplified by the case study of Nicholas Ang.

Nicholas Ang, aged 29, died of acute bronco-pneumonia secondary to multiple drug toxicity in the acute psychiatric unit at Sutherland Hospital on 22 August 2005.¹⁷⁹ An independent audit of Mr Ang's care carried out by Jon Chesterson found that the treatment and care provided during the 4 admissions prior to his death were of a very poor standard and implicated in his death. There was a general failure by staff to conduct routine comprehensive mental health and physical assessments, gather sufficient assessment and observation data including base line data, and to closely monitor the combination of medication that was administered. There was an absence of clinical information, histories, summaries, reviews, routine assessments and other modules throughout previous admissions. The Root Cause Analysis conducted in respect of Mr Ang's death was “wholly insufficient, bureaucratic and inadequate. It indicates system failure at administrative and governance levels.”¹⁸⁰

22.142 The difficulties encountered by mental health patients in obtaining treatment for medical emergencies is illustrated by the case study of Emily Chapman.

On 15 February 2006, Emily Chapman, aged 20, died of hypoxic brain injury secondary to hanging in Ward C4A, a locked ward of Cumberland Hospital.¹⁸¹ Ms Chapman had been admitted to the hospital two months earlier after overdosing on clonazepam and upon admission was diagnosed with Chronic Fatigue Syndrome, Chronic Pancreatitis (from which she had been suffering for some years) and Dissociative Identify Disorder. One week after admission, Ms Chapman attempted to hang herself in the ward bathroom but rang the emergency bell for help, causing nursing staff to come to her rescue.

Some 7 weeks later, Ms Chapman was found hanging in the bathroom near her room on the ward, and was given oxygen but not CPR by nursing staff. CPR wasn't performed because it was (incorrectly) believed that the protocol was for CPR only when a pulse was absent. The State Coroner, Magistrate Jerram, found that staff were neither prepared for nor trained in medical emergencies. They were apparently unaware that the guidelines had changed, and that CPR should be provided immediately if breath is absent.

Magistrate Jerram described the lack of clarity in Ms Chapman's Management Plan and Medical Notes as "horrifying", and the time taken for the Emergency team to be first contacted and then to arrive on the ward as "unacceptable" and to "def[y] belief" (the nurse team leader gave evidence that the Emergency team had gone to the wrong ward).¹⁸²

- 22.143 The Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of schizophrenia and related disorders (2005)¹⁸³ dictate that quality of medical care for people with schizophrenia should be equivalent to the general community standard, recognising that:

"prevention and early treatment of serious medical illness has been seriously neglected in the management of schizophrenia, and results in premature death and widespread morbidity."¹⁸⁴

- 22.144 The guidelines also state that GPs should always be closely involved in the care, particularly the medical care, of people with schizophrenia, and that effective treatment of the whole person requires a multidisciplinary team approach, with a consultant psychiatrist centrally involved in care.¹⁸⁵

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- ¹ World Health Organization (WHO), *Mental health: strengthening mental health promotion*, Fact Sheet, No. 220, September 2007, <http://www.who.int/mediacentre/factsheets/fs220/en/> (15 October 2008).
 - ² Australian Health Ministers, *National Mental Health Plan 2003-2008*, 2003, Australian Government, Canberra, p. 5.
 - ³ Australian Institute of Health and Welfare (Begg S, Vos T, Barker B, Stevenson C, Stanley L and Lopez A), *The burden of disease and injury in Australia*, 2003, Cat. No. PHE 82, Australian Institute of Health and Welfare, Canberra, in Australian Institute of Health and Welfare, *Mental Health Services in Australia 2005-06*, 6 August 2008, Australian Government, Canberra, <http://www.aihw.gov.au/publications/index.cfm/title/10594> (4 September 2008), p. 4.
 - ⁴ Australian Bureau of Statistics, *The National Survey of Mental Health and Wellbeing: Summary of Results*, Cat No. 4326.0, 2007, Australian Government, Canberra.
 - ⁵ Psychological distress is derived from the Kessler Psychological Distress Scale-10 items (K10). It is a scale of non-specific psychological distress based on 10 questions about negative emotional states. These are used to measure the level of current anxiety and depressive symptoms a person may have experienced in the four weeks prior to the interview. It found that 62.3% of people aged 18-64 years in NSW had experienced a low level of psychological distress, 25% had experienced moderate distress and 12.7% had experienced a high or very high level of distress in the previous four weeks. 18-64 year olds were, as a group, generally more likely to experience low and moderate levels of psychological distress than the national population (low: 61.8%, moderate: 24.7%), but less likely to experience high and very high levels of psychological distress (13.4%). People aged 65 years and older in NSW experienced lower levels of moderate, high and very high levels of distress than the younger NSW group, however they experienced higher levels of low psychological distress (67.9%): ABS (Australian Bureau of Statistics), *National Health Survey, 2004-05*, Cat. No. 4364.0, 2006, Ausinfo, Canberra, table 12A.20.
 - ⁶ NSW Health, *NSW Community Mental Health Strategy 2007-2012*, 2008, p.3.
 - ⁷ NSW Health, *Special Commission of Inquiry Presentations: Directions for Mental Health*, 31 March 2008, p. 6.
 - ⁸ A mental illness is defined under the *Mental Health Act 2007* as a condition that seriously impairs, either temporarily or permanently, the mental functioning of a person with one or more of the following symptoms:
 - (i) delusions,

- (ii) hallucinations,
- (ii) serious disorder of thought form,
- (iii) severe disturbance of mood, or
- (iv) sustained or repeated irrational behaviour indicating any one or more of the above symptoms.

A mentally disordered person is someone who, in the opinion of the medical practitioner, is behaving irrationally; placing themselves, or others, at risk of serious harm; and who cannot be appropriately cared for in a less restrictive environment such as at home.

- 9 Australian Bureau of Statistics, *The National Survey of Mental Health and Wellbeing: Summary of Results*, Cat No. 4326.0, 2007, Australian Government, Canberra, p. 17.
- 10 Australian Bureau of Statistics, *The National Survey of Mental Health and Wellbeing: Summary of Results*, Cat No. 4326.0, 2007, Australian Government, Canberra, p. 18.
- 11 There has been "huge growth in co-morbidity between psychiatry and between substance abuse.": Professor Alan Rosen and Dr James Telfer, Royal North Shore hearing, 14 March 2008, transcript 361.41-42; "Cannabis, amphetamines and binge drinking are increasing, which is bringing on mental health problems.": Dr Neil Phillips, Concord hearing, 24 April 2008, transcript 2124.25-33.
- 12 M Tesson, W Hall, M Lynskey, L Degenhardt, "Alcohol and drug-use disorders in Australia: Implications of the National Survey of Mental Health and Wellbeing", *Australian and New Zealand Journal of Psychiatry*, 2000, 34, pp. 206-213 in NSW Health, *NSW Community Mental Health Strategy 2007-2012*, 2008, p. 3.
- 13 Collins D, Lapsley H, *The costs of tobacco, alcohol and illicit drug abuse in Australian society in 2004/05*, (2008), Australian Government, Canberra, [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/34F55AF632F67B70CA2573F60005D42B/\\$File/mono64.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/34F55AF632F67B70CA2573F60005D42B/$File/mono64.pdf) (15 October 2008), p. 51.
- 14 Centre for Epidemiology and Research, *NSW Emergency Department Data Collection* (on HOIST), 20 August 2008, NSW Department of Health, North Sydney in Letter from NSW Health to Special Commission of Inquiry (Request No. 135), 13 November 2008.
- 15 Inquiry into Health Services for the Psychiatrically Ill and Developmentally Disabled (David Richmond), Report, March 1983, ("the Richmond Report"), Department of Health, Sydney.
- 16 It was later acknowledged, however, that closures began earlier in the 1950s, 1960s and 1970s, and that the Richmond Report had provided the framework for deinstitutionalisation and consolidated what had already been happening in the state, and which by that stage was a widely-adopted practice internationally: Select Committee of the NSW Legislative Council on Mental Health, *Inquiry into Mental Health Services in NSW*, December 2002.
- 17 Inquiry into Health Services for the Psychiatrically Ill and Developmentally Disabled (David Richmond), Report, March 1983, ("the Richmond Report"), Department of Health: Sydney, p.40-41.
- 18 NSW Health Briefing, 31 March 2008, transcript 45.38.
- 19 In 2006, Medicare was expanded to allow mentally ill people to be referred to a psychologist under the *Better Access to Psychiatrists, Psychologists and GPs through the Medicare Benefits Schedule* initiative. Now psychiatrists, paediatricians and GPs can all refer patients for intensive, short-term Medicare-subsidised mental health services. Depending on their needs, patients are eligible for up to 12 (or 18 in exceptional circumstances) individual and/or group allied mental health services per calendar year. See <http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-ba> (13 October 2008).
- 20 Letter from NSW Health to Clare Miller, Special Commission of Inquiry, 22 September 2008.
- 21 NSW Health briefing, 31 March 2008, presentation at 7.
- 22 NSW Health data published in: Australian Institute of Health and Welfare, *Mental Health Services in Australia 2005-06*, 6 August 2008, Australian Government, Canberra, <http://www.aihw.gov.au/publications/index.cfm/title/10594> (4 September 2008), p.168
- 23 NSW Health briefing, 21 April 2008, presentation at 238.
- 24 Submission of the Royal Australian and New Zealand College of Psychiatrists (RANZCP), (NSW Branch), 27 March 2008, SUBM.009.0196 at 197.

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- ²⁵ Presentation by NSW Health, 31 March 2008, presentation at 1 [DOH.057.0044 at 1].
- ²⁶ NSW Department of Health Reporting System (DOHRS), as summarized in *Mental Health Performance Report July-December 2007*, NSW Department of Health, Sydney, p. 5
- ²⁷ NSW Department of Health Reporting System (DOHRS), as summarized in *Appendix 3 Acute Unit data Tables: Mental Health Performance Report July-December 2007*, NSW Department of Health, North Sydney; letter from NSW Health to Special Commission of Inquiry, 28 August 2008.
- ²⁸ Letter from NSW Health to Special Commission of Inquiry, 28 August 2008.
- ²⁹ NSW Government, *State Plan: A new direction for NSW*, NSW Government, Sydney, p. 74.
- ³⁰ The premises must be a “declared mental health facility” subject to an order in force under section 109 of the *Mental Health Act 2007* (NSW): s 4.
- ³¹ The following articles were referenced in NSW Health, *NSW Community Mental Health Strategy 2007-2012*, 2008, p.42: Marshall M, Lockwood A, “Assertive community treatment for people with severe mental disorders”, *The Cochrane Database of Systematic Reviews*, Issue 2 (1998); Ziguras S, Stuart G, Jackson A “Assessing the evidence on case management”, *British Journal of Psychiatry*, (2002), 191, pp. 17-21; Mueser K, Bond G, Drake R, Resnick S, “Models of community care for severe mental illness: A review of research on case management”, *Schizophrenia Bulletin*, (1998) 24:1, pp.37-74; Rosen A, Teesson M, “Does case management work? The evidence and the abuse of evidence-based medicine”, *Australian and New Zealand Journal of Psychiatry* (2001), 24, pp.731-746; Rosen A, Newton L, Barfoot K, “Evidence based community alternatives to institutional psychiatric care”, *Medicine Today* (2003), 4:9, pp.90-92.
- ³² The following articles are referenced by NSW Health, *NSW Community Mental Health Strategy 2007-2012*, 2008, p.42: Marshall M, Gray A, Lockwood A, Green R, “Case management for people with severe mental disorders.” *The Cochrane database of systematic reviews*, (1998), Issue 2; Simmonds S, Coid J, Joseph P, Marriott S, Tyrer P, “Community mental health team management in severe mental illness: A systematic review,” *British Journal of Psychiatry*, (2001), 178, pp.497-502; Ziguras S, Stuart G, Jackson A, “Assessing the evidence on case management”, *British Journal of Psychiatry*, (2002), 181, pp.17-21.
- ³³ Mental Health Association NSW Inc, *Involuntary Admission to Hospital and the NSW Mental Health Act*, Fact Sheet, January 2008, <http://www.mentalhealth.asn.au/resources/factsheets/Involadmission&MHAct.pdf>, (13 October 2008).
- ³⁴ For example, a Clozapine clinic typically provides a medication dispensing, monitoring and blood-testing service to users who are on *Clozapine*. Clozapine is a treatment for some forms of schizophrenia.
- ³⁵ NSW Health briefing, 31 March 2008, presentation at 1. [DOH.057.0044 at 1].
- ³⁶ Janette Perrone, Liverpool hearing, 17 April 2008, transcript 1881.26-40; information provided during visit to St George Community Mental Health Service on 3 September 2008.
- ³⁷ Janette Perrone, Liverpool hearing, 17 April 2008, transcript 1881.15.
- ³⁸ Information is available at the South Eastern Sydney & Illawarra Area Health Service website: http://www.sesiahs.health.nsw.gov.au/Mental_Health_Services/About_our_services/St_George_Mental_Health_Services/StGeorgeMHS.asp (17 October 2008).
- ³⁹ Janette Perrone, Liverpool hearing, 17 April 2008, transcript 1881.26.40.
- ⁴⁰ Meeting with A//Professors Alan Rosen, Roger Gurr and Paul Fanning, 27 June 2008.
- ⁴¹ Information provided during visit to Ryde Community Mental Health on 3 September 2008.
- ⁴² At Prince of Wales Hospital, I heard evidence that an intensive home-based nursing team (2 nurses, 12 hours a day) that goes into people’s homes (ie. 3 times a day for example, to administer medication) would greatly alleviate inpatient loads: Dr Mary-Anne O’Donnell, Prince of Wales Hospital hearing, 1 May 2008, transcript 2542.11.
- ⁴³ It was submitted to me by a Mental Health Carer Advocate that community teams could visit patients in their homes during an episode of illness and settle them by, for example, adjusting their medication, providing advice and support to the patient and family, and/or arranging any other action that is required. Community teams could also assist with the

early discharge of patients from hospital by providing intensive face-to-face follow-up after discharge from hospital: submission of Brenda Spencer (on behalf of the SWAHS Mental Health Carer Network), 2 April 2008, SUBM.014.0283 at 284.

- 44 Information provided during visit to Wollongong Community Mental Health on 3 September 2008.
- 45 Information provided during visit to Wollongong Community Mental Health on 3 September 2008 (Dr Neil Phillips).
- 46 The following articles were referenced by NSW Health, *NSW Community Mental Health Strategy 2007-2012*, 2008, p.42: Marshall M, Lockwood A, "Assertive community treatment for people with severe mental disorders", *The Cochrane Database of Systematic Reviews*, Issue 2 (1998); Ziguras S, Stuart G, Jackson A "Assessing the evidence on case management", *British Journal of Psychiatry*, (2002), 191, pp. 17-21; Mueser K, Bond G, Drake R, Resnick S, "Models of community care for severe mental illness: A review of research on case management", *Schizophrenia Bulletin*, (1998) 24:1, pp.37-74; Rosen A, Teesson M, "Does case management work? The evidence and the abuse of evidence-based medicine", *Australian and New Zealand Journal of Psychiatry* (2001), 24, pp.731-746; Rosen A, Newton L, Barfoot K, "Evidence based community alternatives to institutional psychiatric care", *Medicine Today* (2003), 4:9, pp.90-92.
- 47 Meeting with A/Professors Alan Rosen, Roger Gurr and Paul Fanning, 27 June 2008.
- 48 Meeting with A/Professors Alan Rosen, Roger Gurr and Paul Fanning, 27 June 2008.
- 49 NSW Health, *NSW Health Patient Survey 2007*, Report, NSW Department of Health, Sydney, 1:7.
- 50 NSW Treasury, *Budget Estimates 2008-09*, Minister for Health, Department of Health, 31.8 Mental Health Services, p. 12-42, http://www.treasury.nsw.gov.au/data/assets/pdf_file/0011/11423/bp3_12health_f.pdf (1 September 2008).
- 51 Australian Institute of Health and Welfare, *Mental Health Services in Australia 2005-06*, 6 August 2008, Australian Government, Canberra, <http://www.aihw.gov.au/publications/index.cfm/title/10594> (4 September 2008), p.154
- 52 NSW Health, *A New Direction for Mental Health*, 2006, NSW Department of Health, Sydney, p 1
- 53 NSW Health, *A New Direction for Mental Health*, 2006, NSW Department of Health, Sydney, p 9
- 54 NSW Health Briefing, 21 April 2008, presentation at 249.
- 55 NSW Health Briefing, 21 April 2008, presentation at 243.
- 56 NSW Health, *A New Direction for Mental Health*, 2006, NSW Department of Health, Sydney, p 1
- 57 The Senate Standing Committee on Community Affairs, *Towards recovery: mental health services in Australia*, Canberra, Senate Printing Unit, September 2008.
- 58 The Senate Standing Committee on Community Affairs, *Towards recovery: mental health services in Australia*, Canberra, Senate Printing Unit, September 2008, p 19-20.
- 59 Recommendation 23 in The Senate Standing Committee on Community Affairs, *Towards recovery: mental health services in Australia*, Canberra, Senate Printing Unit, September 2008, p. xvii.
- 60 NSW Health Briefing, 31 March 2008, transcript 45.38.
- 61 Meeting with NSW Health, 31 March 2008, transcript 50.36.
- 62 Meeting with NSW Health, 31 March 2008, presentation at 58.
- 63 Productivity Commission, Report on Government Services, 2008, Australian Government, Canberra, <http://www.pc.gov.au/gsp/reports/rogs/2008> (28 August 2008) table 12A.29, 12A.27; see the *National Mental Health Report 2005* for a full description of the derivation of bed estimates.
- 64 Dr Neil Phillips, Concord hearing, 24 April 2008, transcript 2124.12-18; submission of Dr Neil Phillips, 24 April 2008,; SUBM.048.0133 at 134. I was told of the shortage of acute and long stay mental health beds at Macquarie Hospital: information provided during visit to Macquarie Hospital on 11 March 2008.

