Western NSW Local Health District

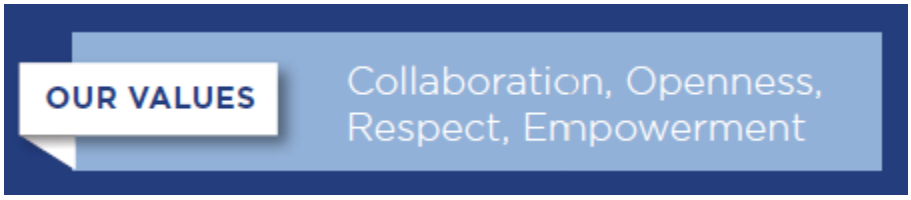
CLINICAL SERVICES FRAMEWORK 2020-2025

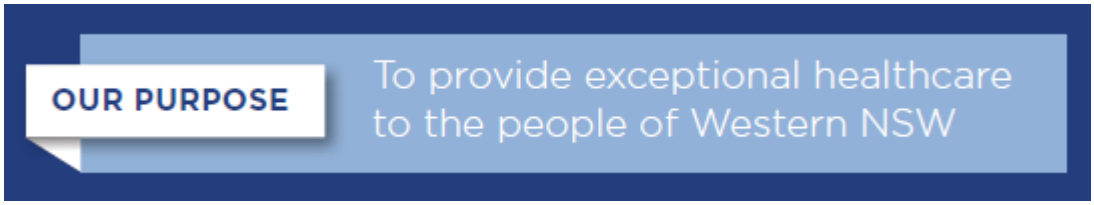
NSW GOVERNMENT

Health
Western NSW
Local Health District

The Clinical Services Framework (CSF) is our five year roadmap for delivering high quality healthcare in the Western NSW Local Health District. It sets out our plans and priorities for our hospitals, multipurpose services, community and primary health services and home based services with a focus on 11 core clinical services.

The CSF is key to helping us deliver on our Strategic Plan 2020-2025.





Acknowledgement of Country

We acknowledge the traditional owners of the Country throughout Western NSW, and their continuing connection to land and community.

We pay our respect to traditional owners, to Elders both past and present and acknowledge the privilege we have to live and work on Aboriginal lands.

We are committed to improving Aboriginal health and the health outcomes and experiences for all people and all communities across our District.

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EXECUTIVE SUMMARY

The Clinical Services Framework (CSF) 2020-2025 provides direction and priorities for Western NSW Local Health District (the District) clinical services for the next five years. It is a guide to inform clinical services planning, service design and delivery and the development of models of care, with a focus on a regional approach to planning of health services. The CSF recognises that the way we deliver healthcare into the future will change and evolve, responding to developments in models of care, technology, research and consumer expectations.

The District currently provides healthcare, education and research services. We provide health and aged care at 3 major rural referral hospitals at Bathurst, Dubbo and Orange, at 4 procedural hospital, 6 community hospitals and 25 multipurpose services (MPS). We have one of the largest rural mental health services in Australian and 50 community health services. There are well-formed links to metropolitan facilities for tertiary level services.

As a rural health service, we are faced with both challenges and opportunities over the coming years. With one of the most vulnerable populations in NSW experiencing high levels of chronic diseases and bio-medical and lifestyle risk factors, there will continue to be a strong demand for health care into the future. Improving health outcomes for Aboriginal people and communities remains a key focus.

The changing nature of the demographics of our communities will challenge us to respond in new ways, as we work to support a higher proportion of older people, population growth in some regional areas and decline in others. The demand for acute, emergency and residential aged care will continue to grow. Without any change to current models of care, acute activity is projected to increase by 35% from 2015 to 2036, while emergency care is projected to increase by 14%, with a more significant increase in the rural referral sites (46%). This increased demand for care will occur alongside the challenge of ensuring a highly skilled and sustainable workforce across the region.

Our core clinical services will need to be delivered alongside a shift towards the delivery of care in non-hospital settings – in people's homes, in the community and in ambulatory and outpatient clinics.

Our focus as a public health system will need to evolve to not only provide treatment when a person is unwell or injured, but to consider wellbeing and prevention, identifying health risks earlier and keeping people well for longer. Advancements in technology and medical research will play an important role in how we adapt and meet the needs of people living in the District.

PLANNING PRINCIPLES

The CSF outlines 16 key planning principles which guide service planning for the District:

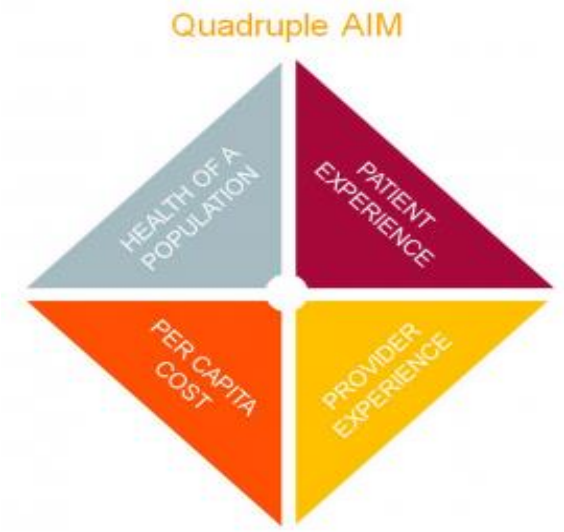
1. Planning is driven by **community and population health needs** to improve determinants of health and includes a focus on health and wellbeing, prevention of illness and keeping people well in the community
2. Planning is guided by the principles of **value-based healthcare**
3. Services will be informed by new and emerging evidence-based **models of care and ways of working** with a focus on developing and improving **virtual health care** delivery to improve access and quality of care.
4. **Technology** will be proactively embraced for improving service delivery, safety, health literacy and the support and coordination of care
5. Provision of **safe and high quality services** is a baseline consideration for all service planning, which includes volume and activity thresholds and efficiencies
6. Co-design and engagement with **communities** will form part of service planning and design
7. Provision of **human-centred care** that is **integrated** between hospital, community health, general practice, specialists, aged care and other health and non-health partners will guide service planning

8. A **network of services** will be utilised within the District to provide care and services as close to home as possible, and planning will be considered on a regional and sub-regional basis, recognising natural catchments
9. Services will be delivered by **skilled, experienced and competent staff**
10. Services will be **accessible**, and service planning will consider the **access and equity** to a broad range of services that impact on health determinates
11. Our approach to the **health needs of Aboriginal people** will be developed through co-design and joint planning, that ultimately leads to the delivery of culturally safe and responsive health services
12. **Resourcefulness, innovation** and the **sustainability** of services will be key considerations
13. **Alternatives to in-hospital care and options for community-based service provision** will be considered in service planning and development.
14. **Environmental sustainability** will be considered in design of infrastructure and redevelopment
15. The District's **tertiary referral pathways** are guided by the NSW Critical Care Tertiary Referral Networks and Transfer of Care (Adults) policy directive
16. Planning will consider **workforce, safety and financial sustainability.**

The Quadruple Aim Framework

In tandem with the planning principles, the District will continue to be guided by the Quadruple Aim Framework.

- Improved quality, safety and patient experience of care
- Improved health and equity for all populations
- Best value for public health system resources
- Improved health care provider experience.



Source: Adapted from Institute for Health Care Improvement

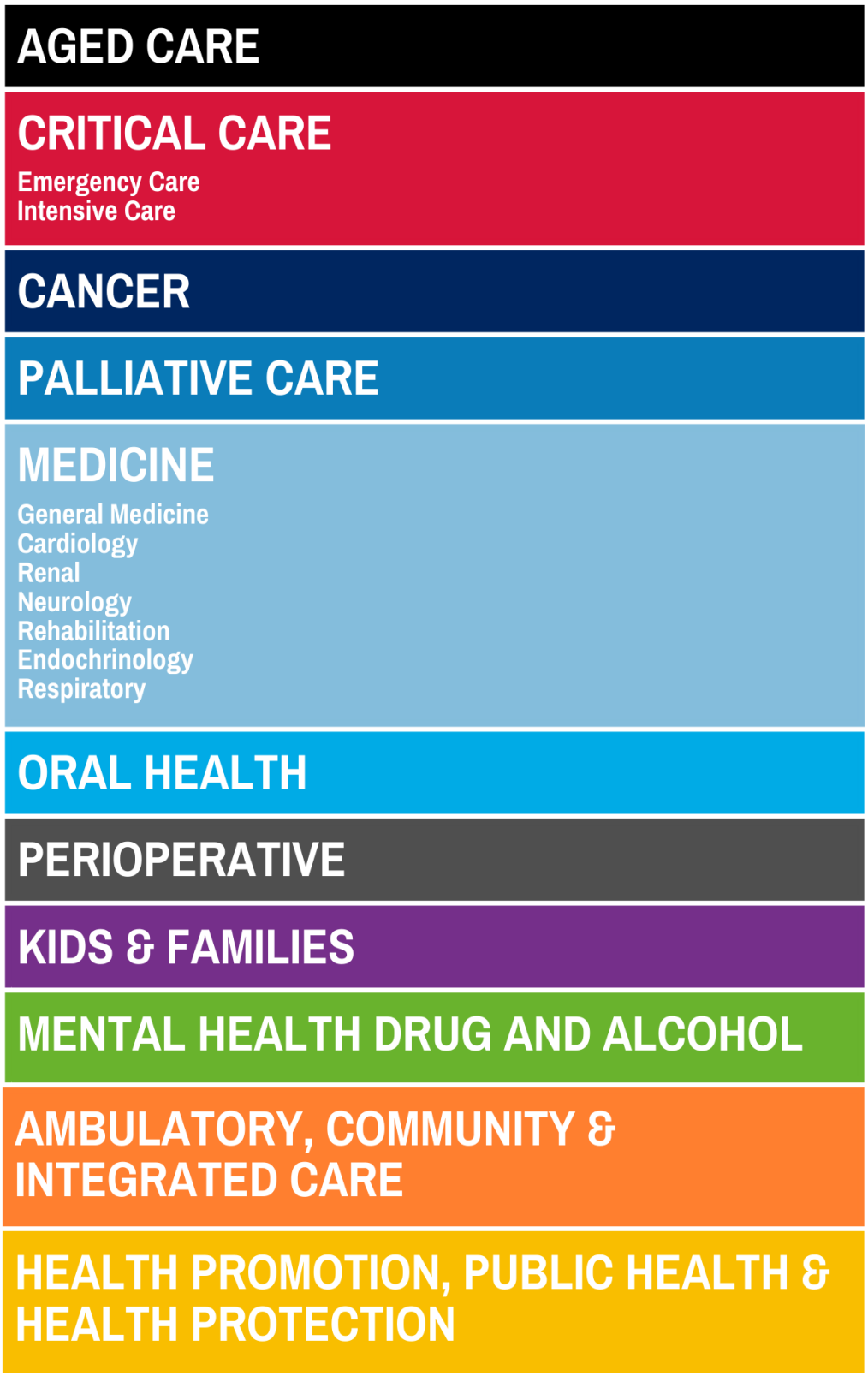
PRIORITIES OF OUR CLINICAL SERVICES

To meet the needs of our communities over the next five years and deliver high quality, contemporary healthcare, six key priorities will guide clinical service development. These priorities should guide each clinical service across the District in the design, planning and delivery of health care, alongside the directions for that particular service.

A networked regional approach to the planning of healthcare will be important for improving health outcomes, providing certainty in service provision and workforce and improving the efficiency of our facilities. A sub-regional network approach to planning considers how sites and services can come together into locality networks so that within a large geographic area a range of tiered services can be offered. Aligning a sub-regional approach with key health partners in the region will be important in designing and delivering health care that is responsive to community need, safe, high quality and sustainable into the future.

Core Clinical Services

The Framework focuses on 11 core clinical services as described below. It is not intended to be an exhaustive list of all clinical services provided by the District. Each core clinical service chapter includes a description of the current services, the drivers for change, service activity and projected activity demand over the next five to ten years and the plans and priorities for the next five years. The core services include:



In addition to the core clinical services, the CSF recognises other sub-speciality services that play an important role in delivering high quality health care to our communities, including but not limited to: ophthalmology, haematology, infectious disease and gastroenterology.

Clinical support services including medical imaging, pharmacy, pathology, sterilising and clinical education services will need to grow and evolve in line with the service developments of the core clinical services. These developments and their future directions are also guided by the business or service plans of these particular units. Similarly, non-clinical support services should be cognizant of the directions within this document, adapting to these as required.

This document should guide the development of:

- Clinical Services Plans
- Service or operational plans, and the planning focus of Clinical Streams
- Clinical service design and delivery
- Development of new services and models of care development
- Other health service planning to meet the needs of rural communities.

The **Planning Principles** and **Clinical Service Priorities** should underpin service planning and development of new services. This will help to meet health service needs and demand of our population. The CSF will also guide the distribution of resources.

Individual chapters will guide specific core clinical services over the next five years. Ongoing performance monitoring and service evaluation will show progress with implementing the priorities in the CSF and their outcomes and impact. A mid-term review and refresh of the CSF will be undertaken, noting the need to be agile and respond as a health service to new information, technology and models of care.

WELCOME TO THE CLINICAL SERVICES FRAMEWORK

The District is a vibrant and diverse region, rich in community and culture. Our rural communities have many unique features - a strong sense of community, high levels of engagement, cohesiveness and resilience. However, our communities and health services face many challenges on the road ahead.

We know that the way we deliver healthcare into the future will be different from how it is currently provided. We will need to be adaptive and innovative in responding to the health needs of people. Alongside developments in research, technology and models of care, the COVID-19 pandemic has provided insights on how we can operate into the future to deliver better patient outcomes and effective healthcare. While hospitals will always play an important role in the management of illness and injury, the focus will shift towards outpatient, community care and home-based services. Virtual health care and use of technology can help improve access to services, enhance quality and safety of care and deliver better patient outcomes.

The focus on interaction with the health care system when a person is sick or injured will increasingly need to change into the future. The role of the system will not be limited to providing treatment, but to also consider wellbeing and prevention, identifying health risks earlier and keeping people well for longer. Over the coming years, advancements in technology, artificial intelligence, robotics and actionable health insights will shape the way we deliver health care. From improved diagnostics and precision medicine to better scheduling to reduce waiting times, monitoring personal health data through wearables or providing care virtually into a person's home, our clinical services will need to adapt, grow and change to meet the needs of our communities and provide world class rural health care.

The needs of our communities and individual patients will always be central to what we do. This requires a population health focus to address the health determinants and burden of disease faced by our residents.

The C*linical Services Framework (CSF) 2020-2025* has been developed to provide direction and priorities for the District's clinical services for the next five years.

The CSF establishes a vision for an integrated, connected and innovative health service which provides world class health care that meet the needs of our residents over the next five years and supports them to stay healthy in their own homes and communities. The CSF focuses on 11 core clinical services. We recognise that this is not an exhaustive list of all clinical services provided by the District.

The CSF builds on the previous Clinical Services Framework 2015-2020. It is informed by, and aligned with, the NSW State Plan, NSW Rural Health Plan and the District Strategic Plan. The CSF sits above a range of clinical service plans – for facilities and specialities. It provides a platform for the planning of clinical services and future service developments. Ongoing performance monitoring and service evaluation will show progress with implementing the priorities in the CSF and their outcomes and impact.

Priorities set out by the CSF are aspirational and are not linked to any commitment of funding. Initiatives mentioned in the CSF that are dependent on additional resources to implement, will require a cost benefit analysis, business case development and/or identified funding source.

The development of the CSF has been overseen by a steering committee with representation from across the District. The content has been informed by extensive consultation with senior leaders, clinicians, staff and consumer representatives. The reflective review of the District response to the COVID-19 pandemic undertaken in mid-2020 has also informed the CSF.

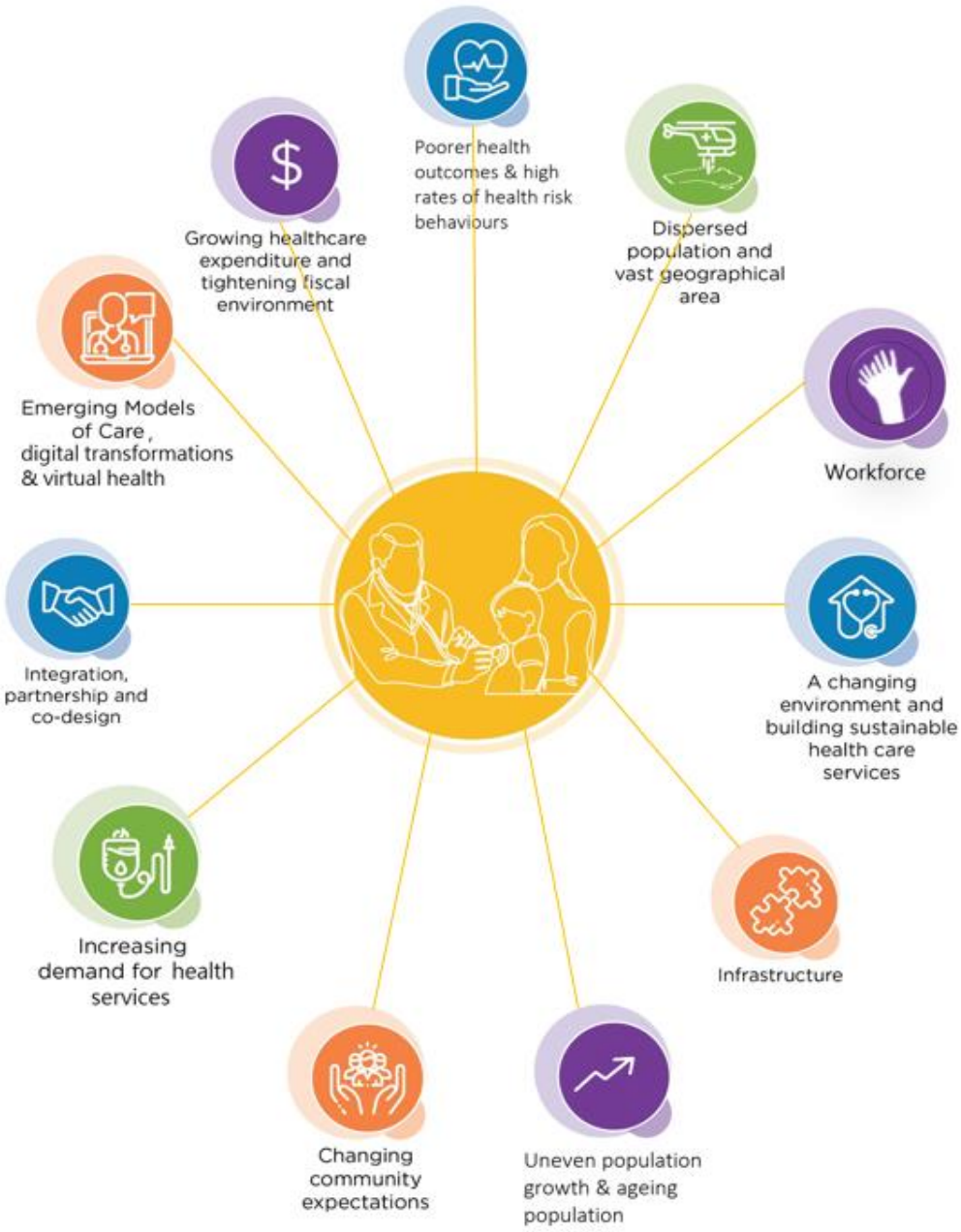
PLANNING CONTEXT - WHY DO WE NEED TO CHANGE?