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- 65 Submission of Alexandra Rivers, 13 June 2008; SUBM.078.0001 at 1.
- 66 Information provided during visit to Ryde Community Mental Health on 3 September 2008.
- 67 Confidential Concord hearing, 24 April 2008, transcript 41.
- 68 Thomas Lim, Prince of Wales Hospital hearing, 1 May 2008, transcript 2572.24-31.
- 69 Information provided during visit to Cumberland Hospital on 13 May 2008.
- 70 Information provided during visit to Cumberland Hospital on 13 May 2008.
- 71 Information provided during visit to Cumberland Hospital on 13 May 2008.
- 72 Submission of the Royal Australian and New Zealand College of Psychiatrists (RANZCP) (NSW Branch), 27 March 2008, SUBM.009.0196 at 201.
- 73 Information provided during visit to Cumberland Hospital on 13 May 2008
- 74 Information provided during visit to Cumberland Hospital on 13 May 2008.
- 75 Information provided during visit to James Fletcher Hospital on 12 May 2008.
- 76 Submission of Alexandra Rivers, 13 June 2008, SUBM.078.0001 at 2.
- 77 Submission of Alexandra Rivers, 13 June 2008, SUBM.078.0001 at 2.
- 78 Submission of Alexander Rivers, 13 June 2008, SUBM.078.0001 at 2.
- 79 Submission of Alexandra Rivers, 13 June 2008, SUBM.078.0001 at 2.
- 80 Confidential Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 45.05.
- 81 Letter from NSW Health to Special Commission of Inquiry, 28 August 2008.
- 82 Australian Institute of Health and Welfare, Alcohol and other drug treatment services in New South Wales: Findings from the National Minimum Data Set (NMDS) 2006-07, August 2007, AIHW: Canberra p. 1.
- 83 Australian Institute of Health and Welfare, Alcohol and other drug treatment services in New South Wales: Findings from the National Minimum Data Set (NMDS) 2006-07, August 2007, AIHW: Canberra p. 1.
- 84 Dr Alexander Wodak, St Vincent's Hospital hearing, 30 April 2008, transcript 2465.40.
- 85 Confidential Concord hearing, 24 April 2008, transcript 42.06.
- 86 Confidential Royal Prince Alfred Hospital hearing, 20 May 2008, transcript 41.02.
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- ¹³¹ Trevor Cocks, Wagga Wagga hearing, 22 April 2008, transcript 1933.47-1934.47.
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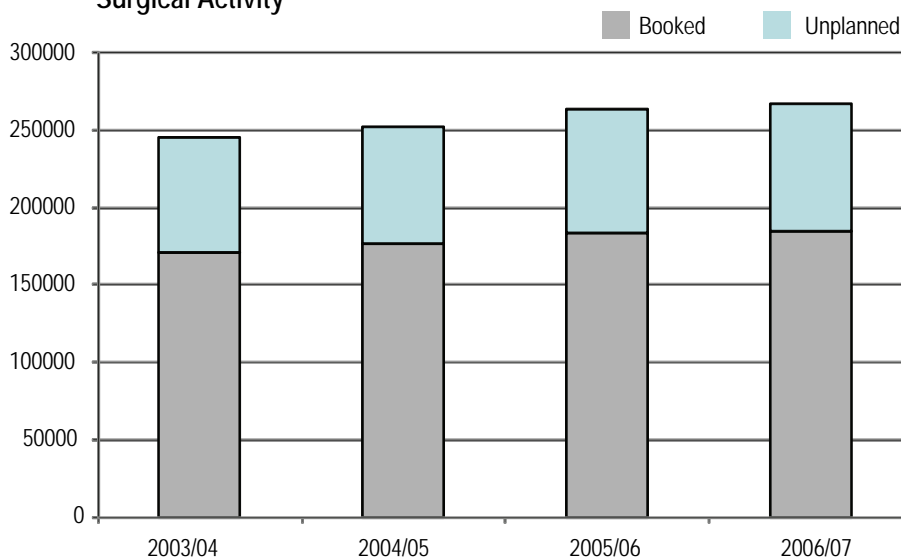
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23 Surgery

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- 23.1 Last year, 201,630 non-emergency surgeries were performed in NSW hospitals (both public and private).¹ The average waiting time for surgery was 35 days, 85.9% of patients were seen within the recommended time and NSW performed better than any other state or territory in this respect.²
- 23.2 Roughly a quarter (23%) of public hospital surgical admissions (Australia-wide) are emergency cases, needing to be undertaken within 24 hours.³
- 23.3 The rest are often described, somewhat curiously, as “elective” surgery, meaning surgery that can be delayed for at least 24 hours. To me, “elective” is a term which suggests that the surgery is of a kind where the choice to have it or not does not result in the significant deterioration of a clinical condition. Most surgery is still crucial to a person's wellbeing, and I prefer to call it “planned” surgery. Planned surgeries include a large range of procedures from total hip replacements to eyelid procedures.
- 23.4 The volume of surgery has increased in recent years. The below graph⁴ demonstrates the increase in both planned and unplanned surgery from 2003-04 through to 2006-07.

Surgical Activity



- 23.5 The public is keenly interested in being able to have surgery performed promptly and without unforeseen delay. The media frequently carries stories of people whose experience in this regard has not met their expectations.⁵ As one doctor from Westmead pointed out:

“Sometimes cases get done because it depends on which radio station the parents ring up and complain, or which Minister they ring, and so on, so there is sometimes political pressure brought on as well to do cases, but it is not necessarily medically appropriate, but they get done for those reasons. That is one of the issues.”⁶

- 23.6 Planned surgery, for most patients, is an important event. Not only does it promise relief from pain and discomfort, but perhaps also a cure of an illness or condition. Some see it as life preserving (which it often is). Patients have to prepare for such surgery. It may involve taking time off from work. It may involve moving members of the family away from their home to support them as they undergo the surgery. It may involve arrangements for post-surgical care which involve friends and family members. One of the most important things for patients is that they be informed of when they are likely to receive their surgery so that all of these arrangements can be made in good time. Not knowing predictably when the surgery will occur, or having arrangements for surgery

cancelled at the last moment leads to frustration with the potential for clinical deterioration as demonstrated in the below case study.

Ron, a 75 year old man, has had a degenerative hip condition for over 15 years. He is now in need of a hip replacement. He is in pain which is getting progressively worse and his mobility is severely affected. He waited 3 months to see a specialist who then completed the necessary forms to have him placed on the waiting list for his hip replacement operation at Lismore Hospital. Ron was put on the waiting list in October 2007 and was told at that time that his operation would take place in under a year. 6 months later he sought further information from the hospital and was told that as he was added to the list in October 2007, he could expect that his operation would happen shortly after October 2008. He sought greater certainty. He was directed to the NSW Health website where he discovered that just 50% of his doctor's patients were operated on within 13 months and 90% had their operations completed within 27 months. In the time waiting, Ron and his wife and made some, and deferred other, significant life decisions which all related to the time frame which he was given and so anticipated, for his surgery. He now feels that the estimation he was first given "was pie in the sky". Ron feels that he was disenthralled from being able to make realistic decisions about his treatment and other important life choices, and stated that it was necessary to: "...sort out the system so that a person can get an honest answer to enable them to make the right choices."⁷

- 23.7 I sympathise with this predicament, but it was nowhere near the worst examples of disruption to the lives of patients and their families about which I was regularly told.
- 23.8 Cancellation of surgery not only causes frustration to patients but has been found to have a depressing effect on patients due to the high level of emotional involvement before surgery.⁸ Cancelled surgery also results in wasted resources for the health system. Better management of planned surgery is required to reduce this unnecessary waste of the valuable health resource. In a study conducted in 2002 in a major tertiary hospital in Sydney, it was shown that approximately 11.9% of surgeries were cancelled on the day of surgery, and of these:
- "...60% of cancellations of elective procedures were potentially avoidable."⁹
- 23.9 Professor Patrick Cregan, a most experienced surgeon, commenting on this study said in an editorial in the Medical Journal of Australia:
- "Currently, 1% of the NSW population is on a surgical waiting list ... We have clear evidence of the harm that excessive waiting times cause patients. All available means must be used to solve this problem. Above all, there is a need to avoid the distress caused to patients by day-of-surgery cancellations"¹⁰

Waiting lists

- 23.10 Public patient access to planned surgery is managed through waiting lists. The aim of these waiting lists is to ensure that patients are seen within a recommended time appropriate to the urgency of their condition.

How waiting lists work

- 23.11 The patient consults either their general practitioner or an outpatient department of a NSW public hospital for assessment of their condition. The patient is then referred to a

specialist for review of their condition and, if surgery is recommended, the specialist allocates a clinical priority category. Planned surgery is allocated an urgency category being:¹¹

- Category 1 Admission is desirable within 30 days (32% of patients in NSW).
- Category 2 Admission is desirable within 90 days (32% of patients in NSW)
- Category 3 Admission at some time in the future is acceptable (36% of patients in NSW).¹²

There is also Category 4, entitled “Not ready for care”, that I have discussed below.¹³

- 23.12 I understand that the days are counted from the listing date, which is the date that the hospital receives that recommendation from the specialist or GP.¹⁴
- 23.13 Patients in Category 1 have a condition that has the potential to deteriorate quickly and **may** become an emergency. Category 2 patients have a condition which is **not likely** to deteriorate quickly or become an emergency. Category 3 patients have a condition which is **unlikely** to deteriorate quickly and which has little potential to become an emergency.¹⁵
- 23.14 Once the patient is placed on the waiting list in the appropriate category, the hospital advises the patient of this, usually by mail, and indicates a planned admission date or approximate waiting time for their procedure.¹⁶
- 23.15 I was told at one hospital that if staff are unable to contact a patient to arrange surgery, they stay on the waiting list while staff attempt to contact them in writing, by phone and through their general practitioner.¹⁷ If that fails after 2 attempts, the patient is taken off the waiting list. If a patient is on the 30 day waiting list and refuses a surgery date, then the patient is referred back to the surgeon.¹⁸
- 23.16 A theatre list is then prepared, based on the time estimated to be required to perform each type of surgical procedure. Code books that contain the average time for each procedure are used to assist in determining the theatre list.¹⁹

Not Ready For Care

- 23.17 Patients on the surgery waiting list are either:
- (a) Ready For Care (RFC), that is, available for admission to hospital for their planned procedure; or
 - (b) Not Ready For Care (NRFC), where the patient is not available to be admitted to hospital until some future date and is either:
 - (i) Staged – not ready for clinical reasons, for example, as part of a periodic treatment, or
 - (ii) Deferred – not ready for personal reasons.²⁰
- 23.18 Not Ready For Care implies that the patient will become ready for care in the future. The policy regulating Not Ready For Care stipulates:
- (a) Not Ready For Care is not intended to be a method for managing waiting time to meet targets;
 - (b) The Not Ready For Care list must be managed to ensure that the patient becomes Ready For Care or is removed from the waiting list;
 - (c) If the patient’s health has declined to an extent that they are unable to undergo the planned surgery, then they should be removed from the list; and

- (d) The hospital must record on the electronic waiting list the reason for staging or deferring the patient.²¹

23.19 There are time limits on the Not Ready For Care category which trigger clinical review²²

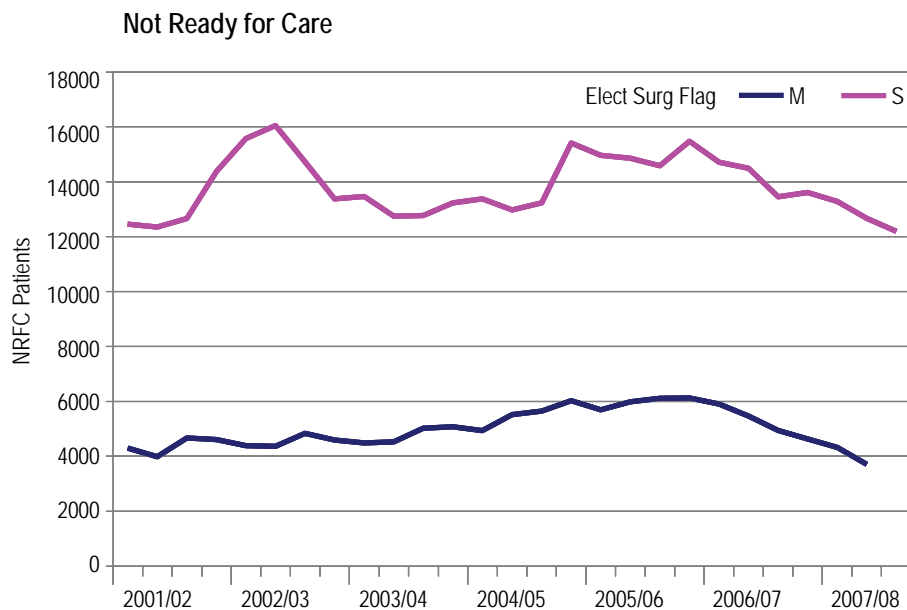
- Category I 15 cumulative days (total days on the waiting list);
- Category II 60 cumulative days; and
- Category III 180 cumulative days.

23.20 Clinical review is a review of a patient on the waiting list to ensure that their waiting time is appropriate for their clinical condition. The major objective of the review is to determine whether there has been any change in the patient's condition that warrants a change in priority, and/or whether admission is still required. The hospital is responsible for organising and paying for the review.²³ The extent of the clinical review varies depending on the category of patient.

23.21 I was told of the following strategies used to manage Not Ready For Care patients.

- (a) all patients are allocated a status review date for reassessment of Ready For Care status;
- (b) the Surgical Services Taskforce & NSW Health monitors the list each month;
- (c) periodic Not Ready For Care audits are undertaken by the area health services;
- (d) NSW Health officers conduct site visits for coaching & education (11 hospitals reviewed in 2007 and 12 in 2008); and
- (e) monthly teleconferences with area health service waiting time coordinators are held.²⁴

23.22 The number of patients who are on the Not Ready for Care list has remained fairly constant in recent times, as illustrated below.²⁵



23.23 As of June 2008, there were a total of 12,988 patients on the Not Ready for Care list in NSW. 8,626 were categorised staged and 4,362 were deferred.²⁶

- 23.24 I should also note that I was told by the Surgical Services Taskforce that the data (and audits) suggest that there is no evidence of patients inappropriately being listed as Not Ready for Care.²⁷ I accept this.

Performance indicators

- 23.25 Waiting times for planned surgery are a performance indicator and are monitored across Australia. However, I discuss in Chapter 17 how this indicator may be manipulated.
- 23.26 Waiting times for planned surgery are measured by overall planned surgery waiting times, and by reference to waiting times by clinical urgency category.
- 23.27 In 2005-06, overall planned surgery waiting times in NSW public hospitals were longer than the Australian average.²⁸
- (a) the average waiting time was 36 days;
 - (b) 78% of patients had their surgeries within the recommended time; and
 - (c) 5.4% waited more than a year for their surgery;

Up to 2005/6 waiting times for planned surgery were getting longer in NSW.²⁹ In January 2005, there were 10,551 patients on waiting lists for more than 12 months.³⁰

- 23.28 However, it is probably more relevant to consider the waiting times by clinical urgency measurement. In NSW in 2005-06,³¹ a significant proportion of patients had to wait for periods exceeding the time-limit set in all 3 categories:
- (a) 41.5% were classified as Category 1, of whom 22.8% had an extended wait.
 - (b) 30.6% were classified as Category 2, of whom 29.5% had an extended wait.
 - (c) 28% were classified as Category 3, of whom 15.8% had an extended wait.

Overall in NSW, 22.9% of all patients experienced extended waits for planned surgery.³²

- 23.29 It should be noted that the waiting time for surgery is not uniform across hospitals, and issues of equity and equal access arise.
- 23.30 I was told that at present the waiting time in western Sydney for coronary and angiopathy is 18 weeks.³³ The common waiting time in similar other Sydney hospitals for those procedures is around 2 weeks. For some other procedures the waiting time is 17 weeks. However, I am told in contrast that an acceptable waiting time would be 1 week.³⁴
- 23.31 The most recent data for the waiting times for planned surgery in public hospitals for all admissions across Australia (other than Western Australia) reveals that in 2004-2005 the longest waits were encountered in very remote areas and the shortest waiting times were experienced in inner regional areas.³⁵ These geographic categories are based on a classification developed by the Australian Bureau of Statistics.³⁶ The term "regional" generally includes the centres which I have described as being rural in this report (for instance, under the ABS classification, the term "inner regional" includes Goulburn, "outer regional" includes Braidwood, "remote" includes Nyngan and "very remote" includes Bourke).³⁷
- 23.32 The most recent NSW data on the current waiting times for booked surgery indicates that there were 58,173 patients on the register, but only 40 of whom had been waiting for more than 12 months for their procedure. The average waiting time across all

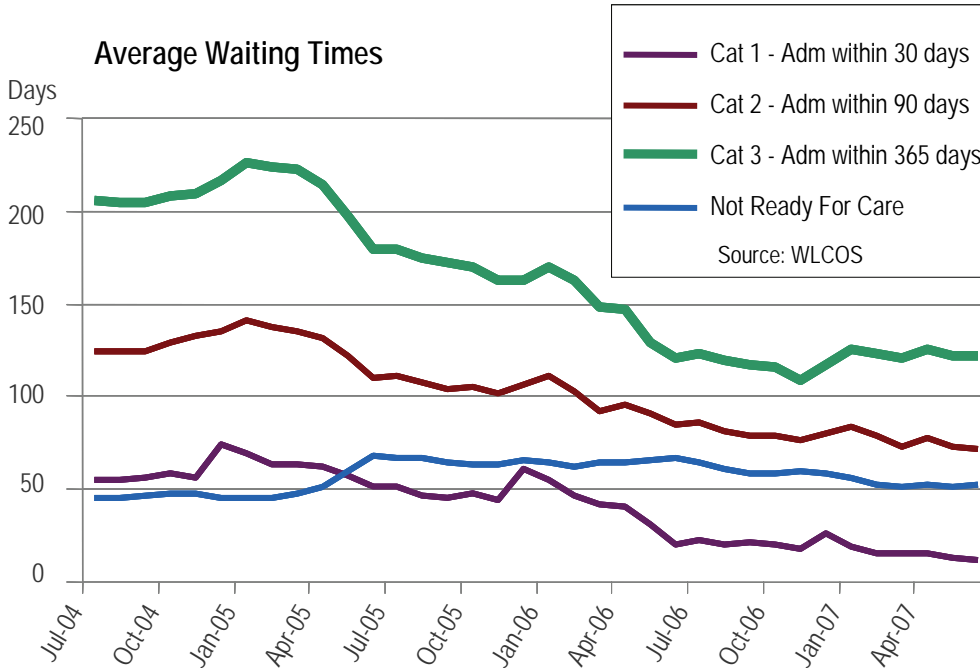
categories for all booked surgery was 2.67 months. I note that the Royal Prince Alfred Hospital had 596 people waiting for surgery with an average waiting time of 0.57 months, whereas Wagga Wagga Hospital had 1950 patients on the waiting list with an average wait of 4.15 months.³⁸ Waiting times are certainly not uniform throughout the State.

- 23.33 As one surgeon in a rural hospital told me, Category 1 patients, being urgent, would be operated on quickly and are moved straight to the top of the list, but the Category 2 patients were “*ignored*”. The surgeon told me that he often operated on Category 2 patients who had waited 7 months, whereas they should have been seen in 3 months.³⁹
- 23.34 I note that in 2006-07, 87% of Category 1 patients in NSW were operated on within the recommended time while 96% percent of Category 3 patients were operated on within the recommended time. However, only 74% of Category 2 patients were operated on within 90 days.⁴⁰
- 23.35 Certain types of procedures and surgeries are subject to longer waiting periods due to high demand. In June 2008, at most hospitals in NSW, the longest waiting lists were for orthopaedic surgery.⁴¹

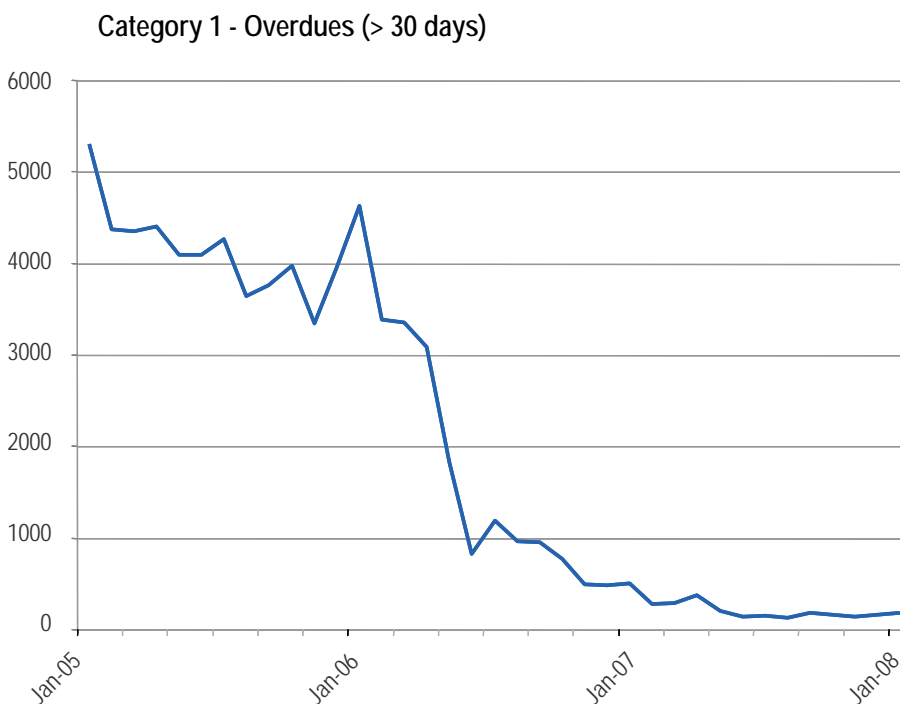
Successful reduction in waiting lists

23.36 It should be noted that in 2006-07, surgery waiting lists were significantly reduced in NSW.

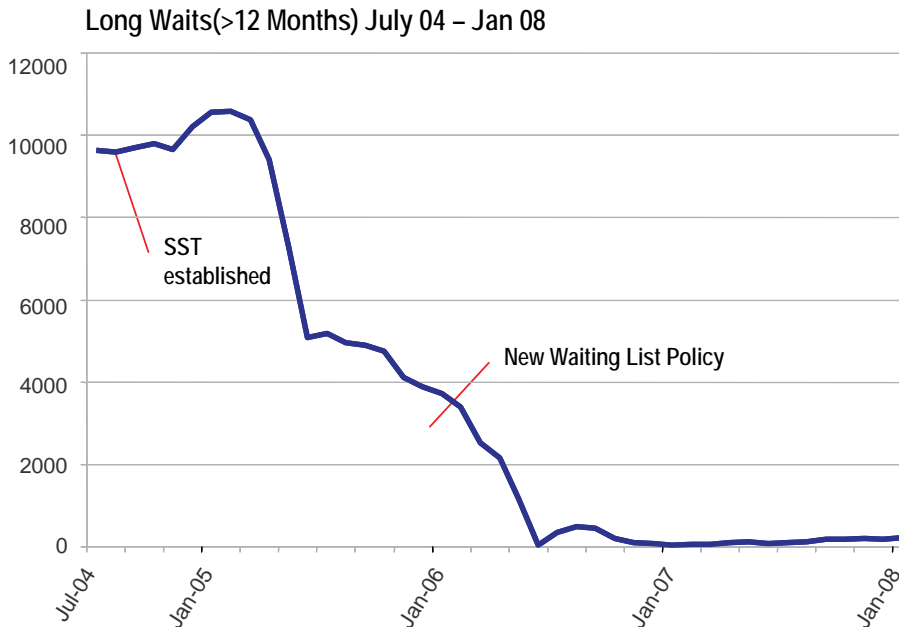
(a) between July 2004 and April 2007, the average waiting time for Categories 1, 2 and 3 had decreased, as illustrated by the chart below:⁴²



(b) the numbers of patients who are overdue for treatment in Category 1 has dramatically reduced, as supported by the following chart:⁴³



- (c) between 2004 and 2008, the number of patients waiting more than 365 days fell markedly, as demonstrated by the chart below (I note the impact of the establishment of the Surgical Services Taskforce and the new waiting list policy, which is discussed below):⁴⁴



23.37 These reductions which are to be highly commended were achieved by several means.

23.38 First, in August 2004, the Surgical Services Taskforce was established by NSW Health to improve access to surgical services across NSW.⁴⁵ The taskforce is an expert group of clinicians, hospital managers and representatives from NSW Health. The Surgical Services Taskforce and NSW Health have expended considerable effort in recent years to improve the efficiency and predictability of the surgical process.⁴⁶ I have discussed some of these efficiencies below.

23.39 Second, in March 2006 a lot of cases were assessed and re-categorised as not requiring to be done in less than a month.⁴⁷ After that reassessment process, if an area health service was not achieving their waiting list targets, NSW Health withheld funds which were reinstated only once the waiting list targets were achieved. Alternatively the surgery went to the private sector. This was successful in removing the existing backlog of surgery. Approximately 1,020 patients were treated privately.⁴⁸

23.40 Thirdly, there was cultural and process change introduced by the Surgical Services Taskforce which have continued and have really been the biggest drivers in reducing the waiting lists for surgery. These changes need to continue and develop to maintain a reduction in the waiting times for surgery. The long-term change is not brought about by simply injecting funds⁴⁹ (although some money is required to help bring about these changes).

23.41 That said, I should also highlight that recently, a considerable amount of one-off funding was allocated by the Commonwealth Government to fund additional surgery under the Elective Surgery Waiting List Reduction Plan. This money is being allocated in 3 stages:

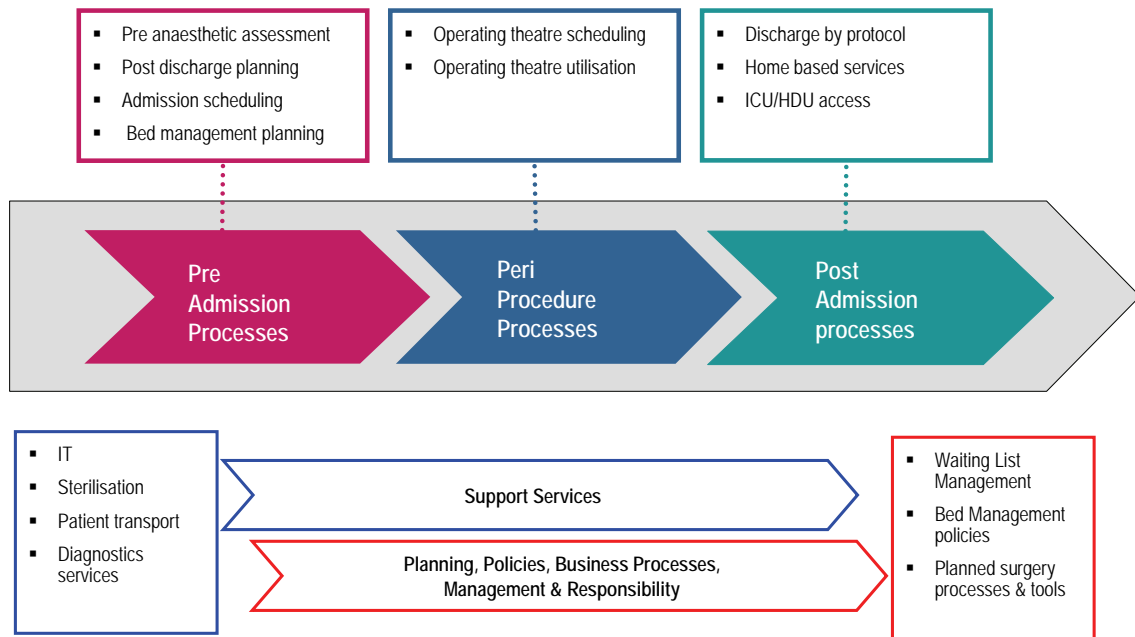
Stage 1 NSW was allocated \$43.3 million to undertake an additional 8,743 planned surgical procedures in 2008;

- Stage 2 An additional \$50.6 million is being provided over the 4 years from 2007-08 by the Commonwealth Government to be distributed to the area health services and Children's Hospital at Westmead for new equipment and surgical instruments and improved surgery management; and
- Stage 3 Up to \$300 million in dividend payments will be paid to states and territories which have dramatically increased the number of planned surgeries within the clinically recommended times by the end of the 4 year plan.⁵⁰

Cultural change

- 23.42 Cultural change in surgery has involved the recognition of the past lack of comprehensive management of waiting lists. The Clinical Service Re-design Programme implemented throughout various parts of NSW involves a re-prioritisation of the management of waiting lists to address the issues of high rates of patient cancellations and low utilisation rate of operating theatres.
- 23.43 The type of redesign that has occurred includes: network reconfiguration; demand planning; better use of physical capacity and layout; consistencies in practices and processes; consistencies with data collection and monitoring; governance structures; theatre utilisation; IT support; and the implementation of new models of care.
- 23.44 There are a number of steps in the process by which a patient has surgery, all of which have to work properly for the process to be smooth:
- (a) pre-anaesthetic assessments;
 - (b) the availability of intensive care beds, surgeons and other staff to perform the procedure;
 - (c) pre-admission has to work properly;
 - (d) operating theatres have to work efficiently and well;
 - (e) the scheduling processes have to be appropriate; and
 - (f) the discharge process has to be set in place before the patient is admitted.⁵¹
- 23.45 These steps are demonstrated in the following diagram.⁵²

The Patient Journey



23.46 The important shift that has occurred in the way that hospitals conduct surgery is in the recognition of the pattern of patient arrival flows; managing these planned arrivals; control and management of the waiting list; and a redesigned planned patient journey and preadmission process.⁵³ These management protocols extend also to unplanned arrivals.⁵⁴

23.47 Practical management solutions such as the scheduling of one extra operation per operating room per day, one surgical plan across the area health service, and innovative operating models such as 23 hour extended care model have also proven to be effective in maximising the hospitals surgery capabilities on their existing budgets and resources.

Day surgery

23.48 I was told that the introduction of a day-of-surgery admission process for planned surgery has now been implemented for more than 90% of suitable cases in most area health services, and towards 100% in rural hospitals. Many surgeries can occur during the day without the requirement for an overnight bed stay. This considerably reduces the cost of the procedure and allows the beds to be used by other patients.

23.49 One aspect of this model is the use of the pre-anaesthetic tool that involves the early assessment by an anaesthetist to determine whether the patient needs to see an anaesthetist pre-admission. This may occur a number of weeks before the operation. Not everyone needs to see an anaesthetist the night before surgery, and consequently this tool has saved an enormous number of hospital bed days.⁵⁵ According to Professor Cregan:

"Usually one of the relatively senior anaesthetists will vet the request for admission and say: this person needs to be seen by an anaesthetist, this person doesn't, and go through the process based on the request for admission."⁵⁶

Extended day surgery – 23-hour model of care

- 23.50 The extended day-only model of care, or 23-hour program has been rolled out and established in every area health service since 2005.

"...it's estimated that about 80% of surgical patients can be done either as day only or extended day only."⁵⁷

This is an extension of the day-only care model and is based on the recognition that the majority of surgical cases typically involve a length of hospital stay of 1-2 days.⁵⁸

"Many patients require only a few hours in hospital, or a stay of less than 24 hours."⁵⁹

- 23.51 The NSW policy directive contains a list of procedures that are suitable for either day-only or extended-day surgery, such as: retinal procedures, cochlear implants, cardiac pacemaker implantation and knee reconstruction or revision.⁶⁰

- 23.52 One example of the steps involved in the 23-hour model of care is as follows:

- (a) the patient is screened by a nurse to determine their suitability, both with respect to the type of treatment that they are to receive and other details that may affect their recovery. This may occur at any stage prior to the day of surgery. Suitable patients attend a preadmission clinic to review any preoperative requirements that they might have;
- (b) on the day of surgery, the patients wait in the waiting area until they are called for surgery, at which stage they change into an operating gown;
- (c) following the procedure, they are transferred to stage 1 recovery in the operating room complex;
- (d) after they are assessed as being stable, they are transferred to stage 2 recovery in the 23-hour care facility; and
- (e) after they are assessed to be alert and their medical condition stable, they are assisted into their own clothes and they spend the rest of the time in a recliner chair in the stage 3 recovery area, following which they are discharged home.⁶¹

- 23.53 Patients who need to stay in hospital longer than the 23-hour period are transferred from the stage 1 recovery area to a suitable ward.