The tyranny of distance, a large chronic disease profile, differential in bio-medical and lifestyle risk factors and ultimately, poorer health outcomes compared to our metropolitan counterparts, presents a significant challenge for the residents of the District and our health services. Aboriginal people in our region continue to have poorer health outcomes than non-Aboriginal people.

The landscape in which we deliver care is shifting with changing population demographics in rural communities, an increasing demand for acute and specialist care and evolving consumer and community expectations. This is coupled with a strong sense of ownership of traditional health services in many rural towns. Community expectations for care in the home or community, alongside a growing evidence base for community-based care, are also driving change

Over the coming years, we will also be challenged to adapt to an increasing digital world, rapid and continued expansion of virtual healthcare, a changing environment, emerging models of care, advancements in medical technology, tighter financial arrangements and securing a sustainable and skilled workforce into the future.

Some of the key components of our planning context are examined further below.



Inequality in Health Outcomes

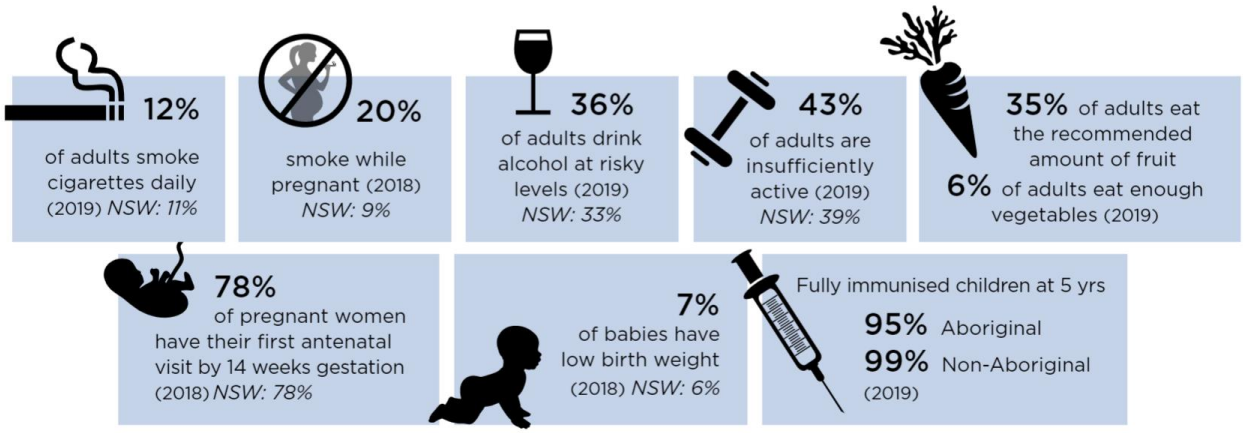
The District is home to 278,759 people (4% of the NSW population) and ptovides services to 22 local government areas (LGAs), of which eight are remote. The District occupies approximately 31% of the geographical area of the State of NSW.

We have one of the most rural and most vulnerable populations in NSW. People living in the District are more likely to have at least one of the risk factors that contribute to poorer health and chronic conditions including smoking, harmful use of alcohol, obesity and low levels of physical activity.

There are 35,863 Aboriginal and Torres Strait Islander people living in the District, representing 13% of the total population. This is significantly higher than the NSW proportion of 3%. The smaller, more remote communities of Brewarrina, Bourke, Coonamble and Walgett have the highest proportion of Aboriginal people.

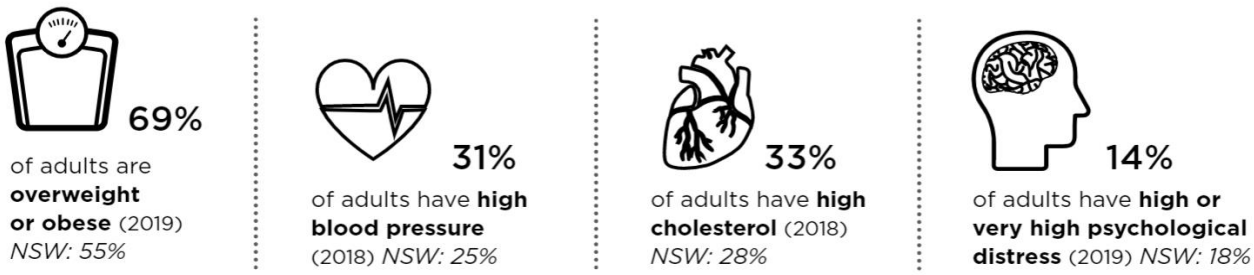
The Aboriginal population continues to show disadvantage across the entire social determinants of health. Our Aboriginal population are over represented across all chronic conditions, with these conditions presenting much earlier in life than the rest of our population. Aboriginal people have a lower life expectancy rate than non-Aboriginal people and are more likely to be admitted to hospital for potentially preventable conditions.

Health related behaviours



Bio-metrix risk factors

Data source: All statistics are from the District Health Needs Assessment[1].

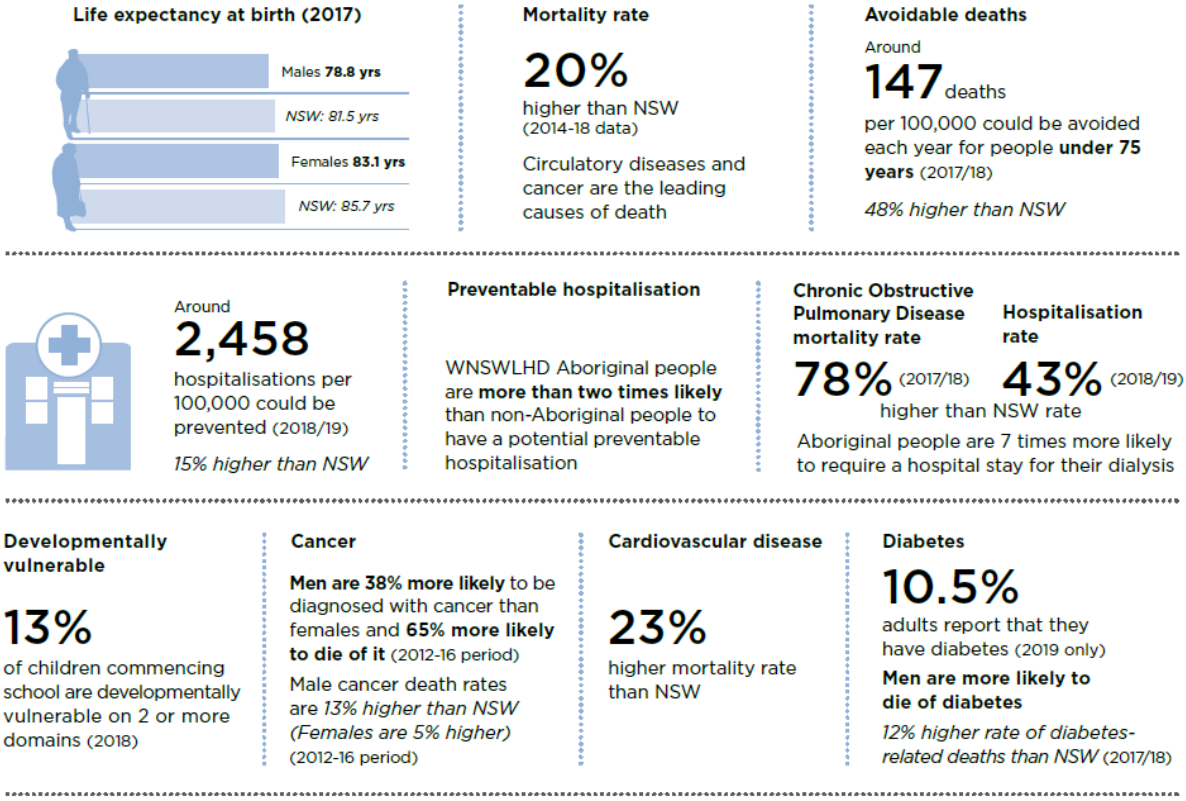


People living in the District generally have a shorter life expectancy, a higher mortality rate, poorer health and are more likely to die a potentially avoidable death than people in the rest of NSW.

The two leading causes of death are circulatory diseases and malignant neoplasms (cancer). Cardiovascular disease, cancer, chronic obstructive pulmonary disease and diabetes mellitus contribute significantly to the burden of disease in the District's residents.

Despite the current health status of our residents remaining worse than NSW, there has been significant gains in some health indicators such as improved circulatory disease deaths and cancer death rates.

Health determinants and burden of disease



Data source: All statistics are from the District Health Needs Assessment[2].

First 2000 days

The first 2000 days of life (from conception to age 5) is a critical time for physical, cognitive, social and emotional health.[3] 90% of a child's brain development occurs by age 5. Adverse childhood events that are sustained in the first 2000 days of life have been shown to have an impact throughout life including:

- a strong predictor of how a child will learn in primary school
- a predictor of school performance, adolescent pregnancy and involvement with the criminal justice system in the adolescent years
- linkages to increased risk of drug and alcohol misuse and increased risk of antisocial and violent behaviour
- related to obesity, elevated blood pressure and depression in 20-40 year olds
- predictive of coronary heart disease and diabetes in 40-60 year olds
- related to premature ageing and memory loss in older age groups.

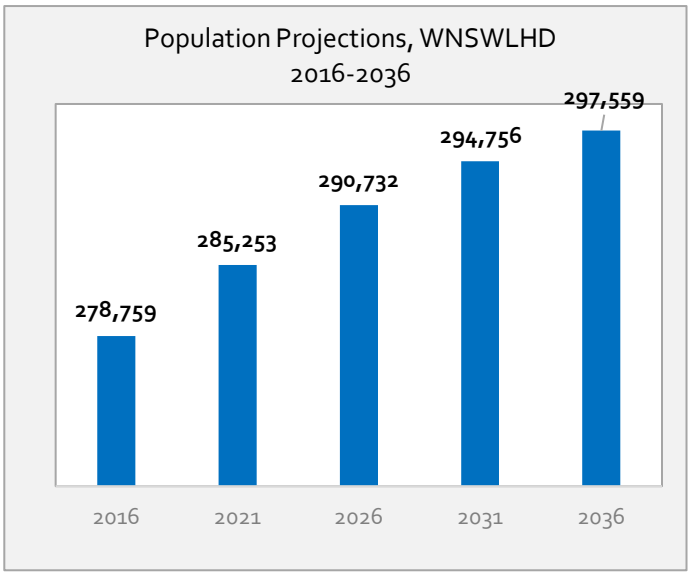
Through effective and collaborative support and intervention during the first 2000 days, there is an opportunity to give children the best possible start in life physically, developmentally, socially and emotionally, and to address the escalating prevalence of adult disease and morbidity.

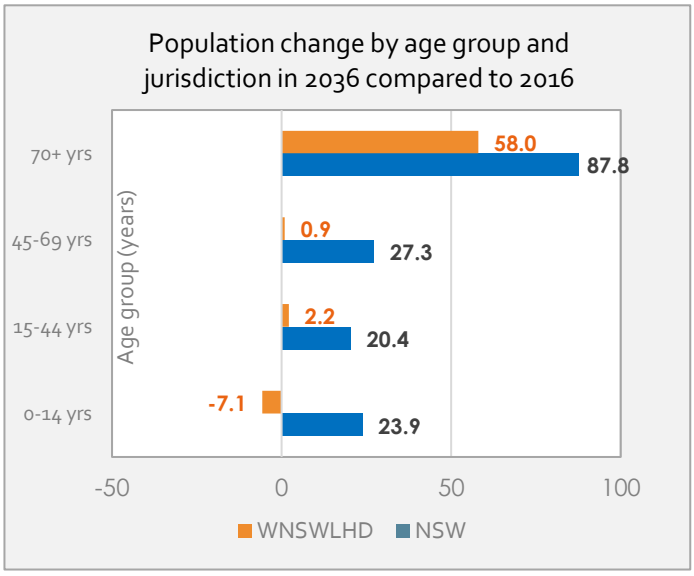
Population Change

In 2016, the resident population was estimated to be approximately 278,800, or 4% of the total NSW population. The majority of the population is concentrated in the larger cities and towns in the Bathurst Regional, Cabonne, Orange, Western Plains, Mid-Western Regional, Parkes, Forbes and Cowra Local Government Areas (LGAs). Centralisation of the population to the bigger towns and cities is likely to continue, particularly for employment, education and retirement.

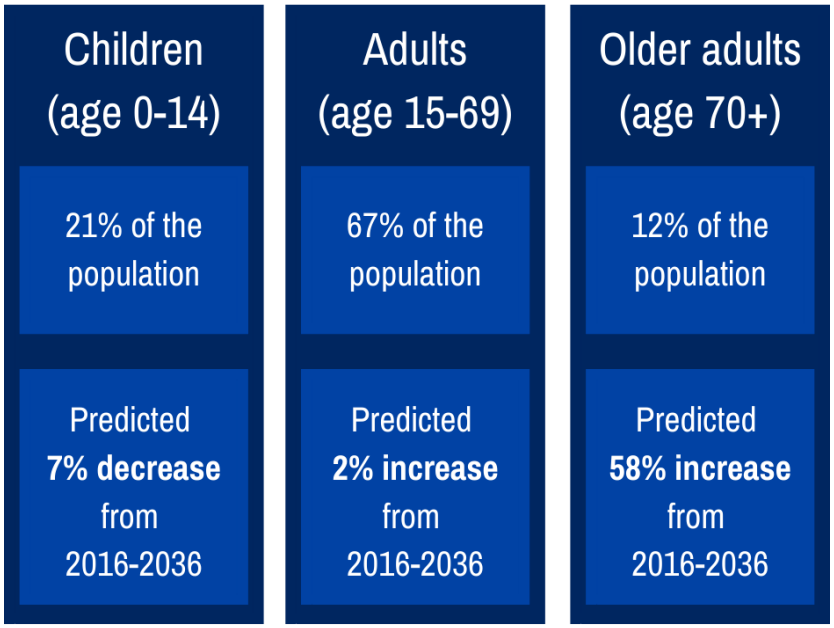
The District's projected growth rate of 7% (from 2016 to 2036) is significantly lower than that projected for the NSW population (30%).

The projected growth is not predicted evenly across the District with our more populated LGAs (Bathurst, Orange and Dubbo Regional) expected to increase by at least 13%, in contrast to a decline of at least 15% in Gilgandra, Weddin, Warrumbungle, Brewarrina and Narromine. The greatest increase in population across the District is expected to occur in the 70+ age group while all other age groups are expected to decline or remain relatively stable. These projected populations contrast substantially with that of NSW, where the populations of all age groups are expected to increase. See DPEI Population Projections for additional information including LGA population projections.





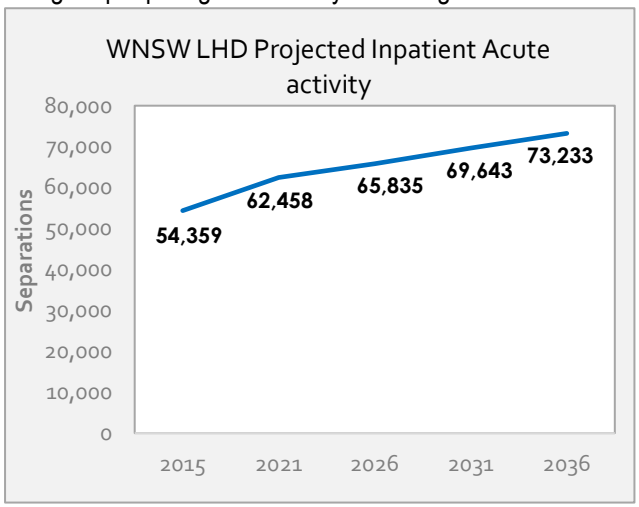
Source: DPIE Population Projections 2019

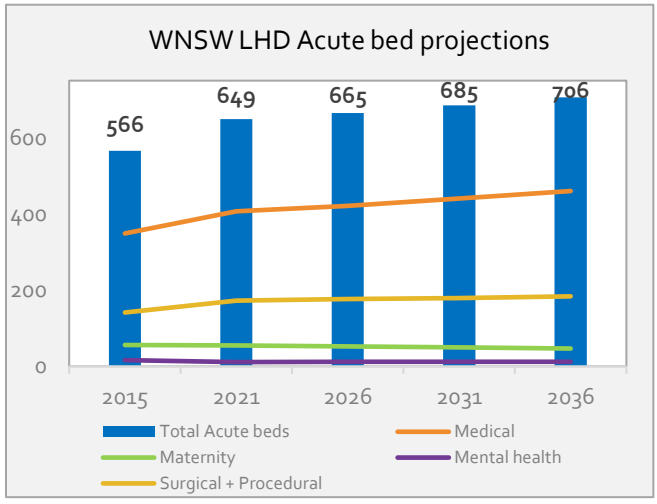


Increasing Activity

Acute Inpatient Services

Base case projections indicate that without any changes to models of care, the District's acute inpatient activity will increase by 35% from 2015 to 2036. This projected growth equates to an additional 18,874 admissions or around **140 acute beds**. The biggest driver is medical admissions / beds, with around 75 of these projected beds being for people aged over 70 years of age.