- 23.54 A study conducted at the Royal North Shore Hospital in 2003 found that the 23-hour model of care is effective in reducing the length of stay for both for planned and emergency surgery patients.⁶²

Lack of surgery time

- 23.55 Against the backdrop of an emphasis on reducing waiting lists, I heard repeated complaints across NSW that there is insufficient operating theatre time available for surgeons to perform the surgery at hand. Lack of theatre time accounts for approximately 18.7% of cancellations of operations on the day of surgery.⁶³
- 23.56 I was told that in some circumstances, surgeons have arrived at the hospital only to find that they will be 'lucky' to be able to perform half a day of surgery. This time is further jeopardised by the lack of resources, equipment and intensive care facilities that are required.⁶⁴
- 23.57 At another hospital, a surgeon told me that they are frustrated about the increasing difficulty in keeping their operating time. This is partly due to the physical limitations of the number of theatres and inefficiencies in the system. For example, the list may be scheduled to commence at 8am, however by the time that the patient is brought up to the theatre, the administration is completed and the patient is anaesthetised, three-quarters of an hour may have been lost. There are also time limits on the length of surgical operating time that can be completed in any one surgical session.⁶⁵
- 23.58 Accompanying the increased workload of Emergency Departments over recent years is the increased pressure on operating theatres. At the Children's Hospital, Westmead, I was told that there has been a 25% increase in Emergency Department presentations to operating theatres in the last 4 years without any increase in funding for emergency cases. The cost of this extra workload is approximately \$500,000 per year for theatre time.⁶⁶
- 23.59 I was also told at the Children's Hospital, Westmead, where they try to preserve an emergency list and a planned surgery list, the volume of operations is such that lists become overfull and staff are forced to operate for long hours. There is simply an overwhelming number of emergency cases. I was told:
- "It is not uncommon for us, everyday of the week in fact, to come and find 18, 16 hours worth of so-called emergency work booked into an emergency theatre even prior to any emergency during that day."⁶⁷
- 23.60 Long working hours have negative implications for patient safety and may also result in surgical registrars doing operations unsupervised. I discuss these issues in Chapter 13.
- 23.61 I heard evidence of surgeons' own solutions to the lack of theatre time at Royal Prince Alfred Hospital. Management of Royal Prince Alfred Hospital's operating theatres is basically carried out by clinicians through an Operating Theatre Committee. The administration gives the Operating Theatre Committee the resources and it is their responsibility to spend those resources and use them as efficiently as they can. Although there has been a reduction in available theatre time by between 5% and 15% over time, in fact the amount of surgery being carried out has increased by 2% per year. The clinicians feel it is their ability to use all the resources available to them and being consulted by their administration throughout the whole process that enables them to greatly improve their efficiency. Clinicians monitor cases that are taking too long and the chairman of the Operating Theatre Committee contacts the surgeons who will apparently exceed their patients' waiting time. The important feature of this success is that the waiting lists are under clinical control. This is seen by those involved with this hospital as an important step.⁶⁸

The competition between emergency and planned surgery

- 23.62 I heard a considerable amount of evidence about problems occurring when planned surgery is interrupted by emergency surgery and *vice versa*.
- 23.63 At Port Macquarie hospital, I was told that emergency surgery accounts for about 40% of surgical procedures, and that in the last 6 months, an estimated 20 to 30% of planned procedures have been cancelled. Whilst these are planned (and not emergency surgery), that does not mean that it is in the interests of patient safety for the procedures to be continually postponed. On the contrary, the surgery needs to be undertaken to prevent further complications or deterioration.⁶⁹ I was told by Dr Chambers that:
- "We only have four operating theatres which are all running all the time during the day and they've got elective lists in them, so to get through the 40%, we often have to cancel whole lists because its much safer to do emergency patients during the day than to start their cases at night"⁷⁰
- 23.64 I was told at Liverpool that although orthopaedic trauma and fractures had traditionally been treated on emergency lists, they were being given less priority than the other 'emergency' cases with which they were competing. This led to some adverse incidents where patients had been fasted and then had their surgery cancelled. To fix this problem, orthopaedic trauma patients were withdrawn from the emergency lists and put onto a scheduled surgery list. This increased the waiting time for orthopaedic surgeries slightly, but increased the predictability of the surgery. The length of stay waiting for surgery increased from 2.2 days to 3.9 days, but the cancellation rate of surgeries dropped from 41% to 5%. The 30 day mortality rate decreased from 7.3% to 1.8% and the supervision rate for surgeries increased from 22% to 46%.⁷¹
- 23.65 Unfortunately, the extra operating time that enabled the waiting-list times at Liverpool hospital to be reduced is no longer available and the preoperative length of stay in a bed had increased to approximately 8 days at the time of the hearing.⁷²
- 23.66 In many hospitals in NSW there isn't a structure for providing rooms and resources to be used specifically for emergency surgery.⁷³ Instead there is significant emphasis on the delivery of planned surgery and emergency surgery is essentially required to fit around it. I was told that "this in fact is an impossible task".⁷⁴
- 23.67 In the competition between emergency and planned surgery, planned surgery is generally subject to cuts if there are constraints on available beds or in response to a budget shortfall. This presents problems as many planned cases are often complex and if not treated promptly may result in the patient subsequently presenting to the Emergency Department in a far worse condition. Delay in the treatment of these conditions may make a favourable outcome for the patient more difficult to achieve.⁷⁵
- 23.68 I was told that due to a shortage of operating theatres in some hospitals, and the competition for resources between planned and emergency surgery, it is not uncommon for staff to continue operating until 3am or 6am having started at 1pm the previous afternoon, to get through emergency cases because there is no room on the list in the following day.⁷⁶
- 23.69 Many clinicians supported the separation of emergency and planned surgery lists. I was told the following by Dr Logan:

"...we feel more and more [that] it is inefficient for emergency and planned surgical work to be simultaneously managed in the same system..."⁷⁷

- 23.70 I received a submission from a doctor who had worked in hospitals (not in NSW) where the planned and the emergency surgery has been separated between hospitals. This model has worked well and, in the author's opinion, leads to both groups of patients being dealt with in a better manner.⁷⁸
- 23.71 On my visits to St George Hospital and Sutherland Hospital, I was told that arrangements had been put in place so that planned orthopaedic surgery was intended to be, and usually was, conducted at Sutherland Hospital whereas the emergency surgery was conducted at St George.⁷⁹ At the Royal Prince Alfred Hospital, I was told that planned non-urgent orthopaedic surgery, such as joint replacement was carried out in a separate building on the campus from the principal operating room complex where emergency orthopaedic surgery was carried out.

Acute Care Service Model

- 23.72 One other model of care of which I learnt was the apparently successful "acute care service" model that has been used for the last three years at Prince of Wales Hospital.⁸⁰ A general surgeon is rostered on and available for surgery 2½ days per week, this surgeon is not rostered on for any other surgery and does not have any other commitments. There is also a full-time registrar and a resident. An emergency theatre is available under the responsibility of the surgeon who also resolves any problems that relate to priority and possible conflict of access.
- 23.73 Prior to the introduction of the acute care service, the utilisation rate of the emergency theatre was only 54%, but there was a perception by surgeons that they could never get access. The utilisation of the emergency theatre is now in the order of 80%, the complication rate has dropped and the operating hours have reduced by two-thirds. The significant improvement for the hospital staff is that they are now doing most of their work through the day rather than after hours.⁸¹
- 23.74 In this regard, it is important to note that emergency surgery is just as predictable as planned surgery, and can be managed just as well. I was told:
- "Acute care is incredibly predictable. The only thing you don't know is the name of the patient, but you know when the cases are likely to come in. It is very, very constant. It is something that can be managed as well as elective surgery."⁸²
- 23.75 The benefits of this model have been recognised by the Surgical Services Taskforce and others who are involved in the provision of health services.⁸³ The popularity of this model in larger hospitals appears to be spreading, as illustrated by the following comment from Professor Cregan:
- "So we have started to foster the so-called acute surgery units, which is a complete change in the philosophy of care. They started at Prince of Wales, then at Nepean, then Westmead..."⁸⁴
- 23.76 The acute care service is a consultant-led service whose only job is to do acute surgery patients for the 12 daylight hours. I was told that there is a move internationally to adopt this type model with it recently being introduced in the United Kingdom and in some parts of the United States of America.⁸⁵ This type of model requires a surgeon to be willing to perform procedures that may be out of their particular area of speciality.⁸⁶

- 23.77 I was informed that there is not universal acceptance of this model and that some are concerned that by asking surgeons to move out of their particular field of expertise, there may be a tendency towards a lower quality of surgical care.⁸⁷ This is a legitimate concern.⁸⁸ I don't think however that it tells against adoption of the model.
- 23.78 This concern was at least partially addressed when considering the following two benefits of this model. First, there are significant safety advantages in not having surgeons operating late at night by reducing the need to be operating into the early hours of the morning.⁸⁹ Secondly, all surgeons are trained in general surgery, and if specialist assistance is required, a specialist may be available either onsite or via phone. This reliance on teamwork and mutual assistance is considered by some to be a benefit of this model.⁹⁰
- 23.79 I heard that an acute surgical unit has recently also been established at the John Hunter Hospital. I heard evidence that this has had a positive and immediate impact on after hours surgery, time between diagnosis and surgery, and decreased cancellations of planned surgeries.⁹¹ Other observed benefits of this model have been better supervision of junior and trainee doctors due to the surgeries occurring in daylight hours and better management of bed occupancy and access block.⁹²
- 23.80 The Royal Australasian College of Surgeons and General Surgeons Australia support the separation of acute (emergency) and planned surgery as an effective way of reducing the competition for beds. Whilst this separation can occur on the same site, a separation of the physical building, as has occurred with the orthopaedic surgery at Royal Prince Alfred Hospital, has proven to have other benefits, such as in the reduction of hospital acquired infection rates.

Use of peripheral hospitals for surgery

- 23.81 It is clear to me that the evidence shows that most major regional and metropolitan hospitals have more surgery than they can comfortably manage.
- 23.82 It is also clear to me that a number of smaller rural and metropolitan hospitals have under-utilised operating theatres and relatively low rates of occupancy in their wards. The staff working at these hospitals have valid concerns about the loss of skills given the lack of surgery, and the potential for loss of facilities in the future.

Solution

- 23.83 It may be that one possible solution to both problems lies in siphoning off non-tertiary surgical cases to smaller hospitals, and sending particular types of non-tertiary surgery to smaller hospitals so that those hospitals develop the skills, attract the clinicians, and achieve critical mass to do these surgeries well. I have discussed how this might be done in rural areas in Chapter 6.
- 23.84 This has already been successfully done in Sydney. Some progress has been made to separate emergency orthopaedic trauma cases from other orthopaedic cases and to utilise smaller hospitals with under-used capacity in South Eastern Sydney and to some extent in Illawarra. For example, planned elective joint replacements are done at Fairfield, and the emergency joint replacements are done at Liverpool.⁹³
- 23.85 The latter are then allocated surgery at a regular time. This gives patients a degree of predictability and provides the volume of surgeries onsite, which improves quality. It also gives patients greater reliability about their surgery date.

23.86 I also heard about the success of the Auburn Elective Surgical Pilot Program. Auburn is a smaller hospital in the Sydney West Area Health Service.⁹⁴ The program involved the selection of suitable patients who were awaiting laparoscopic cholecystectomy (key hole gall bladder removal) and inguinal hernia (operation to repair a protrusion of intestines into the inguinal canal) and schedule them to all have this procedure performed at Auburn. The referrals for planned surgery of this type in the area health service area were pooled and performed at Auburn.

23.87 The program had 6 main objectives:

- to develop a separate administrative stream for planned surgical procedures;
- increase the number of types of procedures performed as day-only surgery;
- streamline the administrative process for planned surgery administration;
- guarantee a date of admission for planned surgery;
- reduce the length of the operating list down to one 6.5 hour shift and increase productivity within this time.⁹⁵

23.88 The results of the program are quite astounding. There were double the number of operations performed during the course of the program, 57% of patients were discharged on the day of surgery, less time was required to perform the surgery, and by the end of the trial period, the waiting lists for the selected procedures were eliminated. All of this was achieved with no adverse patient outcomes.⁹⁶ The benefits of this program are ongoing, with not only reduced waiting lists for people in this area, but also cost savings of about one-third on the cost of performing procedures such as cholecystectomy at Auburn when compared with other hospitals.⁹⁷

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23.89 I was pleased to hear that such a methodology is starting to be applied in other places.

"The Liverpool surgeons do their cold joints [planned joint replacement] at Fairfield... and all their emergency stuff gets done at Liverpool, again in a predictable process."⁹⁸

23.90 The cooperation between hospitals demonstrates the benefits to patients of using smaller hospitals in NSW to consolidate the provision of particular procedures.

23.91 There is a degree of resistance to this.

- (a) by patients, who want to have surgery in the most personally convenient hospital, or in a larger hospital. However, the ability to have the surgery much quicker than otherwise is a benefit.

One patient complained that despite living in Coffs Harbour, he had to travel to Macksville Hospital (about 60 km or 45 minutes in a car) to have a planned operation on his stomach. The surgery was conducted by a general surgeon. The patient would have preferred to have his operation at the hospital closest to where he lived, although ultimately, he accepted that the speed of having the procedure was more important than convenience. The patient was not given the opportunity to choose from these two options.⁹⁹

- (b) by staff in the smaller hospitals, who recall with fondness the times when their hospital did all types of surgery, not just day surgery for low risk patients, but who did not see it as appropriate to become a centre for more surgery, in effect, as an overflow or back up to a nearby larger hospital.

One witness from Kempsey¹⁰⁰ told me that when she started working at the Kempsey Hospital as a nurse almost 20 years ago, they were involved in a large range of complicated operations such as hip replacements, other orthopaedic procedures and bowel surgery. Now

the hospital only does simple day surgery such as eye surgery and colonoscopies. Kempsey Hospital performs approximately 1200 operations per year, 99% of which are day surgery.¹⁰¹ However, the witness also told me that the surgeon who used to undertake the more complicated operations in the 90's no longer lives in Kempsey and there is no surgeon there today.¹⁰² About 56km along the highway from Kempsey, is Port Macquarie. It is about 40 minutes drive away. At Port Macquarie Hospital, which is much larger than the Kempsey Hospital, I heard that they have a lack of beds. Planned surgery is disrupted "every day" due to cancellations caused by a lack of beds in the hospital or in intensive care. About 20% to 30% of planned procedures are cancelled for this reason.¹⁰³

- (c) by surgeons in tertiary hospitals, who believe all surgery should be performed there. One reason behind this was said by one witness to be efficiency.¹⁰⁴ Another reason behind this idea is that the surgeons who are training at the larger hospitals need to learn the more straightforward procedures before they conduct complex operations. This is illustrated by the following statement of Dr Stalley to me:

"The concept that they can whip off to these other places and learn the easy stuff and then come here and learn this, if you want to have a 12-year training program, fine, but it won't work."¹⁰⁵

- 23.92 However, despite these protestations, the reality remains that not all services can, or should, be offered at all hospitals.

- 23.93 I received a submission from a senior doctor who admitted that he had fought for a number of years to maintain the service of a particular procedure at his hospital. After finally relenting the surgery is now performed elsewhere. This doctor now realises that the decision should have been made many years previously despite his protestations. He stated:

"It is no longer satisfactory to bow to community or political pressure to pretend that most services can be provided at most sites."¹⁰⁶

- 23.94 The Royal Australasian College of Surgeons and General Surgeons Australia told me that small hospitals are suitable for being allocated specialised elective surgeries.¹⁰⁷ I also heard some support for this idea from the head of surgery from a smaller hospital. This doctor told me that they know of examples of networking larger and smaller hospitals so that the non-tertiary surgery was taken by the smaller hospital, leaving the larger hospital to do the tertiary workload. This has worked well.¹⁰⁸

Recommendation 110: *NSW Health, within 18 months, should ensure that there is implemented in each area health service for hospitals down to and including Category B2, Major Non-Metropolitan, a model of care for surgery which includes where possible and appropriate:*

- (a) *The separation by facility, or operating list or otherwise, of planned or elective surgery from emergency or urgent unplanned surgery;*
- (b) *The introduction of an Acute Surgery Unit, which is a consultant led unit, the purpose of which is to undertake all acute surgery at the hospital within the 12 hour day time period;*

- (c) *Explores the availability for, and the engagement of smaller hospitals to provide the facilities for surgery to be undertaken there to supplement the principal surgery programs;*
- (d) *Enables improvements to supervision of the kind referred to in Chapter 13.*

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- ¹ Australian Institute of Health and Welfare, *Australian hospital statistics 2006-2007*, p.134, table 6.2.
- ² Australian Government, Department of Health and Ageing, *The State of our Public Hospitals, June 2008 Report*, p. 37.
- ³ Australian Government, Department of Health and Ageing, *The State of our Public Hospitals, June 2007 Report*, p. 36.
- ⁴ NSW Health, *Special Commission of Inquiry Presentations: Surgical Waiting Lists – Not Ready for Care*, 22 May 2008, p. 6.
- ⁵ For example, “Third time unlucky for sick mum”, *Telegraph* 24 October 2007.
- ⁶ David Baines, Children’s Hospital at Westmead hearing, 15 May 2008, transcript 2909.29.
- ⁷ Submission of Ron Stephens, 21 April 2008, SUBM.029.0473 at 474.
- ⁸ Schofield W et al., “Cancellation of operations on the day of intended surgery at a major Australian referral hospital” (2005) 182 MJA 612.
- ⁹ Schofield W et al., “Cancellation of operations on the day of intended surgery at a major Australian referral hospital” (2005) 182 MJA 612.
- ¹⁰ Cregan, P.C. “The Easiest Cut: Managing Elective Surgery In The Public Sector”, (2005) 182(12) MJA 605.
- ¹¹ Steering Committee for the Review of Government Services Provision, *Report on Government Services 2008 Volume 2*, Canberra, p. 10.26
- ¹² Department of Health and Ageing, *The State of our Public Hospitals, June 2008 Report*, page 38.
- ¹³ NSW Health, Policy Directive, *Waiting Time and Elective Patient Management Policy*, PD2006_020, 7 March 2006.
- ¹⁴ Confidential Bankstown hearing, 13 May 2008, transcript 14.20.
- ¹⁵ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020, p. 2.
- ¹⁶ Meeting with Professor Patrick Cregan and Professor Donald MacLellan, Surgical Services Taskforce, 22 May 2008.
- ¹⁷ Confidential Bankstown hearing, 13 May 2008, transcript 16.41.
- ¹⁸ Confidential Bankstown hearing, 13 May 2008, transcript 16.41.
- ¹⁹ Confidential Bankstown hearing, 13 May 2008, transcript 21.38.
- ²⁰ Meeting with Professor Patrick Cregan and Professor Donald Maclellan, Surgical Services Taskforce, 22 May 2008.
- ²¹ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020.
- ²² Meeting with Professor Patrick Cregan and Professor Donald Maclellan, Surgical Services Taskforce, 22 May 2008.
- ²³ NSW Health, *Waiting Time and Elective Patient Management Policy*, PD2006_020, p. 12.
- ²⁴ Meeting with Professor Patrick Cregan and Professor Donald Maclellan, Surgical Services Taskforce, 22 May 2008.
- ²⁵ NSW Health, *Special Commission of Inquiry Presentations: Surgical Services Taskforce*, 22 May 2008, p. 11.
- ²⁶ NSW Health <http://www.health.nsw.gov.au/hospitals/waitingtimes/summary.asp> (18 October 2008).
- ²⁷ Meeting with Professor Patrick Cregan and Professor Donald Maclellan, Surgical Services Taskforce, 22 May 2008.

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- 28 Steering Committee for the Review of Government Services Provision, *Report on Government Services 2008* Volume 2 p. 10.28, using 2005-06 data.
- 29 Steering Committee for the Review of Government Services Provision, *Report on Government Services 2008* Volume 2 p. 10.28, using 2005-06 data.
- 30 MacLellan DG et al. "Applying clinical process redesign methods to planned arrivals in New South Wales hospitals" (2008) 188(6) MJA S23.
- 31 Steering Committee for the Review of Government Services Provision, *Report on Government Services 2008* Volume 2 p. 10.28-29, using 2005-06 data.
- 32 Steering Committee for the Review of Government Services Provision, *Report on Government Services 2008* Volume 2 p. 10.28-29, using 2005-06 data.
- 33 Confidential submission, 2 April 2008, SUBM.043.0206 at 208.
- 34 Confidential Westmead hearing, 10 April 2008, transcript 38.9.
- 35 Australian Institute of Health and Welfare, *Elective Surgery in Australia, June 2008*, page 25.
- 36 Australian Bureau of Statistics, *1259.0.30.004 - Australian Standard Geographical Classification (ASGC) Remoteness Structure (RA) Digital Boundaries, Australia, 2006*.
- 37 Australian Bureau of Statistics, *1259.0.30.004 - Australian Standard Geographical Classification (ASGC) Remoteness Structure (RA) Digital Boundaries, Australia, 2006*; Australian Standard Geographical Classification (ASGC) Remoteness Structure, 2001 edition, Census Paper No. 03/01, pp.22-25. See ABS website: [http://www.abs.gov.au/Websitedbs/D3110122.NSF/0/f9c96fb635cce780ca256d420005dc02/\\$FILE/Remoteness_Paper_text_final.pdf](http://www.abs.gov.au/Websitedbs/D3110122.NSF/0/f9c96fb635cce780ca256d420005dc02/$FILE/Remoteness_Paper_text_final.pdf) (17 November 2008).
- 38 NSW Health <http://www.health.nsw.gov.au/hospitals/waitingtimes/summary.asp> (8 October 2008).
- 39 Dr Dean Andrew Fisher, Dubbo hearing, 19 March 2008, transcript 654.43.
- 40 Australian Government, Department of Health and Ageing, *The State of our Public Hospitals, June 2008 Report*, page 38.
- 41 NSW Health <http://www.health.nsw.gov.au/hospitals/waitingtimes/summary.asp> (8 October 2008).
- 42 NSW Health, *Special Commission of Inquiry Presentations: Surgical Services Taskforce*, 22 May 2008, p. 5.
- 43 NSW Health, *Special Commission of Inquiry Presentations: Surgical Services Taskforce*, 22 May 2008, p. 2.
- 44 NSW Health, *Special Commission of Inquiry Presentations: Surgical Services Taskforce*, 22 May 2008, p. 3.
- 45 NSW Health, *Special Commission of Inquiry Presentations: Surgical Services Taskforce*, 22 May 2008, p. 4.
- 46 NSW Health Briefing, 13 March 2008, transcript 59.26-60.
- 47 NSW Health, *Special Commission of Inquiry Presentations: Surgical Waiting Lists – Not Ready for Care*, 22 May 2008, p. 3.
- 48 Meeting with Professor Deborah Picone, Professor McGrath and Tony O'Connell, NSW Health, 13 March 2008, transcript 103.8.
- 49 NSW Health briefing, 13 March 2008, transcript 95.1.
- 50 Australian Government, Department of Health and Ageing. <http://www.health.gov.au/internet/main/publishing.nsf/Content/elective-surgery-about>
- 51 NSW Health briefing, 13 March 2008, transcript 95.16.
- 52 NSW Health, *Special Commission of Inquiry Presentations: Surgical Waiting Lists – Not Ready for Care*, 22 May 2008, p. 6.
- 53 MacLellan DG, "Applying clinical process redesign methods to planned arrivals in New South Wales hospitals" (2008) 188 MJA S23
- 54 See for example, O'Connell et al. "Clinical process redesign for unplanned arrivals in hospitals" (2008) 188(6) MJA s18.
- 55 NSW Health briefing, 13 March 2008, transcript 96.29.

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- 56 NSW Health briefing, 13 March 2008, transcript 96.19.
- 57 NSW Health briefing, 13 March 2008, transcript 98.11; NSW Health, PD2007_065 *Extended day only (EDO) Administration policy*, OD2007_065.
- 58 Ryan R et al. "A 23-hour care centre model for the management of surgical patients" (2004) 74 ANZ. J. Surg 754.
- 59 MacLellan DG et al. "Applying clinical process redesign methods to planned arrivals in New South Wales hospitals" (2008) 188(6) MJA S23.
- 60 NSW Health, *Extended day only (EDO) Administration policy*, PD2007_065.
- 61 This summary is adapted from a description of the 23-hour model of care model at the Royal North Shore Hospital described in Ryan R et al. "A 23-hour care centre model for the management of surgical patients" (2004) 74 ANZ. J. Surg 754 at 755.
- 62 Ryan R et al. "A 23-hour care centre model for the management of surgical patients" (2004) 74 ANZ. J. Surg 754.
- 63 Schofield W et al. "Cancellation of operations on the day of intended surgery at a major Australian referral hospital" (2005) 182 MJA 612 at 613.
- 64 Dr Gregory Purcell, Royal North Shore hearing, 14 March 2008, transcript 412.11.
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- 24.1 Whilst there are many differences between pathology and medical imaging services, the problems being experienced have much in common and, therefore, I discuss them together.
- 24.2 The common features should be noted.
- 24.3 First, whilst pathology and medical imaging services experience many of the same difficulties as other medical services, the distinguishing feature is that problems with pathology and medical imaging services affect the delivery of almost all medical services, due to the dependence of modern medicine on the results of such investigations. As stated by Professor Koutts to me in a hearing at Westmead:
- "The pathology service isn't frontline acute service and it doesn't quite get the coverage that ICU units and accident emergencies get, but if your infrastructure services, such as pathology and radiology particularly, aren't working then your acute services aren't working."¹
- 24.4 This is supported by evidence I heard that about 70% of medical decisions for diagnosis or treatment are based on pathology testing and about 90% of all the information stored in the medical record is based on pathology testing.² Similarly, I also received a submission that informed me that 60-90% of patient presentations to the Emergency Department require medical imaging.³
- 24.5 As a consequence of this, medical staff recognise the importance of diagnostic testing and imaging which may confirm or refute a differential diagnosis.⁴ Effective use of the diagnostic tools can also save other departments in the hospital clinical time and reduce unnecessary treatments being carried out.⁵
- 24.6 However, I note that I was also told that radiologists feel that radiology tends to get treated as a commodity rather than a health service.⁶ There is a lack of recognition of the cost efficiencies which radiologists allow other departments to make as illustrated by the fact, for example, a single MRI scan may result in large savings in clinical time for the neurology department and remove the need for numerous other tests.⁷
- 24.7 Another consequence of this is that the work of pathologists and radiologists is driven by the demand of other doctors.
- 24.8 Second, given the dependence of all medical services on pathology and radiology, it is apparent that these services lend themselves to being treated by NSW Health as *quasi* corporate services, rather than medical services.
- 24.9 This is illustrated by evidence given at hearing that pathology services had been put in corporate services, and that they are treated as a business instead of as a clinical service. Specifically, I was told:
- "We are actually one of the largest groups of medical specialists in this organisation and our role is integrally central to the provision of acute, chronic health care, but someone up there sort of thinks that we should be in the corporate service rather than the clinical service".⁸
- 24.10 NSW Health policy also dictates that pathology services are to be operated as business units.⁹ Each pathology service charges its client area health service, or other facility, for the provision of pathology services.¹⁰ The rates by which pathology services can charge are determined in the policy directive and are largely based upon the Pathology Service table contained in the Medical Benefits Schedule, or MBS.¹¹

- 24.11 From 1 July 2008, a structure was put in place, which also demonstrates this point. Pathology services have been grouped into pathology clusters that are the business units of client Area Health Services, being as follows:
- Sydney South West cluster – Sydney South West area health service;
 - South Eastern Sydney Illawarra cluster – South Eastern Sydney Illawarra area health service;
 - Western cluster – Sydney West, Greater Southern and Greater Western area health services;
 - Northern cluster – Northern Sydney Central Coast, Hunter New England and North Coast area health services; and
 - Children’s Hospital pathology service – Children’s Hospital, Westmead.¹²
- 24.12 Further, the NSW Health Accounting Manual defines a business unit as “*a discrete entity that provides services in support of patient care in hospitals and other health facilities in the Area Health Services.*”; these services include pathology, radiology and nuclear medicine.¹³
- 24.13 NSW Health has encouraged the area health services to operate this business unit structure, as this enables them to charge a fee for service for referrals from GPs and specialists.
- 24.14 Thirdly, private providers play a significant role, particularly in relation to medical imaging. Private providers often have additional capital to provide services where there is either a shortage or absence in the public sector.¹⁴ Public hospitals often co-operate with local private providers to provide medical imaging to patients in a timely manner, particularly in rural and smaller regional centres¹⁵ I was told by representatives of the Royal Australian and New Zealand College of Radiologists that the private sector can and does from time to time meet the requirements of clearing a backlog of work and night work.¹⁶
- 24.15 With respect to pathology services, I was told that the relationship between the public and the private services is important for both parties and that the private sector has a significant effect on the viability of the public service.¹⁷

The Public and Private Interaction

- 24.16 The provision of medical imaging services by both the private and the public sectors may give rise to a potential conflict of interest for the service provider. Indeed, I received a submission to the effect that a director of a medical imaging service also has an interest in a private consortium in direct competition with the public service.¹⁸ This is a serious allegation but one which I have not had the opportunity to investigate and come to a conclusion.
- 24.17 It occurs to me that with the close relationship that pathology and medical imaging services have with the private sector, and the increased provision of these services as business units, it is necessary for there to be absolute transparency in relation to all business arrangements.
- 24.18 I recognise the importance of maintaining the viability of private services; however parties with financial and business interests should be fully disclosed and subject to an independent audit to ensure that there are no conflicts of interest that could have a financial impact on health services in NSW.

Who pays for diagnostic testing?

- 24.19 Who pays depends on the patient and where the service is provided. Services for public patients, being those without private health insurance, or those with private insurance who have elected to be treated as a public patient, are paid for by NSW. All other services including privately insured inpatients in public hospitals and all outpatients, with or without private health insurance, are paid for at least partially through Medicare. The remainder may be paid by the private insurer and possibly the patient. For services to which Medicare applies, the hospital will charge a facility fee for providing the service, the rate of which will depend on the complexity of the test. This money becomes revenue for the area health service. The cost of the equipment, staff and other costs associated with the hospital stay are paid for by the hospital and consequently NSW.
- 24.20 The cost of each procedure for which Medicare applies is determined by the Commonwealth and is contained in the Medicare Benefits Schedule which is updated approximately 4 times per year.¹⁹

Pathology

- 24.21 Pathologists perform approximately 1,400 different types of tests ranging from relatively common and simple tests (such as a pregnancy test for approximately \$10) to rare and complex tests (such as genetic testing for chromosomal abnormalities costing around \$400 per test). The most common types of specialised tests are as follows:
- haematology, the study of blood diseases;
 - chemical pathology;
 - microbiology, tests to determine the presence or type of micro-organisms; and
 - immunology, the study of aspects of the immune system.

Pathologists

- 24.22 Pathologists are specialist doctors and may be employed either as staff specialists or as Visiting Medical Officers (“VMO”s). Specifically:
- “Pathologists are specialist doctors who study the causes of disease and the ways in which disease processes affect our bodies. Recognising these patterns is the key to the diagnosis and treatment of disease and also provides the basis for preventative measures to avert disease.”²⁰
- 24.23 Pathologists may specialise in anatomical pathology, chemical pathology, genetics, haematology, immunology, microbiology, or general pathology.²¹
- 24.24 The training requirements are determined by the Royal College of Pathologists of Australasia, which accepts applications from registered medical practitioners with at least 1 year post graduate experience. Pathology training takes a minimum of 5 years.
- 24.25 Assisting the pathologists are an assortment of other medical and scientific staff such as microbiologists and biochemists, and other specially trained or general assistants such as hospital scientists, specimen collectors, specimen processing staff, laboratory technicians and laboratory scientists.