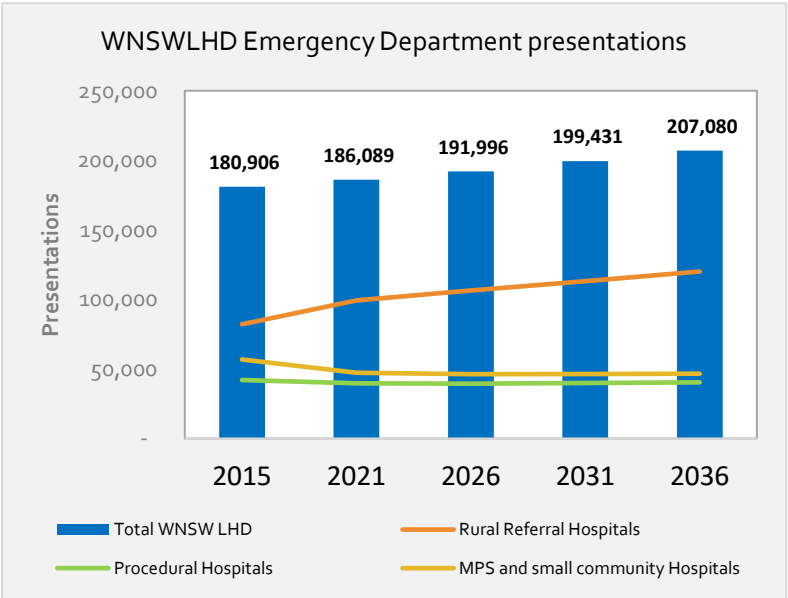


Source: NSW Ministry of Health, HealthApp. Exclusions: Chemotherapy, Renal Dialysis & Unqualified Neonates SRGs[1]

Emergency Department

Base case projections indicate that without any changes to models of care, emergency department (ED) activity will increase by 14% to 2036. However, these projections are nuanced by variation between sites:

- **Rural referral hospital** ED presentations are projected to increase by around 46% from 2015 to 2036 (from 82,077 presentations in 2015 to 120,045 presentations in 2036). It is projected that there will be more Triage 1/2s (increase from 11% to 14% of total) and slightly less Triage 4/5s (decrease from 56% to 55% of total).
- By 2036, projections indicate the number of Emergency Department presentations to the Rural Referral Hospitals admitted to a ward (including critical care ward) will be 34,255 annually, rising from 17,621 in 2015. This is an increase of 94% from 2015 or 3% compound annual growth rate.



- **Procedural hospital** ED presentations are projected to decrease by 4% from 2015 to 2036
- **Community hospital and multipurpose service** ED presentations are projected to decrease by 18% from 2015 to 2036.

Source: NSW Ministry of Health, HealthApp. Exclusions: Chemotherapy, Renal Dialysis & Unqualified Neonates SRGs[1]
Baseline for Dubbo ED has been recalibrated to take into account significant growth from 2014/15, with projections based on this recalibrated baseline.
[1] Activity projections are based on previous population projections which have since been updated by DPIE but not by the Ministry of Health in the HealthApp projection tool. Projections may be an overestimate based on recent forecast.

Residential aged care

The number of older people requiring residential aged care is growing, in line with the ageing of our population. The need for residential aged care varies significantly across the District. Analysis of current residential aged care places against projected requirements (as per Commonwealth modelling[4]) suggests that there will be a significant under supply.

Using the methodology of 75 years and over[5], an **additional 47 residential** aged care places and an **additional 563 home care packages** will be required within the District to meet projected demand by 2036. This may be an under estimate if demand is not met in the provision of home care packages, which is already challenging given current wait times and availability.

If people enter aged care at a younger age, the requirement for aged care places in the District will increase significantly.

Aged Care Service Targets to 2031 for WNSWLHD: Current and Potential Planning Target Benchmarks

Population Projections	2016 Actuals	2016 Projected	Current actuals			GAP, 2016 Projected : Current Actuals	2021 Projected	2026 Projected	2031 Projected	2036 Projected	GAP, 2036 projected : Current Actuals
			MPS	C/W RAC	Total						
Aboriginal 50-69	4,257						4,892	5,473	6,148	6,664	
Population 70+	34,077						39,293	44,013	49,460	53,917	
Target Population	38,334						44,185	49,486	55,608	60,581	
Current Planning Target Benchmarks (based on target population of 70+ years and Aboriginal 50+ years)											
RAC Places		2,990	422	3,098	3,520	530	3,446	3,860	4,337	4,725	-1,205
HCP		1,725			1,490	-235	1,988	2,227	2,502	2,726	-1,236
Restorative Care		77			13	-64	88	99	111	121	-108
Aboriginal 50-74	4,682						5,381	6,308	7,138	8,066	
Population 75+	21,819						24,947	29,409	33,312	37,669	
Target Population	26,501						30,328	35,717	40,450	45,736	
Potential Future Planning Target Benchmarks (based on target population of 75+ years and Aboriginal 50+ years)											
RAC Places		2,067	422	3,098	3,520	1,453	2,366	2,786	3,155	3,567	-47
HCP		1,193			1,490	297	1,365	1,607	1,820	2,058	-563
Restorative Care		53			13	-40	61	71	81	91	-78

Residential benchmark =78/1000 target population HCP benchmark = 45/1000 Restorative care benchmark = 2/1000

Aboriginal population 50-74 years: Census 2016, ABS TableBuilder (with projections determined using growth rates for the DPIE 70+ and 75+ age group)
Population 75+ years: DPIE Population Projections 2019
*RAC Places = Residential Aged Care places: **operational** Commonwealth funded aged care places in the Residential Program as at 30 June 2019, AIHW National Aged Care Data Clearinghouse **AND** WNSWLHD MPS RAC beds*
HCPs = Home Care Packages: HCPs as at 30 June 2019 allocated to recipients living in the District, AIHW National Aged Care Data Clearinghouse
Restorative Care Places: Commonwealth funded aged care places in the Short-Term Restorative Care Program as at 30 June 2019, AIHW National Aged Care Data Clearinghouse
NOTE: Transitional Places and places in the ATSI Flexible Program are NOT included

Workforce

Workforce shortages in medical, nursing and allied health roles will continue into the future, with maldistribution of the workforce impacting rural and remote towns. An ageing workforce, alongside a dependence on internationally recruited health professionals and a high reliance on medical locums presents challenges for the continued delivery of health services across the District. Nurse-led care supported by onsite and/or virtual medical consultation has developed over time and will continue to evolve into the future. Collaborative education models and strong partnerships with existing and new educational providers will continue to be important in ensuring a sustainable, well-skilled future health workforce.

In some areas in the District, the number of private service providers has increased (e.g. in Orange, with increasing number of private hospitals and service providers). However, for most of the District, the number of locally-based private service providers is decreasing.

Primary health care and general practice in our small communities has reached a critical point. Projections show that 41 towns and approximately a quarter of the population in the District are at risk of not having a General Practitioner in those communities over the next 10 years unless remedial action is taken now.[6] The strength of primary care across communities in the District has a direct impact on the health facilities and services we provide.

As the demand for care changes and virtual health care and medical technology continues to evolve, the roles of health workers and capacity of training systems will need to evolve to meet these challenges. While new roles have already developed such as endoscopy nurse and nurse practitioners, roles will continue to evolve and new roles developed into the future.

In the larger hospitals, increasing sub-specialist interests, while having obvious benefits to the community, presents a challenge to staffing after hours especially when dealing with presentations requiring reviews outside the sub specialist interest.

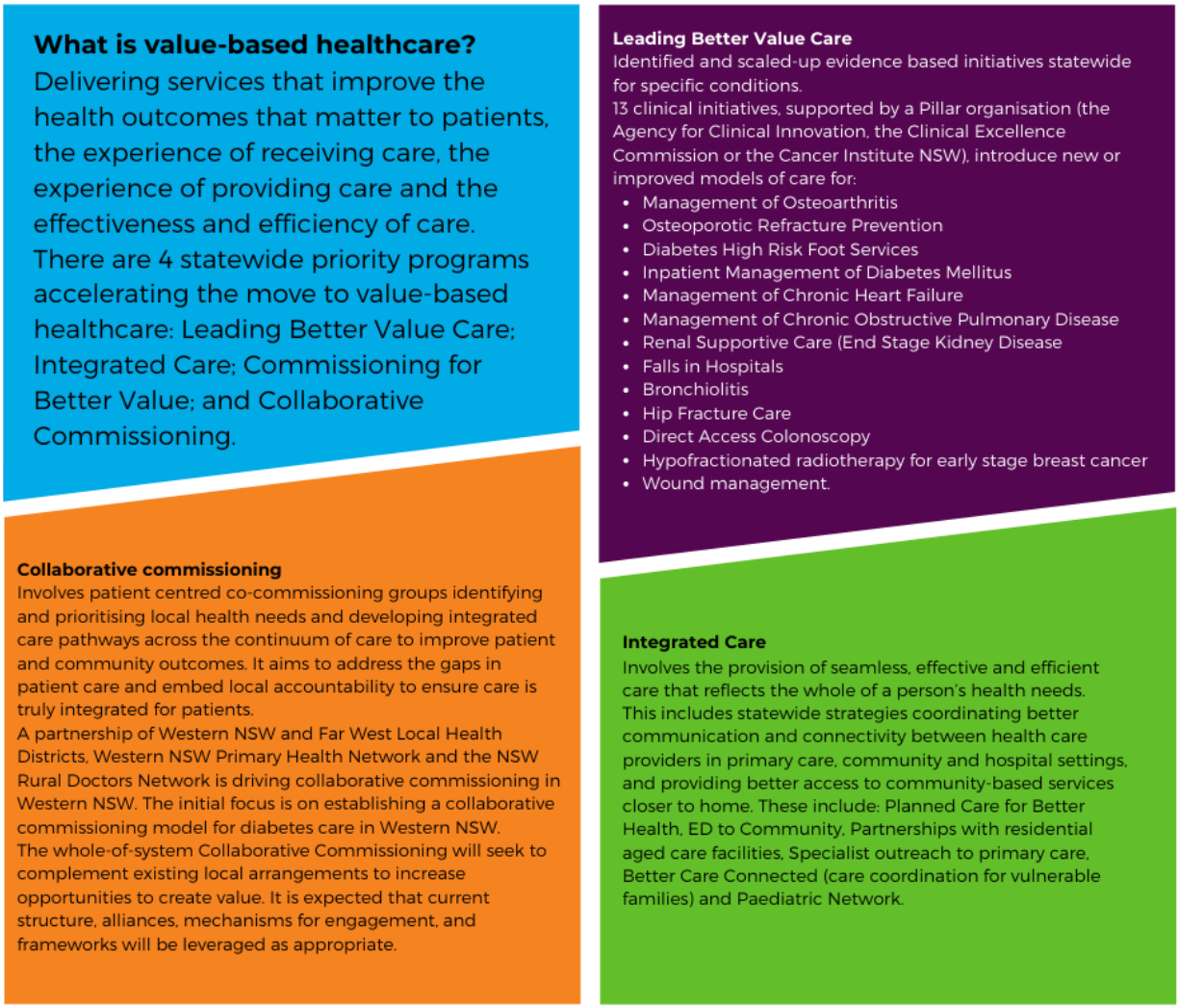
Consumer expectations

Community needs and expectations around health care and service provision are changing, with more people expecting to be involved in and direct their own care. People want to receive care as close to home as possible. In general terms, patients are demanding more from their healthcare experiences and are increasingly embracing new technology for low-risk decision making relating to their health. There is a shift toward personalisation for the individual and an increasing focus on patient outcomes, where the future patient is more likely to be well-being focused, tech-enabled and wanting to direct their care[7].

In rural areas, the concept of social licence is also particularly relevant. Recent analysis has highlighted that health services have a prominence in rural communities they may not have in other environments. Rural communities tend to have a significant investment in their health service and feel a strong sense of ownership – health services are perceived as critical to the survival and sustainability of the community[8]. Maintaining trusting relationships with communities is important for rural healthcare.

Embracing new technology and models of care

New models of care, innovations and translational research will continue to impact on how healthcare services are delivered. The District will continue to embrace new ways of working and adopt state directions, models of care and care pathways to improve access to services, and deliver better patient outcomes, ensure patient safety and deliver better experiences of our health services. This work will be guided by the work the NSW Agency of Clinical Innovation and the Clinical Excellence Commission, and the principles of value-based healthcare.



Virtual care, also sometimes referred to as telehealth or telemedicine, is where healthcare providers provide care to patients remotely, using technology. Virtual care models can be a significant shift for patients and clinicians and an adjustment to new ways of delivering health care. There has been, and will continue to be expansion in a range of digital and new technologies to support health care, including but not limited to wearable devices that allow detection and monitoring of health risks in continuous and real time and virtual health consults. Temporary changes to MBS billing (until March 2021) were introduced as a COVID-19 response, and have led to increased telehealth uptake.

The District recognises that the experiences of staff, patients and their families with these modern technologies is of great importance. We are committed to engaging closely with communities, patients, their families and staff in the practical design and refinement of the use of technology as these new ways of delivering care evolve over the coming years.

We will continue our passion for high quality services. As new types of service delivery evolve, the District is committed to ensuring these services are supported by robust clinical governance and that the quality of service delivery and the human experience of those receiving care virtually is closely monitored and responded to.

Developments in virtual care services and delivery will be guided by the NSW Virtual Care Strategy and the District's Virtual Health Strategy (both currently in development). These strategies will focus on virtual health being embedded as a modality throughout health services to mitigate inequalities in health care and to contribute to positive health outcomes, improved options for care and better experiences of care.

Cost of healthcare

The cost of healthcare continues to grow in a tight fiscal environment. The economic impact of COVID-19 restrictions and associated impact on federal and state budgets is likely to have an impact on funding growth into the future.

Delivering care to a widely dispersed population carries comparatively high costs related to infrastructure, staffing services and patient-related transport. Primary issues affecting the efficiency with which small rural facilities operate is the cost of medical staffing relative to activity, the very high cost of medical and nursing locums / agency staff and the comparatively low utilisation of the non-residential aged care parts of the operation. There are also high costs associated with servicing remote communities from base and tertiary hospitals, and in providing coordinated, networked service delivery across the District (e.g. inter-facility transfers).

The funding model for Australian public hospitals includes a safety and quality component, with adjustments made for potentially preventable hospitalisations, sentinel events and hospital acquired complications. This supports hospitals to take action to reduce systemic risks related to the quality and delivery of care. Available funding for public hospitals is also being impacted by a decreasing rate of private hospital insurance.

Infrastructure constraints

With a large number of healthcare facilities across a vast geographic area combined with ageing infrastructure in some locations (including buildings, equipment, information and data systems and workforce) impact on the ability of the service to provide contemporary clinical care. The District has a large number of assets to maintain and a need to ensure contemporary / fit-for-purpose infrastructure into the future. The future health infrastructure will need to be diverse, agile and sustainable and networked to support the complete patient journey[9].

Changing asset management processes

Local asset management processes are evolving, to align with NSW policy[10,11] and the NSW Health Asset Management Framework and assist with realising value from planned and existing assets. This will advance the management of assets, better integrate assets and service provision, and support state-wide asset management (SAM) initiatives and solutions. A three-year transition period has commenced, and the District is working closely with Health Infrastructure and the NSW Ministry of Health's Asset Management Unit. The District Strategic Asset Management Plan (SAMP) and Asset Management Plan (AMP) will become key documents guiding the management and development of the District's non-financial assets.

A changing environment

The climate of NSW is changing. Average temperatures are rising, and there have been increases in the frequency and intensity of heat waves and in heavy precipitation. Severe bush fires may become more prevalent. Climate change is expected to have a number of mostly adverse effects on human health including heat-related mortality and morbidity, increases in vector-borne diseases and water and food-borne disease, increased air pollution and adverse impacts on mental health. [12]

A changing environment has potential to impact on health needs of communities and service design and responses, including the existing challenges of scale and geography and the economic fragility of communities.

Learnings from COVID-19

The COVID-19 pandemic has had a significant impact on the way our services are provided. Individuals and teams rapidly adapted to working in new ways in preparing for the potential impact of COVID-19 and in continuing to deliver health care to our patients and communities. Some services were stopped or modified, and public behaviour changed with less people seeking services.

There are many insights from our COVID-19 service response as to how services should operate into the future to delivery better patient outcomes and provide models of care to meet the needs of our communities. In particular, we need to imbed virtual health as a core component of service delivery and continue our focus on

hospital avoidance and alternatives to hospital care. It also has implications for infrastructure design into the future, as well as the way in which we engage with communities about their health.

Understanding the impact on the health of people, while maintaining an active COVID-19 Response Plan will present a key challenge over the coming year/s. Recovery from the pandemic will require attention to changing patterns of access to health care and delayed engagement with services, and the associated impact on health outcomes including on mental health, cancer rates and children's development. This is particularly pertinent for existing vulnerable cohorts of the population, including those where health outcomes are already poorer than the rest of NSW.

OUR CURRENT STATE

Our District

Western NSW Local Health District is one of the largest geographical Local Health Districts in New South Wales, but with a small population of only 278,800 people.

We provide high-quality health care, education and research services. There is a coordinated, networked approach to service planning and delivery.