Hospital scientists

- 24.26 Hospital scientists are required to have obtained a degree in science from an approved tertiary institution with a minimum of 3 years full-time study, or other qualifications that have been deemed equivalent by the Health Administration Corporation.²²

Pathology laboratories

- 24.27 There are 6 levels of pathology services in NSW public hospitals. These range from blood and diagnostic collecting facilities with no on-site testing, through to a comprehensive range of testing facilities on-site available 24-hours, 7 days a week. The Level 6 pathology services are designated to have a teaching role and perform tests of a complex technical nature such as, molecular diagnosis, electron microscopy, flow cytometry and specialised inorganic chemical analysis.²³

Medical imaging

- 24.28 In this chapter I refer to medical imaging, also referred to as diagnostic imaging, as including diagnostic radiology and radiation therapy.
- 24.29 An example of a relatively inexpensive and common scan are ultrasound in pregnancy to examine the foetal anatomy and development, which costs \$100. A simple MRI scan of the hand or wrist costs \$37.85, whereas a whole body PET scan for lung cancer costs \$953.00.
- 24.30 Some of the services provided are as follows:²⁴
- (a) an x-ray (or radiograph) is a type of picture produced by passing a very small amount of radiation through the body to expose a sensitive detector or film that is positioned on the other side. The image shows the internal structures including the bones and some of the soft tissues.
 - (b) magnetic resonance imaging (**MRI**), uses a very powerful electromagnet and radio waves to provide a detailed picture of the soft tissues of the body. The images produced are like slices from a loaf of bread;
 - (c) a computerised tomography (**CT**) or computed axial tomography (**CAT**) scan, uses special x-ray equipment to obtain data from different angles around the body to produce a cross-section image of the body;
 - (d) a contrast x-ray, involves the injection of a small amount of fluid in a specific body part to make its movement and characteristics observable in an x-ray;
 - (e) ultrasound, uses high frequency sound waves that are reflected off various soft and hard body parts and assists in determining foetal characteristics, gallstones and varicose veins;
 - (f) interventional radiology, involves the use of medical imaging equipment to accurately guide the positioning of needles, catheters, or stents, for example, insertion of a stent in a narrow part of an artery;
 - (g) positron emission tomography (**PET**), uses small amounts of radioactive material that are administered to the patient to assist with the diagnosis of cancers, brain disorders and heart conditions. There are no known side effects from the radioactive material.

Radiologists

- 24.31 Radiologists must have graduated from a recognised medical school, be registered as a medical practitioner and completed two full years as an intern/resident, prior to commencing the specialist training program. The training program is 5 years and governed by the Royal Australian and New Zealand College of Radiologists.

"Radiology is the field of medicine that deals with the scanning of radiographic images of the body using medical imaging techniques, advanced computers and complex equipment that allows doctors to see inside a patient's body. Some forms of imaging include MRI, nuclear medicine, ultrasound and computed tomography. Radiation Oncology is the field of medicine which involves the care of patients with cancer, and the use of radiation treatment, often in combination with surgery and/or chemotherapy."²⁵

Radiographers

- 24.32 Radiographers, or medical radiation scientists, are allied health professionals who have qualifications specialising in either diagnostic radiography or nuclear medicine or radiation therapy.²⁶

"Diagnostic Radiography is the professional practice of conducting a range of diagnostic examinations using ionising (x-rays) or non-ionising (ultrasound) radiation. This may be done to produce an image to confirm or exclude a clinical diagnosis, to assist and monitor treatment processes, for general or specific screening programs, and for research."²⁷

- 24.33 Radiographers may also be trained and accredited to perform CT scans, ultrasounds, and MRI.²⁸

Other Staff

- 24.34 Medical imaging services are provided by a range of professionals and support staff including technicians and hospital scientists. The hospital scientists may be involved in calibrating machines and calculating the correct dosages and settings for the equipment.
- 24.35 Larger imaging departments in hospitals have a number of nursing staff. Nurses in the imaging department are responsible for a range of patient care procedures, including anaesthetic preparation, triaging and prioritising patient care. These nurses require general surgical and medical skills and experience in working in the Emergency Department, operating suite, recovery and intensive care.²⁹
- 24.36 As previously noted, there are 6 levels of medical imaging services in NSW. These range from mobile services with a limited range of x-ray capabilities with film processing capability, through to 24-hour on-site services with the equipment and staff to perform high-level scanning such as CAT scans, MRI, digital angiography and neuro-radiology.³⁰
- 24.37 Nuclear medicine facilities range from level 3 to 6, with only level 6 facilities being capable of performing PET scanning.³¹

- 24.38 I received several submissions to the effect that Australia is over dependant on CT scans and underutilises MRI technology.³² I also received submissions and heard evidence that some facilities do not have any, or do not have enough MRI equipment at their hospital.
- 24.39 A comparison between Australia and other OECD countries indicates that, in 2005, Australia had 45.3 CT scanners per million population against the average of 20.6, whereas it had only 4.2 MRI units per million population against the average of 9.8.³³ I understand that there are currently 15 Medicare eligible MRI machines in NSW public hospitals and 25 in private facilities.³⁴
- 24.40 The purchase and use of MRI technology involves significant capital expenditure. MRI machines cost, on average, around twice as much as CT equipment.³⁵ It is clear that the number of MRI facilities in public hospitals is referable to capital expenditure and funding generally. I have referred to these issues in Chapters 25 and 30.

Common problems

- 24.41 I heard evidence and received submissions, which I discuss in detail below, about the following common problems besetting NSW public hospitals with respect to pathology and medical imaging services:
- (a) an increase in the demand for tests, unmatched by an increase in resources;
 - (b) a lack of access to tests after hours;
 - (c) a shortage of medical specialists; and
 - (d) inconsistent use of technology to provide test results to clinicians across NSW.

Increasing demand for tests

- 24.42 I heard evidence that, over the last few years, there has been a rapid increase in the demand for pathology and medical imaging services, in excess of what you would expect from population growth alone.
- "...in 1997, a radiologist could be expected to look at a maximum of about 600-800 images in a day when rostered to CT, whereas in 2008, that same radiologist is expected to interpret upwards of 75,000 images in the same period."³⁶
- 24.43 I was told by the director of pathology services for the northern pathology cluster that the demand for pathology is growing at a rate of approximately 7% per annum nationally across public and private services.³⁷ In public hospitals this rate of increase has been higher and in recent times is up to 11 percent per annum.³⁸
- 24.44 This issue was also raised in a submission that I received from the Royal College of Pathologists of Australasia that noted the increased demand on acute services, general increases due to the ageing population and an increased demand to produce a greater volume of test results has not been matched with extra resources.³⁹
- 24.45 The Royal Australian and New Zealand College of Radiologists also told me that there has also been an increased demand for out-of-hours imaging and reporting with high expectations amongst medical and nursing staff of the results and reports being quickly available, no doubt due to the new technologies and better quality imaging.⁴⁰

24.46 The head of radiology at the Royal Prince Alfred Hospital told me that there has been an increase in Emergency Department presentations and increased demand for more sophisticated testing.⁴¹ The increase in more complicated surgeries, such as those to treat liver cancer, has also impacted on the demand on the radiology services.⁴² This demand has not been matched by increased staff numbers.⁴³ The increase in Emergency Department presentations is apparently combined with requests from doctors for complete CT scans. These scans require a large amount of time, however there has been no match between these expectations and staffing. As I was told:

“...there has been a dramatic increase in sophistication of CT scanners, so the expectations are that rather than do a simple CT, it will be kind of a full-on CT, which requires a huge amount of energy and reconstruction time.”⁴⁴

24.47 Data on the numbers of payments made through Medical Benefits Scheme for medical imaging and pathology tests for NSW, set out below, demonstrates the significant increase in demand for these services.⁴⁵

24.48 The average increase in pathology testing per major type of service in the 5 years from 2003-04 to 2007-08 is as follows:

Table 24.1 Pathology services – Increase in number of services⁴⁶

	Increase in number of services 2003/04 – 2007/08 (%)
Haematology	15.9
Chemical	33.8
Microbiology	29.9
Immunology	33.8
Other	30.0

24.49 The average increase in medical imaging per major type of service for the 5 years from 2003-04 to 2007-08 is as follows:

Table 24.2 Medical imaging services – Increase in number of services⁴⁷

	Increase in number of services 2003/04 – 2007/08 (% per annum)
Ultrasound	32.2
Computerised tomography	39.0
Diagnostic radiology	13.1
Nuclear medicine imaging	16.9
Magnetic resonance imaging ⁴⁸	46.0

24.50 I note that the increase in demand for these services is particularly evident in the numbers of computerised tomography scans and magnetic resonance imaging.

24.51 As noted above, Medicare payments only provide data for privately insured inpatients and outpatients. I have no reason to think that this information would not reflect the general trends in both pathology and medical imaging in public hospitals in NSW.

24.52 I have also received the data on the numbers of inpatient pathology tests and medical imaging tests within one area health service only.⁴⁹ That data demonstrates a significant increase in demand for services which whilst not precisely matching the Medicare data, does reflect the general trend.

Table 24.3 Pathology services – Increase in number of services⁵⁰

	Increase in number of services 2003/04 – 2007/08 (%)
Haematology & Blood bank	23.4
Chemistry & Immunology	30
Microbiology & Serology	16.2
Anatomical pathology	4.2

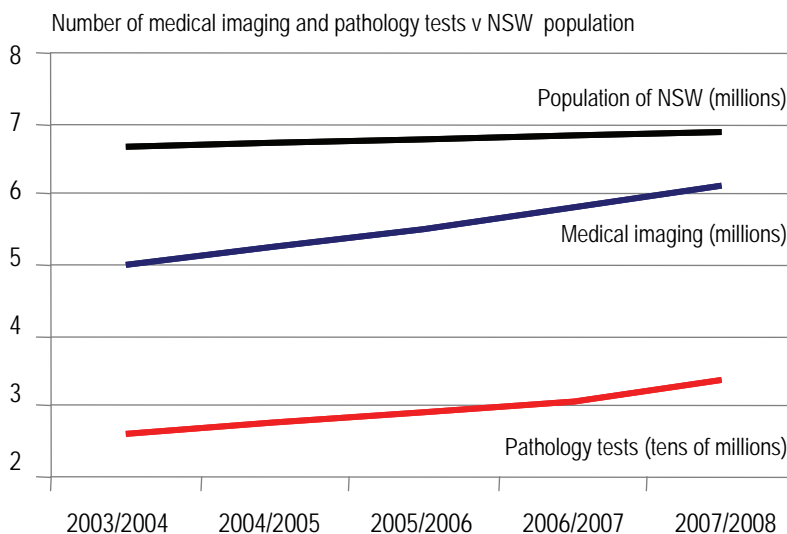
Table 24.4 Medical imaging services – Increase in number of services⁵¹

	Increase in number of services 2003/04 – 2007/08 (% per annum)
Ultrasound	20.9
Computerised tomography	27.8
Diagnostic radiology	11.5
Nuclear medicine imaging	0.7
Magnetic resonance imaging	83.0

24.53 The Medicare data, when compared to the rate of population growth in NSW, indicates that the numbers of procedures and cost of both pathology testing and medical imaging has far exceeded the growth in population from 2003-2008.

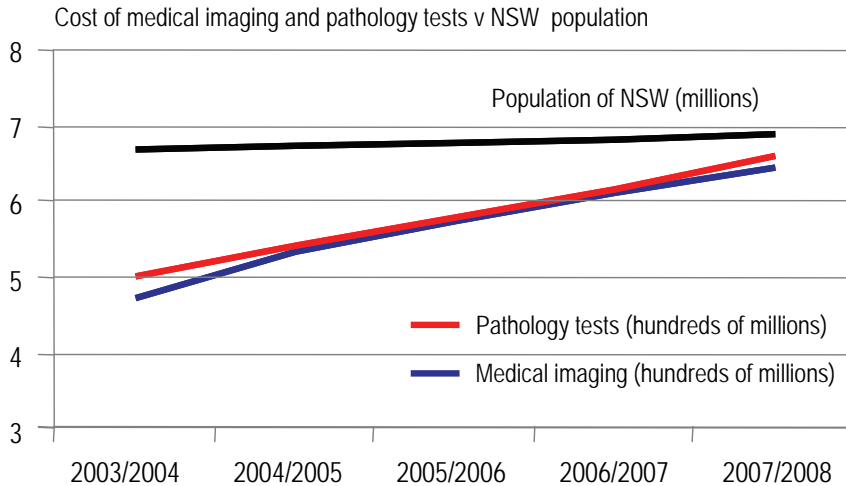
24.54 The graph below demonstrates the growth of population (expressed in millions) against the number of medical imaging cases (expressed in millions) and pathology tests (expressed in tens of millions).

Figure 24.1 Increase of medical imaging and pathology testing claimed under Medicare from 2003-04 to 2007-08⁵²



24.55 The graph below demonstrates the growth of population (expressed in millions) against the cost of medical imaging and pathology testing (expressed in hundreds of millions).

Figure 24.2 **Increase in expenditure for medical imaging and pathology testing claimed under Medicare from 2003-04 to 2007-08**⁵³



24.56 In the year 2007/08 in NSW there were 6,109,450 medical imaging services and 33,774,522 pathology tests claimed through Medicare for NSW. The cost of these services was \$695,066,203 and \$660,811,926 respectively. As noted above, these figures do not include public patients in public hospitals..

Unnecessary Testing

24.57 Unnecessary diagnostic testing in pathology and medical imaging services is a world-wide problem and can be a significant drain on health resources. One estimate is that up to one-third of radiological examinations are either totally or partially unnecessary.⁵⁴ Based on the above data, a conservative estimate of the amount of money lost to unnecessary diagnostic services is in the area of hundreds of millions of dollars.

24.58 In considering this issue, I am conscious of a particular caution, namely, that in the absence of clear protocols about when pathology testing and imaging ought to be done, in many cases the determination of whether a test is unnecessary or not can only occur after the test or image is performed and the results are known. Nevertheless, this is not a reason to ignore the phenomenon.

24.59 Unnecessary testing is not only expensive, but it also adds to delays in performing the necessary testing. It may also be unsafe for patients because some tests will expose the patient to potential harm through unnecessary radiation. As stated by Dr Peter Stuart and his colleagues:

"The wide variation in test-ordering, particularly when tests are used for diagnostic purposes, suggests that some tests are unnecessary or ordered inappropriately."⁵⁵

24.60 I was told by both the Royal College of Pathologists of Australasia and the Royal Australian and New Zealand College of Radiologists that much of the problem in relation to unnecessary testing is that junior doctors are generally responsible for ordering tests and increasingly are not being trained in radiology or pathology.⁵⁶

24.61 The indication is that those who are less experienced are more likely to order more tests due to their lack of experience. This is explained by Hammett and Harris as follows:

"Among hospital-based clinicians, test-ordering practice may be determined by level of clinical experience, fear of censure for lack of testing, medicolegal concerns, and the desire to provide a "one stop" service to evaluate all possible physiological parameters. In addition, the pressures of shorter consultation times in community practice and diminishing hospital beds have led to the increased use of investigations to fast-track patient throughput."⁵⁷

24.62 This concern was also raised in a submission that I received from the Australian Institute of Radiography in which it was noted:

"Requests for imaging, which have been initiated by junior medical officers and other referrers such as nurse-practitioners are often not sufficiently supervised, or lack proper communication pathways to Medical Imaging, to ensure that they are compliant, accurate and appropriate to the patients needs."⁵⁸

24.63 This submission also describes the phenomenon that diagnostic test-ordering in NSW public hospitals is 'free at the point of charge', meaning that there is no apparent cost for the tests to those who are ordering the tests.⁵⁹ Consequently, there are no incentives for the ward to evaluate the number of tests ordered or the number that may have been unnecessary.

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Duplicated tests

24.64 I was surprised to learn that the issue of unnecessary testing also includes a large number of duplicated tests.⁶⁰ This issue appears to relate to the adequacy of communication and medical records,⁶¹ which I discuss in detail in Chapter 15 and 14 respectively.

24.65 I have heard a number of suggestions about how to reduce the numbers of unnecessary tests, as follows:

- (a) **Increased medical staff education.** Some effort has been made at some facilities to educate doctors and allied health staff in the appropriate use of diagnostic tests. However, trainee doctors may only remain at a hospital for a matter of months before moving on, which renders this training and education discontinuous and therefore potentially less effective. The Royal Australian and New Zealand College of Radiologists, through its Quality Use of Diagnostic Imaging program, has conducted several studies examining the referral patterns from medical and allied health staff which may help inform education programs.
- (b) **Implementation of specific protocols in diagnostic test ordering.** The establishment of clinical protocols has proven to be effective in reducing the incidence of unnecessary testing.⁶² By using and applying clinical criteria to the ordering of tests, these clinical pathways can result in savings without adversely affecting health outcomes.⁶³
- (c) **Clinical work practice systems.** I was told that one way of addressing the issue of unnecessary testing and imaging is the use of "Traffic Light Guidelines" that have been introduced for some medical imaging services whereby all images are colour coded by type and the authority to order images of various colours is restricted by reference to role and seniority of the clinician.
- (d) **Use of technology to restrict or prohibit unnecessary testing.** There have been some advances in pathology testing by using smart restrictions on the electronic ordering of tests. It was explained to me that the system does not

allow for the duplication of particular tests within a certain timeframe, or restricts certain tests according to established test order protocols.⁶⁴ Some of these restrictions are cautionary, with allowances made for overriding the restrictions in certain circumstances, while some are absolute.⁶⁵

- (e) **Increasing the role of radiographers in the Emergency Department.** It was suggested to me that a possible role extension should be considered for radiographers by involving them in the triage of patients prior to any scans being ordered.⁶⁶ I have referred to role extension in more detail below.

24.66 It seems to me that, either under the present system of ordering tests, or on introduction of a complete electronic medical record (which is discussed in Chapter 14) that the following information will be routinely collected:

- (a) the patient's unique identifying number;
- (b) the unique identifying number of the health professional authorising the test;
- (c) the type of test; and
- (d) the patient's condition .

24.67 In my view, some analysis of this information needs to be performed and provided to the head of each medical department to track:

- (a) how many tests are being ordered for a particular patient, and the cumulative cost,
- (b) how many tests are being ordered by particular health professionals, and the cumulative cost,

to identify unnecessary testing and to assist the health professional concerned to better determine when a test should be performed.

Recommendation 111: *NSW Health provide its hospitals with the tools to analyse requests for tests, so that the heads of medical departments can track the number and cost of tests by patient and health professional, and regularly publish the results within the hospital for all departments.*

Lack of staff and funding

24.68 Against the background of an increasing demand for tests, I heard complaints, which I discuss below, that the pathology and medical imaging services were insufficient to meet demand at many hospitals as there has been no commensurate increase in staff or facilities to provide the services. It is fair to say that this was a complaint common to almost all areas of medical practice

24.69 For example, the Chair of the Medical Staff Council at Liverpool Hospital presented to me the results of a survey that had been conducted with the medical staff at that hospital. The results of the survey indicate that the delays in providing acute care services in public hospitals was closely associated with the efficient delivery of diagnostic tests (amongst other service-delivery issues).⁶⁷

"If we have a blockage of flow, the solution is to either increase the bed numbers or to increase throughput by increasing the efficiency of the system, but to do that you have to increase the resources across the board in terms of the diagnostic services, and you have to direct those services towards the actual bottle-neck."⁶⁸

- 24.70 Similarly, when I visited Liverpool I was told by a nurse that radiology couldn't keep up with demand. Part of the reason for this is that, due to limited funding, radiology departments are unable to get approval to recruit ward orderlies to transport patients between the Emergency Department and the radiology area, although orderlies are the cheapest staff.⁶⁹ I have referred to the problems caused by the lack of support staff in Chapter 11.
- 24.71 I heard evidence from the clinical director of pathology services from Westmead Hospital who told me that the pathology service is struggling to maintain its service commitment to the hospital. The reasons for this include insufficient funding. He submitted that \$1 million per year should be spent on refurbishment and the provision of new equipment to keep the hospital up to date, however, he said, probably only half this amount is currently being spent.⁷⁰
- 24.72 At one hospital I was told by a nurse who works in a radiology department that the increase of particularly invasive procedures in medical imaging in the last 5 years has resulted in a 72% increase in the medical imaging workload without any increase in nursing staff.⁷¹ I was also told that this has resulted in delays in the reporting of images for inpatients and also for outpatients following procedures. The common wait is around 2 weeks for an inpatient to have a formal report signed off.⁷² I was told by this nurse that they have been asked by radiologists to slow down on patient flow because it reflects poorly on the Radiology department's key performance indicators.⁷³ A staff specialist told me that in some instances it has taken months for a non-urgent report of an image to be written, by which stage the patient has gone home.⁷⁴
- 24.73 I was told that there are problems with staff shortages, replacement and recruitment for radiology departments.⁷⁵ This problem is compounded when staff are not replaced when they are sick or on leave. There is generally a shortage of staff in this area in many hospitals.⁷⁶ I have referred to the problems caused when staff are not back-filled when on leave in Chapter 11.

Rural

- 24.74 The lack of service appears more acute in rural areas (I note that I discuss the particular difficulties faced by rural services in Chapter 6).
- 24.75 For example, when I visited Goulburn I was told that whilst they have access to 24-hour radiology, the pathology department is not part of the hospital. It is operated by the Institute of Clinical Pathology and Medical Research unit based at Westmead Hospital. Apparently, the ICPMR dictates when samples will be processed, and for cost reasons, this does not occur until they have a full batch. This causes delays and test results are often held up for many hours.⁷⁷
- 24.76 Similarly, I received a submission from a nurse from Queanbeyan who informed me that biochemistry and culture specimens are no longer dealt with in Queanbeyan and have to be sent to Goulburn or Sydney for testing. The delay which this entails causes significant problems for doctors in their treatment of patients. This has led to the increased use of private pathology services, which creates a cost to the patient and decreases the experience gained by the pathology staff at the hospital who are left performing only basic testing.⁷⁸
- 24.77 The concern about the level of medical imaging services available at Queanbeyan was also raised in a submission that informed me that the new Queanbeyan Hospital does not provide ultrasound and CT scanning services. Furthermore, the facilities in the area that do have this type of equipment are not accessible after-hours.⁷⁹

- 24.78 To the same effect was a submission which I received from a doctor from Cooma informed me that the pathology testing for Cooma is sent to Institute of Clinical Pathology and Medical Research in Sydney and that there are problems with the way in which the reports are created.⁸⁰ Previously, the service was provided in the ACT. As the laboratory where the tests are being conducted is remote from the doctor, the test results arrive erratically. In addition, they are said sometimes to be difficult to read. Consequently, some of the doctors in town have been sending their samples to the local private laboratory, despite this being against NSW Health guidelines.
- 24.79 I note also that Professor Burnett told me at the Tweed Heads hearing that the rate of growth in pathology testing in hospitals in the Northern Sydney and Central Coast area health service area is approximately 9 to 11% per year. In Tweed Heads this rate of growth is closer to 16%, twice the national average.⁸¹ This growth and the pressure on health funding he said made it difficult for the health system to support this level of growth in pathology testing and service without construction of new facilities. Professor Burnett told me that an onsite pathology service is needed at Tweed Heads as the current pathology laboratory is only sufficient to cope with routine blood tests.⁸² It would cost between \$1M and \$2M to build a pathology laboratory onsite. The existing staffing levels would need to be slightly expanded. He told me that the cost of additional staff would be covered by the savings on sending the samples to other laboratories.
- 24.80 In terms of distribution of services, Dr Dissanayake from Mudgee told me that he is concerned that services are not equally distributed to the rural areas, which has a potentially adverse impact on the 30% of the country's population which lives away from metropolitan areas.. He suggested that there should be infrastructure in place to have simple blood testing or x-rays conducted in a local area and to be able to refer the results to a radiologist. Such infrastructure would help support the doctors in rural regions in providing a better service for their patients. Guaranteeing this type of ongoing support may also help attract doctors to rural regions.⁸³
- 24.81 The importance of being able to obtain a second opinion for clinicians in rural areas was also identified in a submission that I received which placed the viewing of radiology images online as a clinical priority.⁸⁴
- 24.82 Of particular importance to rural communities is the ability and competency of health personnel who are entitled to carry out medical imaging in areas where there may not be a radiographer available.
- 24.83 Currently under the *Radiation Control Act 1990* (NSW), nurses and general practitioners are able to train and obtain a remote operator licence that entitles them to take x-rays if there is no radiographer available. This is an example of a horizontal skills transfer that is designed to provide a greater level of service, particularly in remote areas. To obtain the licence the individual is required to complete a 9 week training program. The licence conditions are set by Department of Environment and Climate Change. This program and upskilling process is one which should be encouraged.
- 24.84 However, I received one submission that informed me that despite the benefits of this program, there have been cases where the quality of image obtained has been so bad that a second examination has had to be conducted and that this has effectively doubled the patient's exposure to radiation unnecessarily.⁸⁵ The reason for the poor work, it was submitted, was the absence of a requirement for the licensed nurses and doctors to maintain their skills and there was no ongoing quality assessment of those skills.
- 24.85 For this purpose, there may need to be some revision of the licence conditions under the *Radiation Control Act 1990* (NSW) so that there is either a requirement for the

ongoing education of the licence holders, or an auditing of their skills. Such requirements should become a condition of renewal of the licence.

Recommendation 112: *That the Department of Environment and Climate Change amend the conditions for licences under the Radiation Control Act 1990 to include the requirement for a quality audit of remote operators who hold licences under the Act to perform x-ray radiology services.*

Patient safety and delays in treatment

- 24.86 A lack of pathology and medical imaging services has flow-on effects including:
- (a) implications for patient safety; and
 - (b) delays caused in diagnosis, commencement of appropriate treatment and discharging patients.
- 24.87 As stated to me at a hearing at Westmead:
- "Radiology is a big issue, not just the ordinary tests and the timing of the films, but getting quick access to radiological consultation and getting a report."⁸⁶
- "...[T]here are examples we have had in recent weeks where it can take months for the report to sift through."⁸⁷
- 24.88 This was demonstrated by the evidence that I heard from a doctor from Gosford who told me that the radiology department is under-funded and under-staffed and that it may take 2 days to receive the results of an x-ray.⁸⁸ This in turn delays the patient's treatment and recovery. Specifically, he stated:
- "... The Radiology Department is chronically under funded and under staffed. They just can't supply the demands of the emergency department, the operating theatres, and the general wards as well as out-patients."
- "...in our hospital it can take two days to get an x-ray of a joint replacement, and that may be the only thing holding then back from moving into a different facility because we don't have the documentation of what's being done."⁸⁹
- 24.89 I also received a submission from the Ministerial Taskforce on Emergency Care in NSW that stated that improved access to after-hours diagnostics are required to deliver patient care and address the problem of access block.⁹⁰
- 24.90 Another submission made it clear to me that the delays in accessing pathology test results and receiving of radiology reports in a timely way can have serious implications on patient safety, stating:
- "...in NSW most x-rays taken in the ED are not reported by a radiologist before the clinical decisions on diagnosis and treatment are made. When abnormal results reach the ED staff (often 1-2 days after they were taken) the doctors have to check the files to see if the correct diagnosis was made when the patient was seen 1-2 days earlier..."⁹¹
- 24.91 I should also add that I received this comment from the Southern General Practice Network:
- "[P]rompt delivery of radiology services can have a profound effect on patient care. This can lead to rapid

diagnosis and appropriate transfer thereby minimising delayed diagnosis. it can also rule out serious conditions quickly meaning that patients can often be managed safely locally"⁹²

- 24.92 The importance of medical staff being able to access the medical imaging results and the patient safety concerns that can arise when this does not happen are demonstrated in a recent situation that arose in a hospital that does not yet have access to the Picture Archiving and Communication System that I have referred to below. Specifically, I was told by a clinician at Concord that:

*A scan was misreported as an intra-cerebral haemorrhage (bleeding in the brain), to which there is no surgical solution. The patient actually had a haemorrhage that could have been corrected as a routine surgical procedure. If the doctor had had easy access to the underlying scan, they would have seen it was a different problem, which could have been cured. The patient died, and may have died irrespective of this incident, however access to the correct information may have saved this patient's life.*⁹³

- 24.93 I note also that I received a submission from one radiographer who informed me that at their facility they previously had in excess of 1,000 unreported cases per month. By 'unreported', the submission was referring to tests about which a radiologist had not given a formal written report. This resulted in fewer than 50% of examinations being reported within 24 hours. It appears that this is a common problem, as the radiographer claimed that another, larger, hospital has at least 10 times this number of unreported scans.⁹⁴
- 24.94 The solution that was implemented at the radiographer's hospital was a fee-per-service online radiology reporting service, whereby the radiologists are remunerated per report completed. This system has successfully reduced the backlog of unreported cases and ensures reports are generated within a clinically useful time. I was also told that the cost was significantly reduced.

After hour access

- 24.95 Of course, the need of patients for tests continues throughout the whole day. When an urgent test is required for proper patient care, the speedy availability of pathology and imaging is critical.
- 24.96 I was told by the executive manager of the Institute of Trauma and Injury Management at Liverpool that the most seriously injured patients arrive out of hours. Specifically, it was stated that:
- "Any of the data that is presented from the NSW Institute of Trauma and Injury Management, and even local reports from this area health service, will demonstrate that the most seriously injured patients come out of hours. They don't come Monday to Friday from 9 to 5."⁹⁵
- 24.97 I have made recommendations elsewhere on how to address this potentially risky situation.
- 24.98 A nurse unit manager from Port Macquarie told me that the hospital does not have 24-hour pathology service and that the last round for tests in the day is at 2pm. This causes problems with taking blood in the evening.⁹⁶ As well, Doppler tests (a type of ultrasound test), are apparently only conducted in the afternoon. Waiting for these tests

to be done can delay morning discharge unless the doctor has requested they be completed on the day prior to discharge.⁹⁷

- 24.99 This problem is apparently also evident in some larger Sydney hospitals. I was told that at the Royal Prince Alfred Hospital there is an expectation that after-hours imaging and reports will be instantly available, but all-night cover in radiology is not available and staff must be called in. The expectation of after-hours service cannot be met.⁹⁸
- 24.100 I received one submission that provides a good example of how patients are affected by the lack of after-hours service.

The patient visited their GP who diagnosed a possible deep vein thrombosis (a blood clot in a deep vein). As it was after 5pm when the patient saw the GP and the local radiology practices were closed the GP gave the patient a letter and instructed the patient to present it to the hospital. Having arrived at the hospital at 6pm, the patient was triaged and eventually seen by the emergency doctor at 9pm, by which time the radiology department had closed for the day. The patient then had to stay in the emergency department overnight and the scan was conducted the following morning, confirmed that the patient had deep vein thrombosis and treatment was commenced.⁹⁹

- 24.101 Similarly, at Westmead Hospital, I was told that staff have difficulties after hours with having investigations done through the Emergency Department and with having access to MRI scanning.¹⁰⁰ Specifically, it was stated that:¹⁰¹

"We have a problem with access to MRI scanning after hours, and that includes for spinal cord lesions, which are supposed to be an absolute indication, but we really have to argue the case more aggressively than I would want to, so there is a problem in access to after-hours investigations."

- 24.102 At a number of hospitals I was told that it is difficult to obtain a full range of medical imaging services 24 hours a day. At St George I was told that there are frequently delays in radiology for the Emergency Department after hours. For example, it is difficult to get a CT after 11pm.¹⁰² At the Prince of Wales Hospital I was told that, while full-time radiography services are available, it is often difficult to get after-hours CT scans.¹⁰³ At Goulburn I was told that medical imaging is only available after hours if the radiographer is called back.¹⁰⁴
- 24.103 I received a submission from a senior radiographer who informed me that, at his hospital, they have made some excellent progress in increasing productivity and can offer on the spot general x-ray and CT services due to 24-hour staffing of the department with radiographers and the abolition of the expensive call-back system for radiographers. The simple formula that he proposed is that when the cost of the total call-back of a department goes over \$70,000 per year, or the salary of a radiographer, then a new position should be created and a 24 hour service delivered.¹⁰⁵

Lack of supply of medical specialists

- 24.104 In some ways, the lack of increased staffing levels is explicable given worldwide shortages in the medical specialists needed to operate these services.
- 24.105 There is a worldwide lack of pathology staff making it hard to adequately staff pathology labs anywhere and particularly in rural and remote parts of Australia.¹⁰⁶ This is compounded by an ageing population of pathologists. The Royal College of Pathologists of Australasia told me that there is also an ongoing shortage of

pathologists due to positions being reduced over the last decade apparently for financial reasons. The College is of the view that pathology trainees are perceived as an extra burden for services because it is not possible for pathology trainees to create revenue through Medicare.¹⁰⁷

- 24.106 There is also a worldwide lack of radiology staff.
- 24.107 Representatives of the Royal Australian and New Zealand College of Radiologists told me that there is an international shortage of radiologists, and that in Australia a 20% increase in the number of radiologists is required.¹⁰⁸
- 24.108 It was also brought to my attention that it is difficult to recruit for specialist positions, such as interventional neuroradiologists. Apparently, there are only 19 interventional neuroradiologists in Australia (and one trainee), but staff at one hospital informed me they were only allowed to advertise domestically and not internationally for appropriately qualified specialist staff.¹⁰⁹ This seems surprising.
- 24.109 Further, I heard evidence that NSW public hospitals struggle to compete for staff, particularly radiologists, given the greater monetary rewards on offer in the private sector. One witness suggested that commencing radiologists can earn up to twice as much (or perhaps more) per year in the private sector after they finish their training as they would in the public sector.¹¹⁰ It was submitted that as the public system can't match this level of remuneration, there has been a steady drain to the private services.¹¹¹ This has the result of creation two levels of service. Privately, a report is obtained on the same day.¹¹² In the public system it might take a few days to get a report.¹¹³ In order to address this problem, the award for medical imaging should be reviewed to see what can be done to avoid this difficulty.¹¹⁴ It was submitted that this has occurred in other states with the result that a more stable workforce has been produced in those states.¹¹⁵
- 24.110 Representatives of the Royal Australian and New Zealand College of Radiologists informed me that approximately 70% of publicly employed radiologists also work in the private sector.¹¹⁶
- 24.111 One way to address the lack of radiologists, and the consequential delays in obtaining radiology reports, is to permit radiographers to read a limited range of medical images such as musculo-skeletal images taken for patients in the Emergency department.¹¹⁷
- 24.112 Another way, so it was submitted was to challenge the existing traditional models of care relating to the carrying out of CT scans.