Specialised health care is provided at **3** major rural referral hospitals at Bathurst, Dubbo and Orange, and at **4** procedural hospitals, **6** community hospitals and **25** Multipurpose Services (MPS).

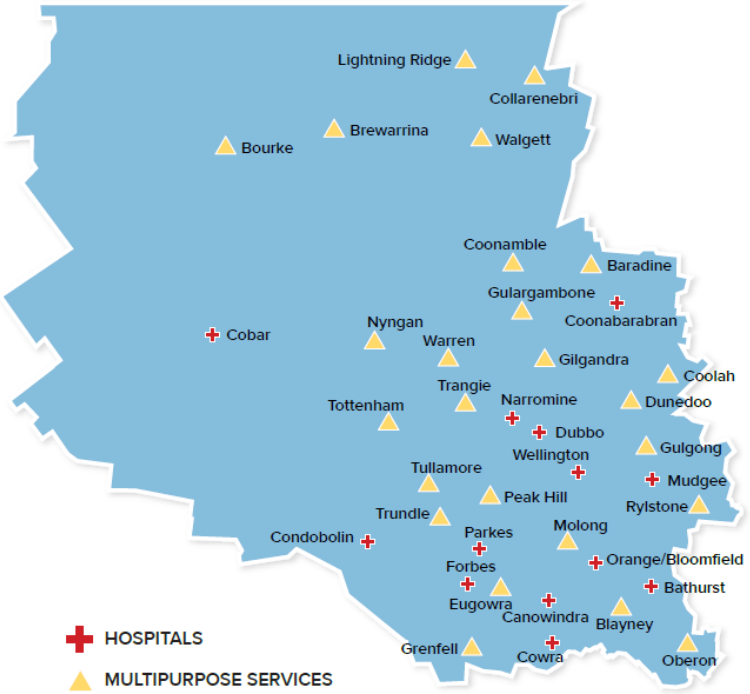
Residential aged care is provided in our MPS.

Inpatient services are organised across three sectors – Northern, Central and Southern.

Community and primary health care services are also widely available across the region. There are **50** community health centres.

The District hosts the largest rural mental health service in Australia.

We have well-formed links to metropolitan facilities for highly specialised (tertiary-level) healthcare services.



Description of services

Inpatient and community services

Rural referral hospitals and health services are located in the large centres of Bathurst, Orange and Dubbo and provide a wide range of specialist inpatient and community services for a large catchment population. Some centres provide tertiary level or inter-district services such as interventional cardiology, surgical specialist services such as Endoscopic Retrograde Cholangiopancreatography ERCP and after-hours urology on-call services, and comprehensive cancer care services including radiation oncology are provided at Orange Health Service. Interventional cardiology and comprehensive cancer care services will be introduced at Dubbo at the completion of Stage 3 and 4 Dubbo Health Service Redevelopment.

Procedural hospitals and health services are located in large rural towns and provide emergency, acute medical, surgical, maternity and subacute inpatient services and a range of primary, ambulatory and community health services for their local community and people from neighbouring villages. They do not have on site specialist services.

Community hospitals and health services are located in smaller towns, providing emergency services, acute and sub-acute medical inpatient services and primary and community health services. They may provide elective surgery and procedures services dependent upon the availability of required support services and their geographical location.

Multipurpose services are located in smaller rural and remote towns and provide integrated acute and subacute inpatient services, emergency, allied health, primary and community health services, health related services and residential aged care under one organisational structure as agreed by the State and

Commonwealth. Some of these services do not provide acute inpatient services (Eugowra, Gulargambone MPSs). The Commonwealth-State MPS Program aims to provide a flexible and integrated approach to health and aged care service delivery to meet the specific needs of small rural communities.

Lourdes Hospital and Community Health Service in Dubbo is an affiliated health service operated by Catholic Healthcare that provides a range of subacute inpatient services and community services under a service level agreement with the District. Inpatient services include palliative care, rehabilitation and geriatric evaluation management. Community health services include allied health, specialist palliative care and nursing services. Lourdes Hospital and Community Health Service also provide aged care assessment services**.**

The District hospital inpatient services – local classification and Peer Group name as per the NSW Health Guide to the Role Delineation of Clinical Services[12]

Local Classification	Peer Group Name*	Facilities
Rural referral hospitals	Major Hospital Group 1	Orange Health Service
	Major Hospital Group 2	Dubbo Health Service
	District group 1	Bathurst Health Service
Procedural Hospitals	District group 2	Cowra Health Service
	District group 2	Lachlan Health Service (Forbes and Parkes)
	District group 2	Mudgee Health Service
Community Hospitals and Multipurpose Services	Multipurpose Service	Baradine MPS
	Multipurpose Service	Blayney MPS
	Multipurpose Service	Bourke MPS
	Multipurpose Service	Brewarrina MPS
	Community Hospital without surgery	Canowindra Soldiers Memorial Hospital
	Multipurpose Service	Cobar MPS
	Multipurpose Service	Collarenebri MPS
	Community Hospital without surgery	Condobolin Health Service
	Multipurpose Service	Coolah MPS
	Community Hospital with surgery**	Coonabarabran Health Service
	Multipurpose Service	Coonamble MPS
	Multipurpose Service	Dunedoo MPS
	Multipurpose Service	Eugowra MPS
	Multipurpose Service	Gilgandra MPS
	Multipurpose Service	Grenfell MPS
	Multipurpose Service	Gulargambone MPS
	Multipurpose Service	Gulgong MPS
	Multipurpose Service	Lightning Ridge MPS
	Multipurpose Service	Molong MPS
	Community Hospital without surgery	Narromine Health Service
	Multipurpose Service	Nyngan MPS
	Multipurpose Service	Oberon MPS
	Multipurpose Service	Peak Hill MPS
	Multipurpose Service	Rylstone MPS
	Multipurpose Service	Tottenham MPS
	Multipurpose Service	Trangie MPS
	Multipurpose Service	Trundle MPS
	Multipurpose Service	Tullamore MPS
	Multipurpose Service	Walgett MPS
	Multipurpose Service	Warren MPS
	Community Hospital without surgery	Wellington Health Service

* In NSW, public hospitals are grouped into broadly similar groups which are called peer groups. Peer grouping is based on the number of patients discharged each year (size of the facility), the primary role of the hospital and geographical location (i.e. rural or metropolitan areas). This information is used predominately for benchmarking and service planning. ** Hospitals in this grouping have 2,000 or less acute separations but greater than 200 total separations per year AND more than 2% surgery (based on DRG status). The surgery performed at these hospitals is limited and of low complexity.

A review of the role delineation of the District's clinical services is underway. This document will be updated to include the finalised role delineation classifications. Role delineation describes the complexity of clinical services provided at a facility. Role delineation describes the minimum support services, workforce and other requirements needed for each clinical service to be delivered safely across NSW. Service levels range from No Planned Service to Level 6, with increasing complexity. The role delineation level does not apply to the hospital as a whole, rather it applies to individual clinical services e.g. orthopaedic surgery, paediatric medicine. A hospital may have a variety of role delineation levels across its different services. It is important to note the dependence of role delineation levels between clinical services. For example, a hospital offering a certain role delineation level in orthopaedic surgery cannot do so safely without the recommended role delineation level in the core services of Anaesthesia and Recovery, Operating Suite, Close observation ward, Intensive Care Services, Nuclear Medicine, Radiology and Interventional Radiology, Pathology and Pharmacy.

Specialty clinical services with a District-wide or regional function

Most clinical services report to the relevant hospital General Manager through the local service line management structure. Some clinical services, such as allied health services, are delivered to smaller sites and locations in the District through a 'hub-and-spoke' type model from larger centres (usually the rural referral or procedural hospitals). Hubs may also provide a clinical support function to support local clinicians (e.g. renal dialysis, community mental health services).

There are a number of District-wide services with a central operational governance and staffing model, including Medical Imaging, Specialist Palliative Care, Mental Health Drug and Alcohol, Oral health (dental) services, Needle Syringe Program, Integrated Care, HIV and Related programs (HARP), Sexual Assault Services, Joint Child Protection Response Program, Health Promotion/Protection and vCare (provided by the District's virtual health service).

Other clinical services, such as Cancer Services, Women's Health and Aged Care Services, have local service provision under the operational management of the hospital supported by some District-wide services/functions. Interventional cardiology and cancer care including radiation oncology are currently based only at Orange Health Service and provide a District-wide service. This will change to a regional focus, with the introduction of these services at Dubbo Health Service at the completion of Stage 3 and 4 Dubbo Health Service Redevelopment.

Mental Health & Drug and Alcohol Services

Mental Health Drug and Alcohol (MHDA) across the District have been structured as a clinical stream for a number of years, maintaining a District-wide approach to clinical and corporate governance, service development, policy formulation and workforce planning and recruitment. The service provides community and inpatient secondary and tertiary psychiatric services for the local population and is a major referral centre for patients needing more specialised care and treatment from the rest of NSW. A number of state-wide inpatient mental health units are located on the Bloomfield campus in Orange.

Community and Primary Health Services

The District Community and Primary Health Services operate across 50 centres, the majority of which are co-located with hospital services. The services provided include nursing and allied health services, maternal and child and family health services, liver/hepatitis services, violence prevention and response services and programs targeting priority populations including Aboriginal health, chronic disease and older people programs. Health One NSW services in the District provide co-location of GPs, nurses, allied health clinicians and other health providers, to foster a 'team health' and integrated approach to primary and community health services.

Western NSW Local Health District – primary and community health / HealthOne centres

No.	Facility	Co-located with a Hospital
1.	Baradine Multipurpose Service	Yes
2.	Bathurst Community Health Centre	Yes
3.	Binnaway Community Health Clinic	No
4.	Blayney HealthOne Service	Yes
5.	Bourke Community Health Centre	Yes
6.	Brewarrina Community Health	Yes
7.	Canowindra Community Health Centre	No
8.	Cobar Community Health Service	Yes
9.	Collarenebri Community Health	Yes
10.	Condobolin Community Health Centre	Yes
11.	Coolah Community Health Service	Yes
12.	Coonabarabran Community Health Service	Yes
13.	Coonamble HealthOne Service	Yes
14.	Cowra Community Health Service	Yes
15.	Cudal Community Health Centre	No
16.	Cumnock Community Health Centre	No
17	Dubbo Community Health Centre	No
18.	Dunedoo Community Health Centre	Yes
19.	Forbes Community Health Centre	Yes
20.	Gilgandra Community Health	Yes
21.	Goodooga Health Service	No
22.	Gooloogong Community Health Centre	No
23.	Grenfell Community Health Centre	Yes
24.	Gulargambone Community Health Service	Yes
25.	Gulgong HealthOne Service	Yes
26.	Hill End Community Health Centre	No
27.	Kandos Early Childhood Centre	No
28.	Lightning Ridge Community Health	Yes
29.	Manildra Community Health Centre	No
30.	Mendooran Community Health Centre	No
31.	Molong HealthOne Service	No
32.	Mudgee Community Health Centre	Yes
33.	Narromine Community Health Centre	Yes
34.	Nyngan Community Health Centre	Yes
35.	Oberon Community Health Centre	Yes
36.	Orange Community Health Centre Bloomfield campus	Yes
37.	Orange Community Health Centre Kite Street	No
38.	Parkes Community Health Service	Yes
39.	Peak Hill Community Health Centre	Yes
40.	Quandialla Community Health Centre	No
41.	Rylstone HealthOne Service	Yes
42.	Tottenham Community Health Centre	Yes
43.	Trangie Multipurpose Centre	Yes
44.	Trundle Community Health Centre	Yes
45.	Tullamore Community Health Centre	Yes
46.	Walgett Community Health	Yes
47.	Wanaaring Community Health	No

No.	Facility	Co-located with a Hospital
48.	Warren Multipurpose Centre	Yes
49.	Wellington Community Health Centre	Yes
50.	Yeoval Community Health Centre	No

St Vincent's Health and Community Services – under a service level agreement with the District, St Vincent's provides Commonwealth Home Support Services (CHSP) i.e. community nursing, physiotherapy, occupational therapy, and a Dementia Advisory Service for people aged 65+ (50+ for Aboriginal people).

Alternatives to traditional inpatient services

Ambulatory care refers to care that takes place as a day attendance at a health care facility, at a person's home or at another setting (for example, school or workplace). Ambulatory care services range from preventative and primary care through to specialist and tertiary level services and are collectively referred to as 'non-inpatient' care. Ambulatory Care Units / Clinic offer multidisciplinary services on an outpatient basis. There are large ambulatory care units in 3 hospitals and smaller ambulatory clinics in most other hospitals in the District.

Hospital in the home (HITH) services provide acute, subacute and post-acute care to children and adults residing outside hospital, as a substitution or prevention of in-hospital care. A person may receive their care at home (including residential aged care facility) or in an outpatient clinic in a hospital or health centre.

Integrated care is a way of working that puts people at the centre of care. It is about both providing wrap around care for individuals with complex needs and having a system that makes it easy and simple for individuals and providers to navigate and access the care they need. Integrated Care aims to deliver seamless care within the health system and its interface with social care, to keep people with chronic and complex needs well in the community, as close to home as possible.

Virtual health care is an approach to the provision of healthcare that drives connected, accessible/convenient and integrated care across the consumer wellbeing lifecycle via digital and telecommunication technologies. Integration of virtual health care services across the District has the potential to narrow the gap in health outcomes through improved level of care and diversity of services available for our rural and remote communities.

The District's virtual health services currently include:

VCARE

vCare is the District's multi-disciplinary team of clinicians, providing collaborative, virtual clinical care for patients across the District. The team offers care coordination, navigation and assistance with:

- Logistics and transportation for patients requiring higher level of care
- Referrals for specialist, post-specialist and diagnostic advice
- Coordinating REACH[1] for the rural sectors
- Clinical reviews, escalation of care and critical care support for life threatening conditions. 24/7 support to our smaller emergency departments is provided via telemedicine that is led by specialist doctors and nurses.

vCare maintains the core services of the former Patient Flow and Transport Unit, with significant enhancements and extension of service delivery to 24/7. The vCare team provides virtual support through their eCare Manager software which utilises patient data and algorithms to produce early warning signs relating to recognition of

[1] *REACH is a system that helps patients and families/carers to escalate their concerns with staff about worrying changes in a patient's condition. It stands for Recognise, Engage, Act, Call, Help is on the way. The vCare Unit supports access to clinical experts for an independent review of a patient using telehealth technology when required.*

patient deterioration. This system enables online patient monitoring and diagnostics to assist the bedside team and provide an additional safety net for patients across our District.

The Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS) is also managed by the vCare team.

VIRTUAL RURAL GENERALIST SERVICE (VRGS)

VRGS is a support service for local medical and nursing staff. It supports local medical staff, and supports patients and nursing staff in facilities where no local General Practitioner Visiting Medical Officer is available, or the local doctor needs to rest. The service works collaboratively with vCare.

Key Features of VRGS include:

- Telemedicine consultations directly with staff and patients
- Experienced doctors rostered on 24/7
- Virtual ward rounds for inpatients and clinical support for residents of associated residential aged care units
- VRGS doctors work both virtually and face to face in facilities alongside local nursing and medical staff according to the needs of the facility
- Contemporaneous documentation in an electronic medical record
- Involvement in Safety and Quality processes for the District.

VIRTUAL ALLIED HEALTH SERVICES (VAHS)

VAHS provide in-reach virtual service to small rural hospitals and multipurpose services within the District by the disciplines of dietetics, physiotherapy, psychology, occupational therapy, social work and speech pathology.

VIRTUAL CHRONIC PAIN SERVICE (VCPS)

Based out of Orange Health Service, the virtual chronic pain service provides access to pain specialist expertise via multidisciplinary team or single-discipline telehealth chronic pain consultations.

VIRTUAL CLINICAL PHARMACY SERVICE

Virtual clinical pharmacy services are currently provided at Bourke, Canowindra, Cobar, Gilgandra, Narromine, Warren (Western NSW Local Health District) and Balranald and Wentworth (Far West Local Health District). VCPS clinical pharmacists complement existing onsite and virtual clinical activities, and perform medication reconciliation and review, antimicrobial stewardship, smoking cessation assessment, patient counselling and drug information and medication education for clinical staff

Clinical streams

There are currently 13 clinical streams operational within the District including Cancer, Cardiology, Diabetes, Disability, Emergency Medicine, Intensive Care, Kids and Families, Palliative Care, Perioperative, Rehabilitation, Renal, Respiratory and Rural and Remote (a new Ageing Clinical Stream is due to commence in 2021). Each stream has been assigned an Executive Sponsor. The Clinical Streams form part of the Distirct's Clinical Governance framework and provide leadership for clinical practice, planning and policy and clinical guideline development. The clinical streams act as communities of practice, facilitating professional linkages amongst the District clinicians.

In addition to the 13 Clinical Streams, the Mental Health and Drug and Alcohol Clinical Council is the District's peak body for the guidance of MHDA services.

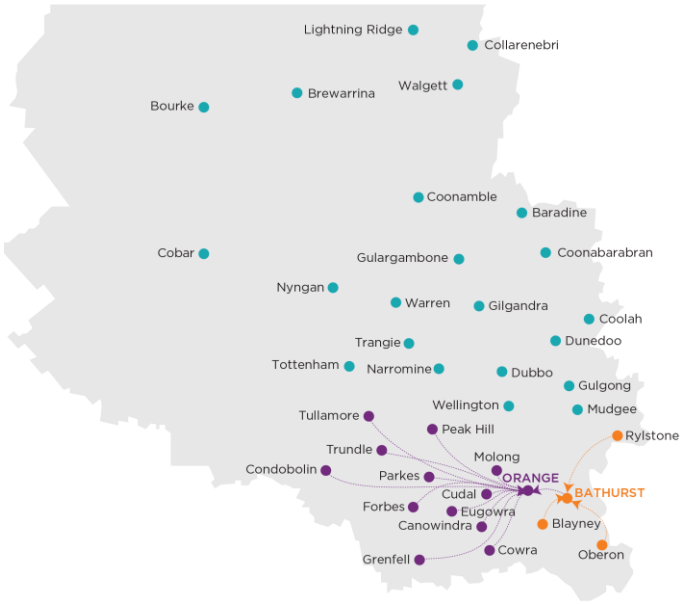
At each of the District's rural referral hospitals there is a Clinical Council that provides guidance and advice for clinical services.

Each of the clinical streams and clinical councils report to the District Clinical Council as part of the District's Clinical Governance Framework[13].

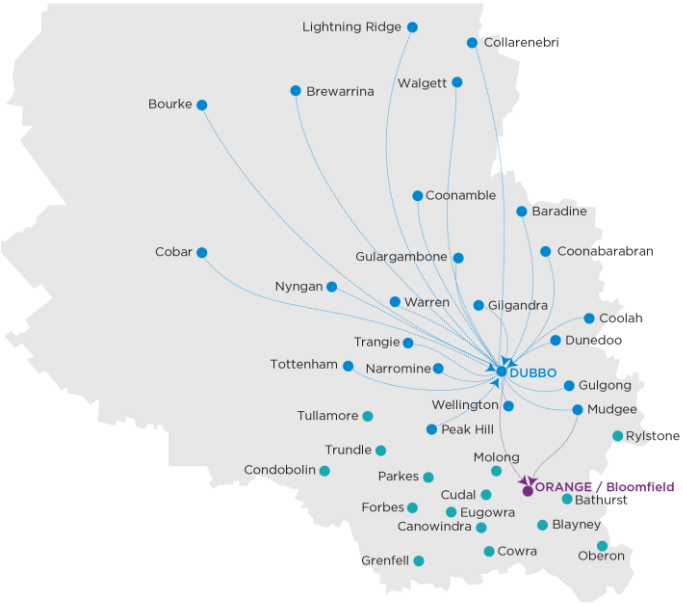
Current referral networks

Informal and formal referral networks exists within the District, and between District services and tertiary services. There are two distinct intra-District referral networks, the Southern Referral Network and the Northern Referral Network. While they differ for some specialist services, these have generally reflected the traditional flow patterns used by people to access a range of services and activities. Patients requiring endoscopic retrograde cholangiopancreatography (ERCP), interventional cardiology, radiation oncology, 24 hour urology and 24 hour ophthalmology services are referred to Orange Health Service. Over the next few years, flows for cancer care, angiography and interventional angioplasty services will change with the establishment of these services at Dubbo at the completion of Stage 3 and 4 Dubbo Health Service Redevelopment.

THE SOUTHERN NETWORK



THE NORTHERN NETWORK



The **Southern Network** of the District includes the Bathurst, Blayney, Cabonne, Cowra, Forbes, part of the Mid-Western Regional, Oberon, Orange, Parkes and Lachlan LGAs. The Network incorporates the Bathurst and Orange health services (rural referral centres) and the Cowra and Lachlan health services (procedural centres). Lachlan Health Service includes the Forbes and Parkes hospitals and health services. Smaller hospitals included in the network are Blayney MPS, Canowindra Soldiers Memorial Hospital, Condobolin Health Service, Eugowra MPS, Grenfell MPS, Molong MPS, Oberon MPS, Rylstone MPS, Trundle MPS and Tullamore MPS.

The **Northern Network** of the District includes the Bogan, Bourke, Brewarrina, Coonamble, Dubbo, Mid-Western Regional, Narromine, Walgett, Warrumbungle and Wellington LGAs. Dubbo Health Service is the network's main referral hospital and Mudgee Health Service is the only procedural hospital in the network. Smaller hospitals that are part of the network include Bourke MPS, Brewarrina MPS, Cobar Health Service, Collarenebri MPS, Coolah MPS, Coonabarabran Health Service, Coonamble MPS, Dunedoo MPS, Gilgandra MPS, Gulargambone MPS, Gulgong MPS, Lightning Ridge MPS, Narromine Health Service, Nyngan MPS, Peak Hill MPS, Tottenham MPS, Warren MPS and Wellington Health Service.

The District has well-formed links to metropolitan facilities for highly specialised (tertiary-level) healthcare services, in accordance with statewide referral pathways. These include the NSW Trauma Services Referral Network (receiving tertiary hospital is Westmead Hospital), the NSW Severe Burn Injury Service Referral Network (to Concord Repatriation General Hospital), the NSW Critical Care Tertiary Networks (Adults) and NSW Cardiac Catheterisation Laboratory Referral Network (to Royal Prince Alfred Hospital), the NSW State Spinal Cord Injury Referral Network (to Royal North Shore Hospital), the Paediatric Critical Care Tertiary Referral

Network (to Children's Hospital at Westmead), tiered networking arrangements for perinatal care (to Nepean Hospital), and the NSW Telestroke Service.

Research, Quality and Continuous Improvement

The District's Research Office, established in 2018, plays a key role in fostering the development of a vibrant rural health research and innovation culture throughout the District. Guided by the Research Strategy 2018-2021[i], the District is building research leadership and capacity, promoting research opportunities and highlighting success. The Research Strategy positions us to be proactive in seeking out research opportunities and to become a leader in the delivery of world-class, meaningful rural health research.

Since 2014, the District has supported the Western NSW Health Research Network (WHRN). A three-year partnership was signed to ensure strong research collaboration for 2018-2021. WHRN hosts annual research symposiums to showcase the diversity of research being conducted in our region and supports the District in hosting the annual Western NSW Rural Health Researcher of the Year Awards, which commenced in 2018 to recognise emerging and current research leaders in the District. In 2019, the Research Office developed *PITCHit* Western NSW, a locally-developed annual grants program, which funded 10 projects designed to improve healthcare sustainability and delivery and patient experience. *PITCHit* continues to be held each year to encourage research and innovation by supporting staff to launch or progress their innovative ideas. The District has also had strong success in the four rounds of NSW Health Translational Research Grants Scheme (TRGS) from 2016-2019, being awarded over $1.8 million dollars in research funding.

The Central West Clinical Trials Unit (CTU), based at Orange Health Service, was established in 2014 through a NSW Cancer Institute grant and community funding. The unit has rapidly expanded and is now self-supporting, generating over $1million in revenue in 2019/20. There are 26 trials currently active (including 3 in Phase 1 human trials). The primary focus of these clinical trials is medical oncology and haematology. However the CTUs strategy aims to expand into other medical, surgical and emergency service specialities. For some clinical trials, patients in rural and remote areas can participate via the tele-trials model. In recognition of its growing success, the CTU won *the 2017 NSW Premier's Award for Outstanding Cancer Research* and the *2017 Australasian Gastro Intestinal Trials Group Outstanding Site Award*.

There are also a number of other clinical trials that are currently underway at Orange Health Service and across the District (but not under the administration of the CTU), in the disciplines of renal, cardiology and infection control (coronavirus).

Quality and safety activities form an intrinsic part of good clinical practice. A range of initiatives are in place across the District, including service accreditation, training, staff credentialing, monitoring of quality and safety metrics and KPIs, quality programs such as Be*tween The Flags* and *Speaking Up for Safety*, *Living Well Together* tools such as clinical bedside handover and patient rounding, patient experience feedback and undertaking quality improvement projects. There is a strong safety culture and a focus on being accountable for the care we provide and on continuous improvement. Clinical incidents are investigated, acted on and learnt from, and there is proactive reporting and analysis of adverse events.

OUR FUTURE

We will adapt and evolve our current clinical services to meet the challenges that are facing our services and the people of the District. This will involve changing the way we provide healthcare to ensure that it is sustainable and meets the needs and expectations of our diverse populations and communities across the District, into the future.

In doing this, we will be guided by agreed planning principles. These planning principles underpin our clinical services planning, service development and service redesign.

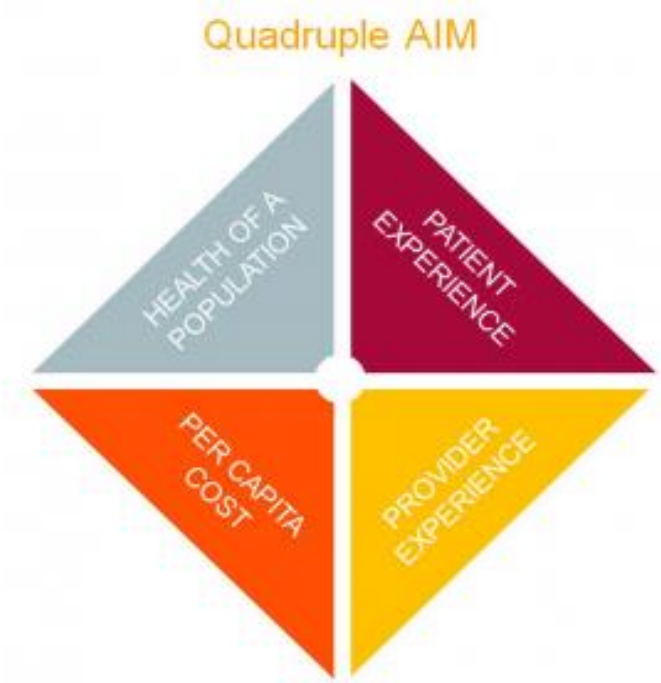
Planning principles

1. Planning is driven by **community and population health needs** to improve determinants of health, and includes a focus on health and wellbeing, prevention of illness and keeping people well in the community
2. Planning is guided by the principles of **value-based healthcare**
3. Services will be informed by new and emerging evidence-based **models of care and ways of working** with a focus on developing and improving **virtual health care** delivery to improve access and quality of care.
4. **Technology** will be proactively embraced for improving service delivery, safety, health literacy and the support and coordination of care
5. Provision of **safe and high quality services** is a baseline consideration for all service planning, which includes volume and activity thresholds and efficiencies
6. Co-design and engagement with **communities** will form part of service planning and design
7. Provision of **human-centred care** that is **integrated** between hospital, community health, general practice, specialists, aged care and other health and non-health partners will guide service planning
8. A **network of services** will be utilised within the District to provide care and services as close to home as possible, and planning will be considered on a regional and sub-regional basis, recognising natural catchments
9. Services will be delivered by **skilled, experienced and competent staff**
10. Services will be **accessible**, and service planning will consider the **access and equity** to a broad range of services that impact on health determinates
11. Our approach to the **health needs of Aboriginal people** will be developed through co-design and joint planning, that ultimately leads to the delivery of culturally safe and responsive health services
12. **Resourcefulness, innovation** and the **sustainability** of services will be key considerations
13. **Alternatives to in-hospital care and options for community-based service provision** will be considered in service planning and development.
14. **Environmental sustainability** will be considered in design of infrastructure and redevelopment
15. The District's **tertiary referral pathways** are guided by the NSW Critical Care Tertiary Referral Networks and Transfer of Care (Adults) policy directive
16. Planning will consider **workforce, safety and financial sustainability.**

The Quadruple Aim Framework

In tandem with the planning principles, the District will continue to be guided by the Quadruple Aim Framework.

- Improved quality, safety and patient experience of care
- Improved health and equity for all populations
- Best value for public health system resources
- Improved health care provider experience.



Source: Adapted from Institute for Health Care Improvement

Priorities of our clinical services

To deliver on our primary objective of the CSF to meet the needs of our communities over the next five years and deliver high quality healthcare in the District, 6 key priorities will guide clinical service development.

Every clinical service across the District should consider how these priorities will be implemented in the design, planning and delivery of health care.

A strong and sustainable workforce is the backbone of our organisation, and the key enabler to achieving the directions outlined in the CSF, and to providing high-quality clinical services that deliver better patient outcomes.

NETWORKING OUR SERVICES

Rural Locality Networks

Service planning and delivery in the District will increasingly be undertaken on a rural locality network basis. This approach aims to help improve health outcomes for rural communities, provide certainty in workforce and service provision and improve efficiency of our small rural facilities.

A network approach will support service planning and delivery on a sub-regional catchment area basis. The sites will come together into locality networks so that, within a larger geographic locality, a tiered range of services will be offered. There will be delineation of all sites within a rural locality network in terms of their service availability, function and the models of care. A Rural Locality Network Framework will define the functions and interconnectedness of each site within localities across the District.

It is envisaged that the rural services delivered by the District might be sub-divided into around ten locality networks. The role of the rural referral facilities in our regional centres will not change – they will remain centres for high acuity patients, specialist services and definitive care. Within each network will be a 'hub' or staging centre which can provide a more expanded role over a wider catchment, supporting care within that sub-region. Under this approach, some locations will have greater emphasis because of their ability to support a wider network of services in the surrounding catchment. One of the objectives is that over time the risk of workforce shortages in our smaller rural towns can be reduced and the need for patients and their families to travel long distances diminishes over time, when the care they need can be safely delivered in a rural centre.

Initially, the focus will be on inpatient facilities. However, the rural locality networked approach will expand to include community, non-admitted / ambulatory, allied health, clinical support, mental health drug and alcohol, specialised nursing and residential aged care services to ensure integrated services that best meet the needs of the community. The role of the centralised hubs may further expand to become the nucleus of support services and locality-based staffing pools. Partnerships with other health service providers and programs will be important in designing services and programs to meet the needs of the particular sub-region.

Over time, the rural locality networks can become the focal point for locality alliancing style arrangements for whole of health system service commissioning.

Proposed rural locality networks*

In considering the distribution of services across the District, the proposed networks are described in regions, in relation to their geographical linkages.

1	Bathurst network	6	Lachlan and south west network
2	Dubbo network	7	North western network
3	Orange network	8	Warrumbungle and north eastern network
4	Southern network	9	Western network
5	Eastern network	10	Far northern network

** Rural Locality Networks may evolve over time as further planning and service development occurs*

The District is piloting a place-based model for sustainably providing integrated, multidisciplinary healthcare that is high quality and accessible, through the **'Sustaining Small Rural Communities (4T's) Project' in Tottenham, Trundle, Tullamore and Trangie**.
The project is a collaboration and involves joint governance between WNSWLHD, NSW Rural Doctors Network (NSW RDN) and Western NSW Primary Health Network (PHN).
It also takes a co-design approach with communities, local staff, Health Councils, Community Engagement Groups and Local Government.
Community Health Needs are being identified across all four locations, and a networked service delivery model (spanning preventative, primary and acute care) developed to meet local health needs into the future. Integration across service providers is a key focus of this work.

RESEARCH AND CLINICAL TRIALS

The District is committed to building a vibrant and proactive health research culture. Through our current research strategy, we aim to improve the health and wellbeing of communities and enhance the patient and provider experience. We will continue to build research capacity and capability, foster partnerships with other research organisations, strengthen our ethics and research governance, engage communities and consumers in research and encourage the translation of research evidence into practice. Our Research Office will develop a new District Research Strategy 2022-2027 that builds on the previous strategy and guides our further growth and leadership in rural and remote health research.

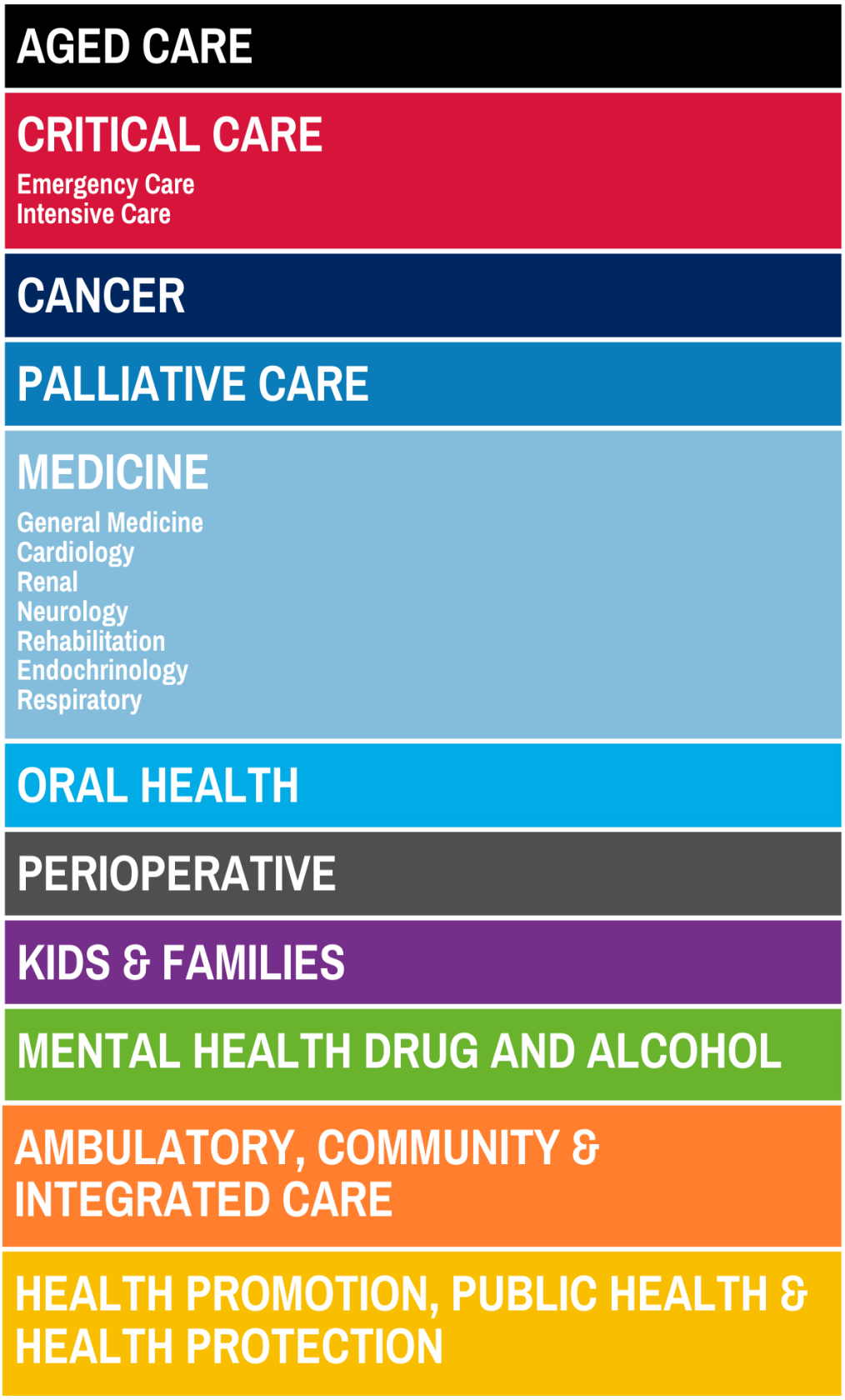
Clinical Trials

Clinical trials are an important initiative for the District as they have the potential to improve patient outcomes, boost recruitment of highly skilled professionals, improve the overall capability and maturity of the health service and generate revenue.