"After hours CT services do not require direct radiological supervision, radiologists can be contacted by phone or electronically. Increased CT hours of service would be possible with the acceptance of relevant radiographer competency levels."¹¹⁸

- 24.113 I am aware of some significant work that has been done in investigating the possible role expansion for radiation therapists and radiographers. A working party was formed in late 2005 and a Report produced in April 2006.¹¹⁹ The working party examined the various requirements for developing the roles of advanced practitioner in radiography and radiation therapy, and consultant practitioner. The model upon which these roles were discussed was the recent development of nurse practitioners in Australia, and in the United Kingdom where the advanced positions have already been established.¹²⁰
- 24.114 The perceived benefits of such a role expansion include:
- (a) improved level of care in areas of need (specifically rural);

- (b) reduced waiting times and earlier commencement treatment; and
 - (c) less fragmentation of care.¹²¹
- 24.115 The types of duties that the working party considered to be suitable to the expanded role include some of the tasks and duties which are normally conducted by radiologists and Emergency Department doctors and nurses. Examples of these tasks were:
- (a) image interpretation;
 - (b) performance of colonoscopies and biopsies;
 - (c) initiating imaging procedures and examinations; and
 - (d) patient referral for further tests, treatment and therapies.
- 24.116 Another suggestion I heard, which is largely an extension of the above, was for the introduction of interim radiographer medical imaging reports particularly for the Emergency Department.¹²²
- 24.117 With suitable qualifications, both academic and clinical, I have heard of no reason why the role expansion of radiographers should not occur in NSW. As stated in a submission to the Inquiry:
- "Radiographer role extension will free Radiologists to conduct the more complex reporting and interventional procedures that are increasingly being demanded by Acute Care Services"¹²³
- 24.118 I understand that discussion is continuing as to the development of this initiative.¹²⁴ However, no such positions for advanced-role radiographers have yet been created in Australia. It is to the obvious benefit of NSW Health for these discussions to be pursued, and a careful assessment made about the potential for such role to be appropriate in NSW.

Use of technology

- 24.119 There are also a number of simple technologies available to assist in the speedy production of medical imaging reports. These do not appear to be widely used.
- 24.120 For example, I heard that in one hospital there were not enough people in the radiology department to type the reports and that the radiologists had to queue to dictate into the machine that does the reporting.¹²⁵ The solution that was suggested to resolve this problem is for radiologists to use voice recognition software. This has proven to be effective in the experience of at least one radiologist in a public hospital. The radiologist who suggested this solution uses voice recognition software, and has reduced the turnaround time to 3 hours, which, I am told, is often better than in private practice.¹²⁶
- 24.121 I have referred to the importance of staff being able to obtain accurate and timely clinical histories of patients and the impact that technology has on providing this in Chapter 14. This is also true for staff involved in diagnostic testing.

"There is strong evidence that having information about previous admissions, the consultant reports and previous diagnostic tests such as scans expedites the diagnostic process in ED, and avoids unnecessary testing"¹²⁷

- 24.122 The introduction of an electronic medical record (including the relevant ordering systems) ought go a long way to addressing the current inadequacies in clinical histories being provided to radiographers and radiologists.

Range of Technology Systems

- 24.123 On my visits across NSW, I observed that there is a wide range of imaging equipment and systems in place to capture images, and to “develop” or provide those images with reports to clinicians. I saw antique almost museum style pieces right up to state-of-the-art digital technology.
- 24.124 At one end of the spectrum, when I visited the Braidwood MPS, I was told that the x-ray facilities are particularly out of date with staff having to use chemicals, in freestanding containers, to develop films. Staff are required to handle the containers and dispose of chemicals by hand.¹²⁸ Clearly, the safety and quality elements of this service are not being appropriately addressed.

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- 24.125 Similarly, I heard the following evidence from a councillor of the Dubbo City Council that demonstrates many of the problems with inconsistent technology being used throughout the State.

“Dubbo remains the only major hospital in the GWAHS area without digital radiography... The hospitals that feed into this hospital, over the years quite a number of those have been converted to digital. Specialists here wishing to get advice, or support, from one of their colleagues in Sydney, also, where they are digital, and those hospitals that are further out can’t feed the information in, we can’t feed the information out because we don’t have a digital system.”¹²⁹

- 24.126 Not only can the staff at the hospital not assist staff from smaller facilities with diagnosis, but staff from Dubbo find it difficult to obtain advice from larger hospitals and Sydney-based specialists.

Incompatibility

- 24.127 The range of systems in use leads to incompatibility. For example, when a patient is transferred from a rural hospital to a tertiary hospital, accompanied by a DVD containing test results, the tertiary hospital may not be able to read the DVD.
- 24.128 I heard from a radiologist that patients sometimes arrive at the hospital by helicopter with a DVD of their imaging which cannot be read.¹³⁰ This doctor said that the same software and equipment needs to be used that enables images to be read on PACS, which is described below, so that it can be read at any hospital.¹³¹
- 24.129 The poor compatibility in technology also occurs in some major Sydney hospitals. In one submission that I received I was informed that the medical imaging department currently operates half filmless, half filmed and that there is an incompatibility of the radiology imaging system (RIS) and the existing VAX terminals (virtual address extension). This frequently results in the wrong report being issued for the wrong patient.

“...we have been forced by lack of funds to operate in a half-filmless, half-hard-copy-film limb, whereby we report much of our work [on] computer monitors, but issue film and paper reports to clinicians.”¹³²

Inaccessibility

- 24.130 Test results are generally not accessible off-site. In hospitals where doctors could access test results remotely, it appeared to me to take a great deal of pressure off all clinical staff and provide greater patient safety. There is often a need to access images held at other hospitals. There are many reasons for this. First, it may avoid further unnecessary imaging. Secondly, earlier images are valuable for comparison purposes to ascertain progress or to understand the development of a clinical condition. Thirdly, they may assist in the process of diagnosis. Yet there is no good system of remote access to images for hospitals and clinicians.
- 24.131 I heard from the director of the Emergency Department at Gosford Hospital that they have radiology services 24-hours a day, seven days a week with radiologists whom they can call after hours to receive a verbal report on most scans. However, some scans can not be read after hours due to the radiologists home computers not being able to read them.¹³³ Also, the radiology and pathology results are not available on the same computer system.¹³⁴
- 24.132 I was told by a paediatrician in Orange that the lack of access is particularly an issue with VMOs who may only be at the hospital for a short period of time and do not have access to the pathology test results. It would be useful for the records to be online so that VMOs could access them from home.¹³⁵
- 24.133 This is in contrast to what I was told by the staff in the Emergency Department at Wollongong Hospital. By using the PACS system, described below, and a specially designed computer software package, radiologists are able to access reports and images throughout the hospital network and from home.¹³⁶ Through this system, the hospital can provide 24-hour radiologist support with radiologists on call who do not need to be physically at the hospital.

Picture Archiving and Communication System

- 24.134 The state-of-the-art digital system for distributing medical imaging results to clinicians is the Picture Archiving and Communication System (**PACS**).
- 24.135 PACS is a computer system that enables x-rays, MRIs, ultrasound and CT scans to be stored and archived electronically. Such a system when fully implemented will remove the need for x-ray films.
- 24.136 There are a number of advantages to a digitally based medical imaging service:
- (a) the need for creating film images and archiving is removed;
 - (b) it enables images to be quickly accessed and viewed thereby saving time in locating the image;
 - (c) it can allow for remote access to the images and thereby remote analysis; and
 - (d) when used as part of an electronic medical record may assist in reducing the rate of misdiagnosis.
- 24.137 Indeed, even without considering the requirements for making the images and tests results accessible for the staff that need to review them, the professions themselves have developed in a way as to make the use of computer information systems essential. The sheer volume of images that modern imaging equipment can produce makes it impractical to view all of these images in hard copy. This in itself supports the need for film-less imaging supported by a robust IT system.¹³⁷

24.138 The time spent searching for hard copies of scans and test results causes wasted time at the expense of patient care time, as is illustrated by the following submission to me:

"Much junior officer time is spent on clerical tasks such as collecting x-rays, delivering and coordinating tests requests."¹³⁸

24.139 I note that the full implementation of PACS is stated to be a key priority in NSW Health's information technology strategy. In the NSW Health submission to the Inquiry, it gave this outline of its approach:

A standardised state-wide approach to procurement and implementation to support the implementation of digital radiology and other imaging systems enabling images to be stored and viewed electronically across the health system. This includes the implementation of a centralised image server and storage.¹³⁹

24.140 However, PACS has not as yet been rolled out in all hospitals in NSW. Some hospitals are able to access x-rays on PACS, but not CT scans.¹⁴⁰ For example, at Sydney Children's Hospital I was told that the staff are able to access x-rays but not CT scans on PACS in the intensive care unit.¹⁴¹

24.141 I was told that that radiologists had expressed disappointment with PACS for two reasons: first, it has only been partly implemented in some hospitals; and second users have not been sufficiently trained to maximise the use of this technology.¹⁴²

24.142 I also heard evidence that there is a lack of viewing stations for digital X-rays and CT scans, and difficulty in accessing the system at some hospitals. A doctor informed me at Westmead that:

"The system that gives us the blood results is called Cerner. Half the time the log-ins don't work, so we can't access those computers, in which case we can't get the blood results so it holds up discharges for patients."¹⁴³

24.143 These problems were also experienced with radiology results where X-rays and CT imaging. At Westmead, a hospital of between 800 to 1000, there is only one viewing station for x-rays and CTs in the Emergency Department; 2 terminals in radiology; and one terminal to access CTs in the geriatric ward. I was told that a lot of time is also wasted in waiting to view the results of various tests on a computer terminal.¹⁴⁴

"...sometimes it's not possible to access the x-rays on that one terminal in radiology..."¹⁴⁵

24.144 Not all hospitals yet have access to PACS. I heard from a neurologist from Concord who told me that they did not have the capability to access PACS either on or off-site. Their inability to do so results in frequent delays in reviewing radiology images onsite, films are often not anywhere near the patient and access to the films is difficult. There is significant time wasted in having to go to the Radiology department to view the slides and it is impossible to do so after-hours. This in turn results in frequent delays in reviewing radiology on-site and an inability to review films out of hours.¹⁴⁶

24.145 It is clear to me that digital imaging and access to the PACS software has to be made available, as a matter of priority, in every hospital across NSW, and it has to be accessible remotely.

24.146 I understand that in Queensland, medical imaging services are available in approximately 130 facilities, however radiologists are only present at approximately 19 locations throughout the State.¹⁴⁷ Recently Queensland has upgraded the medical

imaging equipment so that all services are able to produce digital images. I was told that the ultimate goal in Queensland is to be able to introduce a system whereby all of these diagnostic radiography services can be read and accessed electronically.¹⁴⁸ This, with respect, seems to make perfect good sense.

The way forward

24.147 Pathology and medical imaging results should be available to clinicians on-line, accessible both within the hospital and remotely, so that clinicians can view results away from the hospital, for example, at home after hours.

24.148 I heard that at the Royal Prince Alfred Hospital they have PACS for radiology and 'Powerchart' for pathology results and that:

"These are an invaluable part of the efficiency of the system at RPA"¹⁴⁹

24.149 At Royal Prince Alfred Hospital, PACS provides "easy/universal access" and has proved itself to be effective in making accessible patient imaging and assisting in timely patient diagnosis. As submitted to the Inquiry:

"When trainees travel to other hospitals in the RPA network that do not have PACS radiology, there is a palpable difference in the efficiency and access to radiology films and results, which often lead to delays in treatment decisions and patient care."¹⁵⁰

24.150 Certainly it is apparent that there is great inconsistency of radiology and pathology services throughout the state.

24.151 It is clear from the evidence and material obtained during the Inquiry that the shortage of radiologists is one cause of the delay in reading and reporting on images. I have referred to this earlier in this chapter. The way in which this is done after hours in all but a few hospitals is to have a radiologist on-call who can attend to reading urgent images as needed. At any one time across the state there are many radiologists on call for their particular hospital. Once images are digital and there is state-wide access to the PACS system, then there is the capacity for all after-hours images to be able to be read centrally for the whole state. In other words, significant cost savings can be made and service levels improved, by identifying how such a service can be provided in this way. It does not matter where the service is physically located because what is necessary is adequate IT infrastructure which ought to be available for the whole of NSW Health in any event.

24.152 I have concluded that NSW not only needs a state-wide PACS system, but it needs to have all images created digitally and have the capacity to be read centrally 24 hours a day 7 days a week. Part of this service should provide a means by which the clinicians are able to talk to the radiologist, if required.

Recommendation 113: *Within 18 months, every public hospital in NSW ought to be fitted with a digital radiological imaging system, such as PACS, or a compatible system thereto, which will enable the electronic transmission of medical images to remote locations for use in clinical treatment, reading and interpretation.*

Recommendation 114: *NSW Health establish a central radiology service sufficiently staffed to read the results of medical images and provide*

medical imaging reports to public hospitals across NSW 24 hours a day, 7 days a week. In establishing this service, NSW Health should compare the costs of providing this service itself or outsourcing it to the private sector. In the event that it may be able to be provided by the private sector more cost effectively, NSW Health should consider seeking tenders for this service.

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- ¹ Professor Jerry Koutts, Westmead hearing, 10 April 2008, transcript 1547.8-12.
 - ² Professor Leslie Burnett, Tweed Heads hearing, 29 April 2008, transcript 2333.31-41.
 - ³ Submission of the Australian Institute of Radiography, March 2008, SUBM.002.0002 at 3.
 - ⁴ Meeting with Dr Deborah Graves and Dr Stephen Adelstein, Royal College of Pathologists Australasia, 26 June 2008.
 - ⁵ Meeting with Don Swinbourne and Lucy Cheetham, Royal Australian and New Zealand College of Radiologists, 23 June 2008.
 - ⁶ Meeting with Don Swinbourne and Lucy Cheetham, Royal Australian and New Zealand College of Radiologists, 23 June 2008.
 - ⁷ Meeting with Don Swinbourne and Lucy Cheetham, Royal Australian and New Zealand College of Radiologists, 23 June 2008.
 - ⁸ Professor Jerry Koutts, Westmead hearing, 10 April 2008, transcript 1551.10-15.
 - ⁹ NSW Health, *Pathology Services – Principles of Funding of NSW Public Health Sector*, PD2005_533.
 - ¹⁰ NSW Health, *Pathology Services – Principles of Funding of NSW Public Health Sector*, PD2005_533.
 - ¹¹ NSW Health, *Pathology Services – Principles of Funding of NSW Public Health Sector*, PD2005_533.
 - ¹² Submission of the Royal College of Pathologists of Australasia, undated, SUBM.086.0246 at 246-247.
 - ¹³ NSW Health, Accounting Manual, Part 9.5 - *Accounting and Reporting for Business Units in NSW Health*.
 - ¹⁴ Submission of Nicholas Stephenson, 20 April 2008, SUBM.029.0476 at 476-477.
 - ¹⁵ Submission of Nicholas Stephenson, 20 April 2008, SUBM.029.0476 at 476-477.
 - ¹⁶ Meeting with Don Swinbourne and Lucy Cheetham, Royal Australian and New Zealand College of Radiologists, 23 June 2008.
 - ¹⁷ Meeting with Don Swinbourne and Lucy Cheetham, Royal Australian and New Zealand College of Radiologists, 23 June 2008.
 - ¹⁸ Confidential submission, 20 February 2008, SUBM.013.0069.
 - ¹⁹ Australian Government, Department of Health and Ageing, MBS online, Medicare Benefits Schedule <http://www.health.gov.au/internet/mbsonline/publishing.nsf/Content/Medicare-Benefits-Schedule-MBS-1> (28 October 2008).
 - ²⁰ Submission of the Royal College of Pathologists of Australasia, SUBM.086.0246 at 246.
 - ²¹ The Royal College of Pathologists of Australasia website, <http://www.rcpa.edu.au/public/pathology/discipline.cfm> (2 September 2008)
 - ²² Clause 1, *Hospital Scientists (State) Award*.
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