Given the success of the Central West Clinical Trials Unit model, the District is keen to increase the number and scope of clinical trials across all areas of health service delivery. This will be achieved through the development of a District-wide Clinical Trials Strategy within the next District Research Strategy. The following items will be under consideration:

- Determining the optimal District leadership and governance arrangements
- Improving engagement with staff and consumers outside of cancer services
- Ensuring the District meets the National Clinical Trials accreditation requirements
- Integrating the Clinical Trials Support Unit (CTSU) within the current trial capabilities and services. The CTSU will be established in the District in 2021 under the *Improving Access to Innovative Healthcare in Rural, Regional and Remote NSW and ACT Program* funded by the Commonwealth in the 2020/21 budget.
- Develop processes to further implement and deploy the tele-trials model within and beyond the District borders
- Developing a central 'pool' of staff with expertise in clinical trials (nurses and coordinators), available to support clinical trials in all specialities, across the District.
- Engaging with staff and consumers to identify clinical trials to address the niche health needs particular to our environment and our communities.

OUR CORE CLINICAL SERVICES



AGED CARE

OUR CURRENT SERVICES

Older people admitted to hospitals within our District are under the care of general practitioners, general and specialist physicians and surgeons. They are cared for in general wards according to the nature and acuity of their conditions. Designated geriatric evaluation beds (4) are available at Lourdes Hospital in Dubbo (an affiliated health service).

The District has one resident geriatrician based in Orange. Geriatric medicine in the District is primarily provided in an outpatient model of care involving virtual and face to face consultations which are available across the entire District.

The District has 25 MPS facilities providing residential aged care.

INPATIENT AND DISCHARGE SERVICES

Geriatric Medicine Program

The District offers GP referral to this service for older patients and carers with complex health needs. This assists GPs with appropriate medical care for their patients, but this model also identifies and facilitates access to the restorative, re-ablement and social support options to support the patients further. Consultations are offered virtually or face-to-face to enable care close to home.

Inpatient Care

Older people requiring hospitalisation are cared for in inpatient services. Confusion, dementia and/or delirium and behavioural issues may make caring for older patients more challenging in the hospital environment. Models of care such as Confused Hospital Older Person's (CHOPs) and TOP5 aim to improve the care of the confused older person in hospital.

Aged Service Emergency Team (ASET)

ASET staff undertake a comprehensive assessment of the older person presenting to the Emergency Department and inform the treating team, ensuring the complexity of care needs and contributing factors are considered in the overall management plan. ASET staff are located in the Emergency Departments of Bathurst and Orange Health Services.

Acute to Age Related Care Services (AARCS)

This service assists the patient to be supported during discharge to services which are appropriate and minimise hospital stays. The AARCS positions are located at Bathurst and Dubbo Health Services.

Transitional Aged Care Program (TACP)

TACP provides older hospitalised patients with therapy and social support services to assist them to leave hospital and to regain their best functional level. The program duration is (on average) eight weeks and flexible between residential TACP places and community TACP places.

Aged Care Access Centre (ACAC)

The ACAC is the District hub for intake and allocation of referrals for aged care services from the following sources:

- My Aged Care (MAC) – the national contact centre to gain information and access to Commonwealth subsidised aged care services
- General practitioners (GPs)
- Hospital staff and health workers
- Service providers
- General public

HOME SUPPORT PROGRAMS

The Regional Assessment Service

The Regional Assessment Service undertakes assessment for need and eligibility to receive entry level social support services in the community i.e. Commonwealth Home Support Program (CHSP) such as:

- Community Nursing Services
- Allied Health Services
- Social Support Services
- Day Care Services
- Domestic Services
- Personal Care Services
- Transport Services
- Home Maintenance and Modification Services
- Meal Services
- In home respite

Aged Care Assessment Team (ACAT)

The Aged Care Assessment Team (ACAT) undertake a comprehensive assessment of

complex and clinical need and determine eligibility to receive additional packaged, restorative and residential services such as:

- Home Care Packages
- Residential Respite
- Permanent Residential Care
- Short Term Restorative Care
- Transitional Aged Care Program

Commonwealth Home Support Program (CHSP)
Under a Commonwealth grant, the District provides CHSP services in select areas of the District including community nursing, allied health, social support, centre based respite, meals on wheels and dementia advisory service.

Dementia Services
The Western NSW Local Health District Dementia Advisory Service provides early diagnosis and education and capacity building to people diagnosed with dementia and their families to help them better manage into the future as the disease progresses. This service is available across the District and is provided by the District's aged care staff and geriatricians and in partnership with Catholic Health Care (St Vincent's) in Bathurst. The District's Clinical Nurse Consultant (CNC) service also has a dementia focus and provides leadership and training for Western NSW Aged Care Programs. With this support, clinical staff working in the Aged Care Programs are better equipped to provide dementia support and advice during all aspects of client interactions.

The three Aged Care CNCs based at Bathurst, Orange and Dubbo health services have primarily a dementia/delirium focus and are called on in the acute setting to support staff in managing and caring for patients with confusion/dementia.

All our multipurpose services care for residents with dementia including some with more challenging behaviours. Some like Nyngan MPS have dedicated secure areas for the care of people with dementia. Many have a walking track or similar, and some provide respite for people with dementia. Staff can access support when required via Commonwealth-funded dementia advisory services or from the District Older Peoples Mental Health Service when behavioural and psychological symptoms are severe.

Out of Home Care - ComPacks
ComPacks provide patients being discharged from hospital with social support services and case management for a maximum of six weeks to support recovery. The District has a strong partnership with Live Better Community Services to provide services for the ComPacks program while the Aged Care Access Centre (ACAC) screen and approve appropriate referrals for the program.

Out of Home Care – Safe and Supported at Home
Safe and Supported at Home provides short term clinical and social support services for people under 65yrs who are not eligible for the National Disability Insurance Scheme (NDIS). This includes people who:

1. Are negotiating with the NDIS for their ongoing care
2. Are an NDIS client but their care plan does not include the current service they are asking for
3. Are awaiting an NDIS assessment.

Generalist Community Nurses
All communities across the District have access to generalist community nurses. They play a vital role providing community-based nursing care to older people, including in their homes.

SPECIALIST SERVICES FOR OLDER PEOPLE

Older People's Mental Health Services (OPMH)
This service provides specialist care for older people (generally 65 years and over and 50 and over for Aboriginal people) with mental health problems (including those with and without dementia), guided by the statewide Service Plan and models of care[14,15,16]

The OPMH service responds to the needs of older people with mental health issues including severe Behavioural and Psychological Symptoms of Dementia (BPSD) and offers assessment and care coordination, challenging behaviours program, education / therapy / counselling and access to acute inpatient care when required.

The service includes:

- a District-wide multidisciplinary community team, with clinicians based in Orange, Bathurst, Mudgee, Parkes, Forbes, Cowra and Dubbo. The Dubbo OPMH community team provides support across the Dubbo Hub. In addition to the OPMH teams in the locations noted above, there is a regional multidisciplinary team based in Orange that provides clinical support to the OPMH teams across the Bathurst and Orange Hubs.
- an acute inpatient unit - this is a 12 bed unit with 24/7 inpatient service provision located in Lachlan Building on Bloomfield campus.

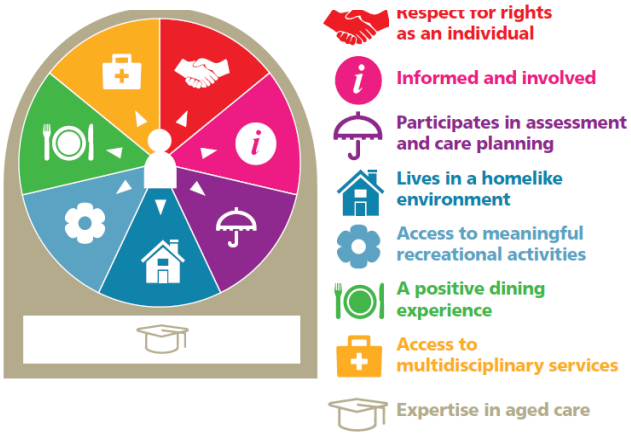
The District has four old age psychiatrists on a roster covering Monday to Friday, business hours. They are the main contacts for dementia-related issues.

RESIDENTIAL AGED CARE

The District is the largest provider of residential aged care services in the District, providing 422 Commonwealth-funded RAC places within its multipurpose services.

In our District, MPS have more beds allocated to residential aged care than hospital inpatient care. Residents living in MPS residential aged care are not patients; they are people residing in their own home. Providing a homelike environment with a focus on lifestyle, leisure and activity options, nutrition, independence, choice and control, contributes to wellness in older people. The *Living Well in a MPS Principles of Care*[17] guide the provision of care to residents of MPS.

Living Well in a MPS Principles of Care



Source: NSW ACI 2016, Living Well in Multipurpose Services, Principles of Care, ACI Rural Health Network

SPECIFIC DRIVERS OF CHANGE

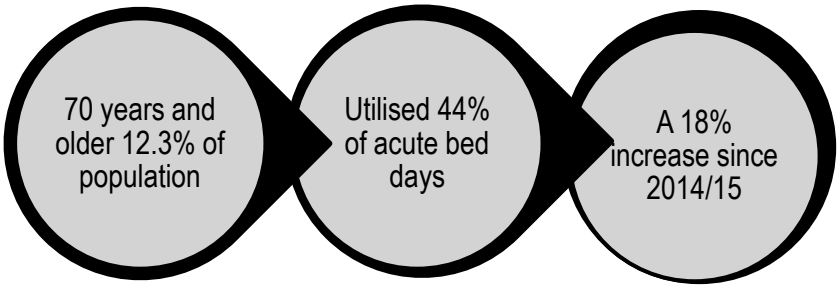
- The ageing of the population and the higher prevalence of age-related health problems including dementia, arthritis, cancers, hypertensive disease, heart and vascular diseases and osteoporosis, will be key demand drivers for acute and sub-acute health services and community and residential aged care services. Falls are more common among older people and often result in fracture or serious injuries. Older people are also more likely to have multiple long-term health conditions.
- Royal Commission into Aged Care Quality and Safety[18] – final report due February 2021
- Living Well in Multipurpose Services Model of Care[19]
- New accreditation requirements for MPS – from January 2021, MPS will need to meet the new MPS Aged Care module[20] in addition to the National Safety and Quality Healthcare Standards[21]
- Care of Confused Hospitalised Older Persons Principles[22]
- Leading Better Value Care Falls in Hospitals Initiative[23]. Implemented at Bloomfield Older People's Mental Health Acute Inpatient Unit and Bathurst and Canowindra Health Services.
- Hip Fracture Care Clinical Care Standard[24]. Hip fracture care initiative has commenced at Dubbo Health Service.
- Delirium Clinical Care Standard[25] - updated version due by early 2021
- Review of the delivery of aged care in MPS Program[26] undertaken in 2019 and potential changes to the program made by the Commonwealth Department of Health as a response to this

- Move towards a single system for care of the elderly in the home, unifying the Commonwealth's Home Care Packages (JCP) Program and Commonwealth Home Support Program (CHSP)
- New aged care assessment arrangements to streamline consumer assessment for access to aged care services is proposed to commence from April 2021[27]
- More than 30% of older people present with or develop confusion during their admission to a hospital, most commonly because of dementia and delirium[28]. There is strong evidence that poor prevention and treatment of delirium and inappropriate care of people with dementia, leads to avoidable functional decline, increased morbidity and adverse events, prolonged hospitalisation and a higher risk of admission to residential care and mortality.
- Annual average mortality rate for older persons in the District is 23% higher than that for NSW. Circulatory diseases and malignant neoplasms caused 58.6% of all deaths in older people in the District.
- Due to their poorer health status and higher levels of socioeconomic disadvantage, the health care and support needs of older Aboriginal Australians differ from those of other Australians, and they use these services at both higher rates and younger ages. Dementia is also emerging as a significant problem for Aboriginal people at comparatively young ages.[29]
- Occupancy of residential aged care beds in the District is almost at capacity and there are few facilities able to accommodate people with high care dementia.

WHAT DOES THE DATA TELL US?

Inpatient activity[30]

- People aged 70 years and over account for 12.3% of the District's population.
- In 2018/19, people aged 70 years and over were admitted on 20,772 occasions for acute care utilising 88,285 acute bed days, over 44% of the total District occupied bed days.
- Between 2014/15 and 2018/19 there has been an 22% increase in acute hospital admissions and 18% increase in bed utilisation (an additional 13,396 bed days) by the 70 years and over age group
- Between 2014/15 and 2018/19, the leading causes of acute inpatient hospitalisation of older residents of the District was non-subspecialty medicine, respiratory, cardiology, orthopaedics and gastroenterology.
- In 2018/19, the majority (96%) of people aged 70 years and over occupying the Districts acute beds were residents of the District.
- Aboriginal people 70 years and over during 2018/19 accounted for 4,459 bed days, only 5% of the Districts 70 years and over age group utilisation. This percentage is significantly under representative and is reflective of Aboriginal people's shorter life expectancy.
- Between 2014/15 and 2018/19, the leading causes of hospitalisation in Aboriginal residents aged 55+ years were respiratory medicine, non-subspecialty medicine, cardiology, gastroenterology and orthopaedics.



Projected activity[31]

- By 2036, the District's 70 years and older population will be 53,917 people, a 58% increase from 2016. This will equate to 18% of the total District population in the year 2036, compared to 12% in 2016.
- The population for the 70 years and older age group is expected to increase for all LGAs of the District over the next 20 years. Indeed, for Bathurst, Bourke and Brewarrina, the population for this age group is expected to at least double.
- It is predicted that an additional 21,975 acute bed days will be required for the District by 2036 for the 70 year and older age group.
- Without additional interventions or hospital avoidance strategies, projections indicate by 2036 the Districts 70 year and over age group are going to utilise around 75 additional acute beds.
- By 2036, it is projected that an additional 47 to 1,205 residential aged care places (depending on whether the new or proposed aged care targets are used), and an additional 563 to 1,236 home care packages will be required within the District.

TOWARDS 2025

The avoidance of unnecessary hospitalisations of older people is pivotal in preventing their functional decline, reducing the incidence of iatrogenic harm and managing the future demand for inpatient services.

OUR PLAN

- Deliver aged care services based on a person and needs based model of care
- Adopt contemporary inpatient models of care for lower acuity and/or rehabilitation patients
- Improve access to specialist geriatric, psychogeriatric and dementia care including through enhanced use of virtual health models and technology and collaborative partnerships
- Improve access to appropriate Aboriginal health workforce to better support older Aboriginal people
- Reduce unnecessary transfers of older people to emergency departments and hospitals by engaging with NSW Ambulance and residential aged care facilities (RACFs), providing more inreach to RACFs guided by models of care such as PACE-IT and Geriatric Flying Squads, and enhancing services in community settings. (PACE-IT stands for Partners in Aged Care Emergency services using Interactive Telehealth and connects care to improve health outcomes for older people living in residential care).
- Transition our MPSs to a culture change model that aspires to promote autonomy and self-determination and emotional and social wellbeing, in an atmosphere reminiscent of home[32]
- Continue to focus on health promotion and prevention strategies to assist older people to live a healthy lifestyle
- Ensure culturally appropriate services for older Aboriginal people and older people from Non-English Speaking Backgrounds
- Improve the older patient and carer experience during acute care episodes
- Ensure an effective transition from hospital to home/residential aged care and support people to remain at home, working in partnership with other service providers as required
- Investigate the future need of people with dementia and implement inpatient service models for people with moderate-severe behavioural and psychological symptoms associated with dementia
- Work towards implementing contemporary dementia-friendly infrastructure design
- Support the ongoing education and upskilling of clinical staff in the care and management of older people with challenging behaviours (in acute and residential aged care settings)
- Progress recommendations of the District Ageing Strategy (due for completion 2021) including the District's ongoing role of provision of aged care into the future

- Enhance the District Aged Care Services to provide a stronger clinical support/advice function to acute services throughout the District
- Evaluate the virtual pharmacy and virtual allied health services provided at multipurpose services, enhancing the services across the District as appropriate
- Maintain a quality improvement focus and continue and/or undertake new projects to keep people well in MPS or aged care, and undertake ongoing monitoring of performance and service evaluation
- Facilitate the older person with lower care needs to the Regional Assessment Services (RAS) for assessment and access to restorative, wellness and low level social support services
- Expand Leading Better Value Care (LBVC) hip fracture care initiative to other sites in the District

CRITICAL CARE

1. EMERGENCY - OUR CURRENT SERVICES

Emergency Departments (ED) are the 'front door' of the health facility and an important interface between the community and the health facility. Emergency services are responsible for triage, initial assessment, stabilisation, management of patients of all age groups presenting with acute and urgent aspects of illness and injury and referral to ongoing care.

Emergency services are provided across the District. Service levels are based on NSW role delineation guidelines[33], which account for the type of health service facility, geographical location, availability of support services, staffing, activity and acuity of presentations.

- **Level 6** services are not provided within the District. People requiring level 6 speciality services will be referred to the NSW Trauma Services Referral Network (receiving tertiary hospital for the District is Westmead Hospital), NSW Critical Care Tertiary Networks (Adults) and NSW Cardiac Catheterisation Laboratory Referral Network (to Royal Prince Alfred Hospital), NSW Severe Burn Injury Service Referral Network (to Concord Repatriation General Hospital), to the NSW State Spinal Cord Injury Referral Network (to Royal North Shore Hospital) or to the Paediatric Critical Care Tertiary Referral Network (to Children's Hospital at Westmead) as appropriate.
- **Level 5** services are provided at Dubbo and Orange Health Services
- **Level 4** services are provided at Bathurst Health Service
- **Level 3** services are provided at Lachlan (Parkes and Forbes), Cowra and Mudgee Health Services
- **Level 2** services are provided at Bourke MPS, Cobar Health Service, Condobolin Health Service, Coonabarabran Health Service, Coonamble MPS, Lightning Ridge MPS and Walgett MPS
- **Level 1** services are provided at Baradine MPS, Blayney MPS, Brewarrina MPS, Canowindra Soldiers Memorial Hospital, Collarenebri MPS, Coolah MPS, Dunedoo MPS, Gilgandra MPS, Grenfell MPS, Gulgong MPS, Molong MPS, Narromine Health Service, Nyngan MPS, Oberon MPS, Peak Hill MPS, Rylstone MPS, Tottenham MPS, Trangie MPS, Trundle MPS, Tullamore MPS, Warren MPS and Wellington Health Service
- **Walk in health clinics** are located in Eugowra and Gulargambone MPS.

CARE PROVISION

Care for critically ill people

Rural Referral Centres

- 24 hour on-site medical cover
- Dedicated resuscitation team
- Access to support services (including pathology, radiology and 24/7 emergency operating theatres, interventional and diagnostic medical imaging)
- Access to other specialists (for example: anaesthetists, paediatrics)
- May need to transfer for definitive specialist care (for example: burns, head injury, paediatrics)
- Birthing Centre
- Orange Health Service is the regional trauma centre for the District
- Critical care pathways include:
  - Trauma
  - Stroke
  - ST-Elevation Myocardial Infarction
  - Sepsis

  These direct activity directly to Level 5 EDs.

Procedural Hospitals

- Dedicated 24 hours nursing staff
- On-call access to medical staff
- First-line emergency care
- Access to support services (this includes: pathology, radiology)
- Access to Critical Care Advisory Service (CCAS) (24 hours)
- Patients need to be transferred for definitive specialist care.

Small Rural Hospitals and Multipurpose Services

Facility nurses with FLECC (First Line Emergency Care Certificate) to initiate care in emergency

- May have access to on-call GP (available to come in to facility as soon as possible)
- Transport of patients by NSW Ambulance to the hospital that best meets the patients clinical need reducing a subsequent inter-hospital transfer
- Access to pathology point of care testing
- Some access to radiology services (nursing led)
- Access to CCAS
- Access to Critical Emergency Response Service provided by NSW Ambulance
- Patients need to be transferred for definitive specialist care.

Care for non-life threatening illnesses

Rural Referral Centres

- 24 hour on-site medical cover
- Models of Care:
  - Fast track
  - Nurse Practitioners
  - Clinical Initiative Nurse
  - Emergency Department physiotherapy
  - Mental health Clinical Nurse Consultant
  - Short Stay Unit in some facilities
- Access to support services (this includes: pathology, radiology and theatre)
- Access to other specialists (for example: anaesthetists, paediatrician)
- Access to speciality positions, aged care and allied health.

Procedural Hospitals

- Dedicated 24 hours nursing staff
- On-site medical staff (business hours, on-call after hours)
- Models of Care:
  - Nurse Practitioner
- Access to pathology and radiology (on-site).

Small Rural Hospitals and Multipurpose Services

- Nurses available to manage the emergency department
- Access to on-call GP's or Virtual Rural Generalist Service (VRGS)
- Access to telehealth for real-time consult
- Models of Care:
  - Nurse Discharge Emergency Care
- Access to pathology point of care testing.

VCare

A District-wide service providing 24/7 single access point for care coordination, clinical support/advice, inpatient transport and assistance with referrals for specialist, post-specialist, appointments and diagnostic transportation.
vCare currently provides virtual support to 4 sites (Mudgee, Oberon, Walgett and Wellington) using the eCare Manager software. This system recognises early warning signs relating to patient deterioration and enables online patient monitoring and diagnostics to assist the bedside team. Virtual support will be progressively rolled out across the District.

Critical Care Advisory Service

Provides coordinated outreach support and specialist management advice for clinicians caring for critically ill adult patients in WNSWLHD facilities, via a telehealth system. Patient monitoring cameras are available in emergency services across the District, providing one-way video communication and are accessed and controlled remotely by consulting specialists.

ECG Reading Service

LIFENET ECG transmission is available within all non-base hospitals throughout the District. ECGs are performed by NSW Ambulance paramedics. ECG reading is undertaken (virtually) by doctors based at the Orange Health Service.

Mental Health Emergency Care (MHEC)

MHEC is a telepsychiatry program established in the District to provide accessible specialist emergency mental health care. It provides access to a regionally-based team of mental health specialists for everyone across the region via a freecall number, 1800 011 511 and is available 24/7. MHEC provides advice and support as well as emergency clinical services– emergency triage and video assessments via telehealth technologies for local providers.

Mobile MHEC is a video trial established by MHEC. Mobile MHEC enables the Cowra Police Command area and ambulance officers with iPads to videolink to MHEC for rapid video assessment, de-escalation

and risk assessment in the home. Mobile MHEC provides Cowra police and ambulance a rapid on site psychiatric assessment where emergency services are, rather than forcing transfer to an emergency department or psychiatric unit.

Virtual Rural Generalist Service (VRGS)

VRGS supports local medical staff, and supports patients and nursing staff in facilities where no local General Practitioner Visiting Medical Office is available.

SPECIFIC DRIVERS OF CHANGE

- Projected rise in ED presentations to the three rural referral hospitals, but decreased presentations to the procedural and community hospitals and multipurpose services
- Increasing acuity, particularly at the three rural referral hospitals
- NSW Premier's Priority to improve service levels in hospital (with 100% of all triage 1 category, 95% of all triage category 2 and 85% of triage category 3 commencing treatment on time by 2023) and NSW Health Emergency Treatment Performance (ETP) requirements
- High numbers of ED presentations from residential aged care facilities
- High demand for ED access to available inpatient beds leading to crowding and access block
- Medical workforce shortages in small rural and remote facilities
- Rise in the use of virtual emergency medical services to support staff at small hospitals and multipurpose services
- People with conditions that may be better managed in a primary care setting, continue to present to all emergency services across the District.
- Lack of afterhours and weekend primary health care options in many towns in the District
- State care pathways (including for coronary syndromes, stroke and severe trauma) will continue to redirect the transfer of some patients with time critical illness from smaller centres to the base hospital referral centres
- Increasing demand for people presenting with mental health issues
- Evidence based and emerging models of care to improve flow through the emergency department, improve treatment access and reduce waiting times, such as short stay units and fast track models of care and community based models of care that prevent the need for admission
- Ambulance Sub-Acute and Non-Acute Care Programs such as Extended Care Paramedic program

WHAT DOES THE DATA TELL US?

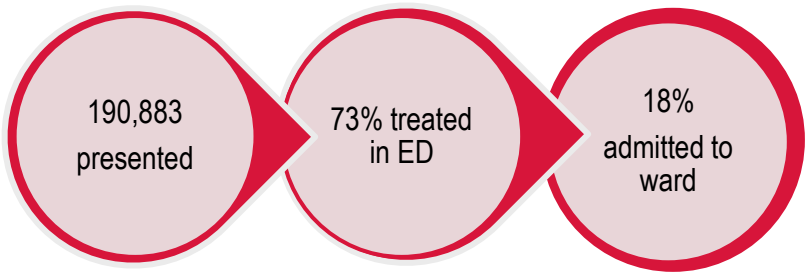
Emergency department activity[34]

- On average, 520 presentations to Emergency Departments occur each day across our District.
- Between 2014/15 and 2018/19 there has been a 14% increase in the number of presentations to the rural referral hospital emergency departments, representing an additional 11,800 presentations in 2018/19.
- During 2018/19, there were 190,883 occasions of care provided in our Emergency Departments.
- A very small percentage of people (0.5%) are Triage category one requiring resuscitation.
- Dubbo ED is the busiest emergency department in the District

Triage category	Dubbo Health Service 2018/19 ED presentations	Orange Health Service 2018/19 ED presentations	Bathurst Health Service 2018/19 ED presentations
1	113	375	103
2	4080	4615	2717
3	11364	7558	9033
4	15440	12096	13147
5	4124	6601	2436
TOTAL	**35,121**	**31,245**	**27,436**

Direct ward admissions are undertaken at Orange Health Services, impacting on the number of triage 3 and 4 presentations.

- The majority (22%) of people presenting to Emergency Departments are older (aged 65 years and above).
- 20% of all emergency presentations across the District identified as Aboriginal – Aboriginal people presented 24% of people who did not wait and 29% of patients who left prior to completion of treatment in ED



Projected activity[35]

- Emergency department activity in the District is projected to continue to increase, particularly in the District's three rural referral hospitals.
- The annual compound rate for each rural referral hospital emergency departments is estimated at 2%.
- In 2036, the number of emergency department presentations at Dubbo, Orange and Bathurst are projected to exceed 42,800, 40,300 and 36,800 respectively.

TOWARDS 2025

The demand for specialist emergency care services continues to be a high priority across the District due to the complexity of patients presenting, the ageing population and high proportion of Aboriginal people. Population growth and historical trends predict an increase in demand across the rural referral centres. A focus on reducing unnecessary presentations and representations to emergency departments is required to reduce the demand on these services. This will need to include partnerships with primary and community care services to prevent avoidable admissions and keep people well in the community, reducing the need for emergency care.

OUR PLAN

- Expand ambulatory care services throughout the District
- Continue demand management strategies including redirecting people with lower acuity conditions to alternative ambulatory and primary care settings
- Optimise service efficiency by improving patient flows including internal ED flows[36] and direct ward admissions where appropriate
- Transport of patients to the hospital that best meet the patients clinical needs and supports timely access to definitive care in line with role delineation of services and agreed clinical pathways
- Explore models of emergency and urgent care suitable for small rural hospitals with consideration of factors such as safety and quality, remoteness, distance to a larger centre, alignment to rural locality networks, the catchment population they support and the availability of supporting services
- Strengthen partnerships with Ambulance Services to provide more care in the community including end of life care and reduce unnecessary ED transportations.
- Continue to provide inreach consultation including with residential aged care facilities to prevent unnecessary ED presentations and/or continuity of care post ED discharge, through models of care such as Geriatric Flying Squad and PACE-IT
- Build partnerships with other specialist service providers to direct non-urgent care to appropriate setting
- Work with our partners to develop more integrated primary care options and services
- Strengthen the role of vCare in supporting all facilities in management and transfer of complex and critically unwell patients, including virtual monitoring of patients
- Extend *virtual support* service to more facilities across the District to supplement on-ground patient monitoring
- Continue to build on virtual health strategies to improve the delivery of emergency care to remote facilities
- Ensure emergency department environments are culturally appropriate
- Review and redesign current models of care to increase efficiency and flow through the emergency department, hospital and broader network
- Continue to improve the patient experience in ED
- Engage with Integrated Care and Aged Care teams to identify strategies and clinical pathways for treatment of non-urgent presentations
- Complete and evaluate the MHEC-mobile pilot in Cowra, expanding to other locations across the District as appropriate
- Expand best-practice ED workforce models such as nurse practitioners and dedicated-ED allied health clinicians
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation
- Continue to focus on priority populations including Aboriginal people.

2. INTENSIVE CARE - OUR CURRENT SERVICES

Intensive care services are provided at the District's three rural referral hospitals. All District Intensive Care Units (ICU) are under a closed collaborative model of care. In this model, the intensive care team is led by an intensivist or designated specialist who has the primary responsibility for patient management. A strong working relationship between the Intensive Care Service, the vCare service and the Critical Care Advisory Service is vital in the development of '*one health service across many places'* for the District intensive care services.

LEVEL 5 INTENSIVE CARE SERVICES

Dubbo Intensive Care Unit is a Level 5 ICU with the capability of providing mechanical ventilation, renal replacement therapy and advanced haemodynamic monitoring. The Unit is a 12 bed combined intensive care, high dependency and coronary care unit with four designated intensive care beds with mechanical ventilation. Stages 3 and 4 of the redevelopment of Dubbo Health Service includes provision of a stand-alone 12 bed intensive care unit. Coronary care will be accommodated separately in a cardiovascular unit. People requiring specialty services not available in Dubbo are managed in consultation with either Orange Intensive Care Unit or a network Level 6 intensive care service.

Orange Intensive Care Unit is a Level 5 ICU with the capability of providing mechanical ventilation, renal replacement therapy and advanced haemodynamic monitoring. Orange ICU is a standalone unit with 12 intensive care / high dependency beds. Five beds are designated intensive care beds with mechanical ventilation. People requiring specialty services not available in Orange are managed in consultation with a network Level 6 intensive care service.

LEVEL 4 INTENSIVE CARE SERVICES

Bathurst intensive care Unit is a Level 4 ICU combined intensive care, coronary care and high dependency unit with seven beds. Two beds are designated intensive care bed equipped with mechanical ventilation. The unit provides short term invasive mechanical ventilation, haemodynamic monitoring and renal replacement therapy. People requiring specialty services not available in Bathurst are managed in consultation with either Orange Intensive Care Unit or a network Level 6 intensive care service.

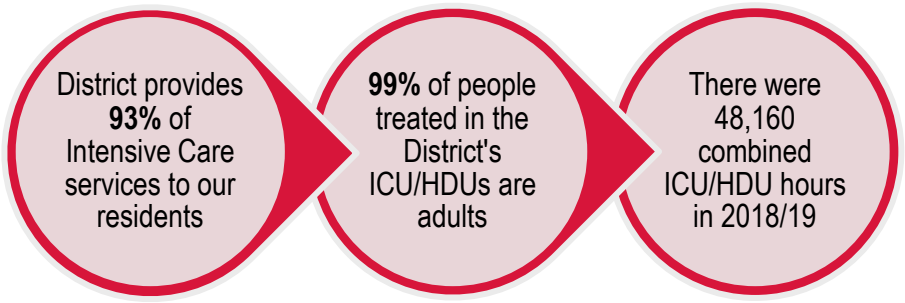
SPECIFIC DRIVERS OF CHANGE

- State-wide ICU Guidelines[37]
- State-wide ICU directions including Level ICU Model of Care[38] and Exit Block Project to optimise intensive care capacity[39]
- Bed block and access to ICU beds
- Increasing critical care demand due to our growing and ageing population
- Rise in the use of virtual intensive care models

WHAT DOES THE DATA TELL US?

Intensive care unit activity[40]

- Including our residents and people from other regions, there were 10,115 combined ICU/HDU separations from our District ICU/HDUs between 2014/15 to 2018/19
- The majority of admissions were for adults. Children (0 – 15 years) account for approximately 1%.
- 93% of admissions to the District ICU/HDUs were for residents of the District
- The top 5 reasons for admission to the Districts ICU during the period 2014/15 to 2018/19 were respiratory medicine, non-subspecialty medicine, non-subspecialty surgery, cardiology and orthopaedics. These groups accounted for 49% of admission to ICU. It is noted data is influenced by the mixed cardiac/ICU model of care utilised at Bathurst and Dubbo.



Projected activity

- The demand within the District for intensive care services will increase in the coming years due to ageing of the population, population growth, the high proportion of Aboriginal people who have poorer health and the increasing complexity of surgery undertaken within the District. The long distances travelled within the District and the farming nature of many communities are also associated with an increased rate of accidents and trauma.
- An increase in acute inpatient and surgical activity combined with projected increases in emergency activity particularly in triage categories 1 and 2, may also drive intensive care demand.

TOWARDS 2025

Intensive care services in the District will be networked and include formalised links with level 6 tertiary services to provide timely access to consultation liaison services, improve patient flow and reduce unnecessary transfers outside of the District. Intensive care services will continue to be provided at their current level and role delineation.

OUR PLAN

- Reduce variation in practice in the areas of role delineation, care planning and coordination, patient transfer and resourcing.
- Continue to evolve care pathways and models of care including investigation of virtual delivery opportunities
- Consider the need for and sustainability of providing outreach liaison services
- Expand the role of intensive care services in end of life care and advanced care planning.
- Consider strategies to improve District organ donation rates
- Continue to focus on priority populations including Aboriginal people and ensure intensive care services are culturally appropriate
- Support stronger commitment to workforce skill maintenance and development
- Explore further opportunities to conduct more research
- Link and coordinate delivery of services at a District level
- Implement strategies to ensure appropriate utilisation of intensive care beds, focusing on minimisation of bed block and timely access to specialty intensive care services
- Continue to improve system integration
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.

CANCER

OUR CURRENT SERVICES

ORANGE HEALTH SERVICE (CENTRAL WEST CANCER CENTRE)

The Central West Cancer Centre located at Orange Health Service provides outpatient and inpatient services including medical oncology, haematology, and radiation oncology. The Orange Health Service has two linear accelerators.

Outreach medical oncology and haematology clinics are delivered in Bathurst, Cowra and Parkes (also radiation oncology at Bathurst). Radiation oncology clinical outreach services are held in Dubbo and Bathurst. Orange Health Service provides a 24-hour Haematology/Oncology and Palliative Care inpatient on call service for the southern network of hospitals.

The Central West Cancer Centre provides outpatient clinic chemotherapy services to the central and western part of the southern sector of the District

DUBBO HEALTH SERVICE (ALAN COATES CANCER CENTRE)

The Alan Coates Cancer Centre is located on the grounds of Dubbo Health Service, supported by locally based medical oncology and haematology specialists. Additional fly in/fly out medical oncology and haematology services are provided by Sydney specialists, and outreach radiation oncology clinics from Orange.

Dubbo services the District's northern sector including Narromine, Wellington, Brewarrina, Bourke, Warren, Lightning Ridge and Gilgandra. Outreach clinics are provided in Mudgee, Coonabarabran, Walgett and Cobar.

The Alan Coates Cancer Centre is currently being redeveloped and the **Western Cancer Centre, Dubbo** will open in 2021. This will include 16 chemotherapy and treatment chairs, consulting rooms and one bunker with linear accelerator and provision for a second.

BATHURST HEALTH SERVICE (DAFFODIL COTTAGE)

Daffodil Cottage is located on the grounds of Bathurst Health Service, supported by visiting medical oncologists and haematologists from Orange Health Service. Daffodil Cottage provides outpatient clinic chemotherapy services to the eastern part of the southern sector of the District and Lithgow. The Cottage has 9 chairs and 1 bed, with treatment provided 5 days per week.

MUDGEE HEALTH SERVICE

Mudgee Health Service chemotherapy unit has four chairs and delivers low-risk chemotherapy and supportive treatments two days per week. Clinicians from Dubbo provide outreach medical oncology and haematology clinics. Chemotherapy nursing clinical support provided via outreach from Dubbo, with locally-based nurse management.

LACHLAN HEALTH SERVICE - PARKES HOSPITAL

The Parkes Hospital chemotherapy unit is supported by visiting medical oncology and haematology specialists from Orange with regular teleheatlh and outreach outpatient clinics. The unit has six chemotherapy chairs with a two day per week service. Patients from the Parkes region travel to Orange for more high risk and initial treatment.

COWRA HEALTH SERVICE

Outreach chemotherapy treatment clinics are held in Cowra, where oncology nurses administer chemotherapy and supportive treatments. The unit has four chairs with a four day per week service. This outreach service is supported by the Central West Cancer Care Centre based in Orange Health Service. Visiting medical oncology and haematology specialists provide outpatient clinics in Cowra on a monthly basis.

Patients from the Cowra region travel to Orange for more high risk and initial treatment.

TELEHEALTH/VIRTUAL HEALTH

Since 2013, medical specialists in cancer services have increasingly utilised telehealth to complement face to face consultations with the aim to provide care closer to home where possible.

In 2017, the Remote Video Assisted Chemotherapy service commenced at Coonabarabran Hospital, with chemotherapy-endorsed community nurses administering low to medium risk chemotherapy

locally, virtually supervised by an accredited oncology nurse. This model is also now functioning at Cobar.

CANCER CLINICAL TRIALS

The Central West Clinical Trials Unit (CTU) is based at Orange Health Service. There are currently 26 trials active (including 3 in Phase 1 human trials). The primary focus of these clinical trials is medical oncology and haematology. However the CTUs strategy aims to expand into other medical, surgical and emergency service specialities

DISTRICT SUPPORT SERVICES

At the District level there are positions which support Cancer Services development and delivery including: Director Cancer Services and Innovation, Cancer Information Manager, MOSAIQ Clinical Lead, Oncology Clinical Nurse Consultant and Direct Access Colonoscopy Nurse.

DISTRICT CANCER SERVICES

Service	Orange	Bathurst	Dubbo	Cowra	Parkes	Mudgee
Medical Oncology Clinics	✓	✓	✓	✓	✓	✓
Haematology Clinics	✓	✓	✓	✓	-	✓
Telehealth Clinics	✓	✓	✓	✓	✓	✓
Inpatient Chemotherapy	✓	-	✓	-	-	-
Radiation Oncology	✓	-	-	-	-	-
Medical Physics	✓	-	-	-	-	-
Surgical Oncology	✓	✓	✓	✓	✓	✓
Cancer Diagnostic Imaging	✓	✓	✓	-	✓	✓
Cancer Interventional Service	✓	✓	✓	-	-	-
On-site Cancer Clinical Trials	✓	-	-	-	-	-
Cancer Genetics	-	✓	✓	-	-	-
Anatomical Pathology	✓	-	✓	-	-	-
Bone Marrow Biopsy	✓	✓	✓	✓	-	-
Palliative Care	✓	✓	✓	✓	✓	✓
Patient/Carer Support	✓	✓	✓	✓	✓	✓
Wig Library	✓	✓	✓	-	✓	✓
Rural Cancer Coordinator	✓	✓	✓	-	-	-
Aboriginal Liaison Officer	✓	✓	✓	✓	✓	✓
McGrath Breast Care Nurse	✓	✓	✓	✓	✓	✓
Prostate Cancer Specialist Nurse	✓	-	✓	-	-	-
Specialist Lymphoedema Service	✓	✓	✓	-	✓	-

Service	Orange	Bathurst	Dubbo	Cowra	Parkes	Mudgee
Cancer specific Dietician Service	✓	✓	-	-	-	-
Cancer specific Social work	✓	✓	-	-	-	-
Psycho-oncology (social work)	✓	✓	✓	✓	✓	-
On-site oncology pharmacy service	✓	✓	✓	-	-	-

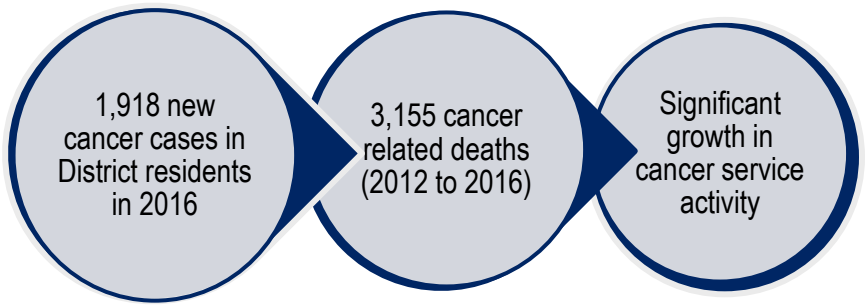
SPECIFIC DRIVERS OF CHANGE

- Cancer is a major cause of illness, with a significant impact on individuals and families and on the demand for health services
- High rates of health related behaviours that contribute to chronic conditions
- The Districts cancer statistics reveal regional variation in cancer incidence and mortality whereby:
  - cancer incidence of respiratory, cervical and prostate cancers is higher than NSW average
  - cancer mortality in relation to respiratory, bowel and skin (non-melanoma) cancers is higher than NSW average
  - cancer prevalence demonstrates that the burden of disease is higher than NSW average
  - significant improvement in the latest data compared with previous years, and commendable initiatives to improve cancer outcomes.[41]
- Between 2012 and 2016, 8,961 new cases of cancer were diagnosed among the District's residents. Males were approximately 38% more likely to be diagnosed with cancer than females and the most commonly diagnosed cancers in the District included prostate cancer, breast cancer and melanoma of the skin. [42]
- Cancer is responsible for 26.5% of all deaths in the District (2013 to 2017 period). It is the second highest leading cause of death. Leading cancer deaths among the Districts residents included lung, prostate, breast and colon cancers. [43]
- Compared to NSW, cancer death rates among the Districts males and females were higher by 14% and 9%, respectively.[44]
- Resident males diagnosed with cancer were 65% more likely to die of their disease than their female counterparts and 13% more likely to die than their NSW counterparts. Similarly, resident females were 5% more likely to die of their cancer than NSW females.[45]
- Cancer mortality and incidence rates increase with age
- Significant increase in the demand for District cancers services.
- The utilisation of cancer services will rise more rapidly than the growth of cancer diagnoses in the District
- Cancer survival rate is improving for many cancers[46]
- Hypo-fractionated radiotherapy for breast cancer Leading Better Value Care initiative[47] and national guidelines[48]. Hypo-fractionated radiotherapy has been implemented at Orange Health Service.

WHAT DOES THE DATA TELL US?

Service activity

- In 2018/19, there were 11,235 admissions of District residents to hospitals across NSW (including private hospitals) for cancer related conditions, a 14% increase and an additional 1,419 admission between 2014/15 and 2018/19. [49]
- In 2018/19, 5,245 (47%) of admission were people aged 45-69 years and 4,786 (43%) were people aged 70 years and older.
- In 2018/19, there were 675 Aboriginal and/or Torres Strait Islander people admitted for cancer related conditions to hospitals across NSW. Inpatient care for Aboriginal people with cancer has increased by 57% since 2014/15.
- In 2018/19, the District provided 54% (6,061 admission) of total resident demand for inpatient care. Private hospitals provided 35% of activity and the remaining 11% was provided by other local health district hospitals.
- Breast screening rates for women aged 50-74 years in 2018/19 was 57.1%, higher than the NSW screening rate of 53%. Breast screen rates for Aboriginal women aged 50-74 years in 2018/19 was 47.3% (this has risen from 38.4% in 2011/12).[50]
- Between 2015/16 to 2019/20, new and follow-up haematology consultations increased by 67% and 69% respectively, new and follow-up medical oncology consultations by 32% and 43% respectively, and systemic chemotherapy treatments by 69%.[51]
- In 2015/16, 579 consultations were undertaken by videoconference, rising to 1,429 in 2019/20.



Projected activity

- Cancer incidence across NSW has been steadily increasing and is projected to continue this increase due to the ageing of the population and lifestyle risk factors.
- Projections expect a 17% increase in the number of cancer cases by 2026[52].

TOWARDS 2025

Cancer services will focus on supporting early diagnosis of cancer through screening, diagnostic and referral processes; improved access for Aboriginal people; and implementing high quality care across the District's vast geography.

OUR PLAN

- Evolve Cancer services into a formalised District-wide service with a central reporting and governance structure and responsibility for service provision across the geography of the District
- Establish the Western Cancer Centre (Dubbo) including diagnostic positron emission tomography (PET) and radiotherapy enhancements (to be opened in mid-2021)
- Expand outreach consultation and treatment clinics including embedding the outreach chemotherapy treatment clinic at Mudgee (2 days per week service commenced October 2020)
- Continue to grow telehealth clinics to provide care closer to home
- Enhance the Remote Video-Assisted Chemotherapy (RVAC) Program particularly in the north west of the District
- Expand utilisation of the tele-trial model of care for clinical trials
- Expand inpatient chemotherapy services
- Promote workforce sustainability consistent with clinical practice guidelines
- Implement cross credentialed positions across the District
- Implement a range of quality and safety strategies to monitor performance
- Continue to focus on priority populations including Aboriginal people.
- Establish a District Aboriginal Steering Committee for cancer services
- Actively promote screening initiatives – particularly for the early detection of bowel and breast cancer

PALLIATIVE CARE

OUR CURRENT SERVICES

Generalist clinicians deliver the majority of palliative and end of life care within the District. They refer to the Specialist Palliative Care Service when the patient's or family/carer needs exceed their capacity (knowledge, resources and facilities) as primary care providers or, when there is exacerbation of a previously stable symptom.

DISTRICT SPECIALIST PALLIATIVE CARE SERVICE

The Specialist Palliative Care Service uses a consultative model of care, supporting primary care providers and inpatient teams across the District to provide high quality palliative and end of life care. Under the leadership and management of the Manager of Palliative Care Service, the service operates under a nurse led model, supported by Palliative Medicine, Allied Health, an Aboriginal Health clinician and Palliative Care volunteers. The Specialist Palliative Care Service has teams located in Bathurst, Dubbo (based at Dubbo Health Service and Lourdes Hospital and Community Health Service), Lachlan Health Service, Mudgee and Orange.

Specialist palliative care nurses and generalist clinicians are supported by five palliative care clinical nurse consultants (CNCs) across the District.

The degree of medical specialist support currently provided to generalist clinicians is variable across the District.

- Specialist palliative care medical support in Dubbo is provided by a fly-in, fly-out physician. Patients are able to access a specialist outpatient clinic and consultations via telehealth for more rural and remote locations. This service is from Sydney Local Health District - Royal Prince Alfred Hospital.
- In Orange and the Southern Sector, specialist palliative care medical support is provided nine days per fortnight by a locally based Palliative Care Medical Officer.

In recent years a number of allied health professionals have been employed specifically in palliative care. Palliative care social workers provide services in Bathurst, Orange and Dubbo. Palliative care occupational therapists provide services in Bathurst, Orange, Parkes and Forbes. Where access to these professionals is not available, services are provided by generalist allied health clinicians. The District also employs an Aboriginal Health Worker in palliative care, currently based in Bourke with this position providing support and advice across the whole District.

Bereavement support is provided by specialist palliative care nurses and specialist social workers in partnership with generalist clinicians. In the more isolated northern region of the District, a trained volunteer provides general support by telephone from Dubbo, one day per week. This position is supported by the palliative care CNCs.

People identified as experiencing complicated grief are referred to specialist palliative care social workers where available. Referrals are also attended to professional counsellors, mental health services and Non-Government Organisations including the National Association for Loss and Grief.

INPATIENT PALLIATIVE CARE

There are five palliative care specific beds located at Lourdes Hospital and Community Health Service in Dubbo. All other facilities within the District have a number of single rooms that provide a private environment for people requiring end of life care. Many small hospitals in the region have rooms with specific equipment which has been donated by the local community to support people towards the end of life.

An on-site palliative care suite (two beds with surge capacity for two more) is to be built within the Orange Health Service.

PALLIATIVE CARE AFTER-HOURS ADVISORY SERVICE

This service is available after hours during the week and 24/7 over the weekend to people registered with The Specialist Palliative Care service. This service can be accessed by patients, families/carers, general practitioners, residential aged care facility staff and NSW Ambulance

Paramedics, who are supporting a patient known to the specialist service. This service is staffed by specialist palliative care nurses from across the District.

PALLIATIVE CARE HOME SUPPORT PROGRAM

People receiving palliative care services within much of the District can receive additional support at home towards the end of their life. The Ministry of Health, as part of a three year initiative, have provided additional community support for people who wish to die at home. These 'packages' are part of The Palliative Care Home Support Program and complement and link with the specialist palliative care services and aim to increase patient choice and reduce hospital admissions. The Hammond Care Consortium (comprising Hammond Care, Sacred Heart Health and Calvary Health Care Sydney) successfully tendered to provide the packages including in the District. This tender will end on 30th June 2021. A procurement process for end of life care packages is currently being progressed for services which will commence on 1st July 2021.

PAEDIATRIC PALLIATIVE CARE

Consistent with the *Paediatric Palliative Care Planning Framework* 2011-2014, the District supports the "Pop up Model" when a child requires palliative care support. This 'virtual Pop up Team' is formed when the need arises, providing collaborative support consisting of local hospital and community service providers, GPs and paediatric and palliative care services supported by metropolitan specialist paediatric palliative care teams.

PRIMARY CARE

NSW Ambulance Authorised Palliative Care Plans provide further support for people receiving palliative care at home or in a residential aged care facility. These plans provide clinical direction and support for NSW Ambulance Paramedics to administer specific clinical support, consistent with the person's wishes, including their wish to die at home. Plans can be developed for children and adults.

VOLUNTEERS

The palliative care service is also supported by small groups of volunteers in a range of locations across the District. Currently there are palliative care volunteers based in Dubbo, Mudgee, Bathurst, Orange, Coonabarabran, Parkes and Grenfell.

PALLIATIVE CARE EQUIPMENT

Currently, the provision of equipment to support palliative and end of life care in the home occurs through a variety of mechanisms, including local general loan pools, specialist loan pools which are located at sites with a Specialist Palliative Care Team, hire agreements with equipment providers, and accessed through other mechanisms including Aged Care Packages and Motor Neurone Disease Association etc.

SPECIFIC DRIVERS OF CHANGE

- With the growth and ageing of Australia's population and an increase of chronic illnesses, the types of patient groups requiring palliative care has widened. The demand for end of life and palliative care services is increasing and continues to grow, associated with the ageing population.
- There is inequitable service provision for consumers who have non cancer life-limiting illnesses.
- There is variance in models of end of life and palliative care provision and needs of different communities, across the District
- Palliative care and end of life care involves many stakeholders which can lead to fragmentation of care across settings.
- There is conflicting views as to who requires specialist palliative care services.
- The challenge of providing access to specialist palliative and end of life care close to home is compounded by the dispersed population, large distances between small communities and large centres, the difficulty and costs of accessing transport and accommodation services and the limited locally available health resources in small communities.

- The distribution of specialist medical clinicians also varies across the District and access to specialist medical services is constrained.
- Individual preferences and funding constraints point to an increasing need for service delivery in the community, within homes, in rural and remote locations and in residential aged care facilities.
- ED presentations of residential aged care residents for end of life care remain high.
- Acute care services with their emphasis on patient flow and acute disease management and cure are not always 'palliative friendly.' Staff are not always aware of contemporary end of life care including advance care planning and may be uncomfortable with talking about dying with patients and carers. Failure of acute care staff to identify people requiring palliative and end of life care may prevent appropriate referral to specialist palliative care services.
- With an increasing cultural diversity of our communities, services need to be responsive to the different beliefs, values and customs of people requiring services.
- Providers of palliative and end of life care need to focus on providing care that meets the cultural needs and practices of Aboriginal people in their communities.
- NSW Health *End of Life and Palliative Care Framework 2019-2024*[53]
- *ACI Palliative and End of Life Care: A Blueprint for Improvement*[54]
- *National Palliative Care Standards 2018*[55]

WHAT DOES THE DATA TELL US?

Accurate collection of palliative care activity data across the District has been difficult historically. The generalist model often results in the misclassification of inpatient palliative care activity as 'acute care' activity. The Palliative Care Clinical Stream has worked to increase the accuracy and completeness of data collection.

Anecdotal evidence from front-line clinical staff suggests that much of the palliative care activity is still not accurately recorded. The focus on accurate data collection and understanding the demand for palliative care will remain a focus of the clinical stream over the next five years of the strategic planning cycle. In Orange, Bathurst, Parkes, Forbes, Mudgee and Cowra and Lourdes hospitals, the service is implementing a national program called Palliative Care Outcomes Collaboration (PCOC). The PCOC program is designed to improve data collection and improve practice and patient outcomes for palliative care patients.

Service activity[56,57]

- In 2018/19, the Districts allied health, nursing palliative care services and the palliative care medical consultation service provided 11,718 episodes of non-admitted occasions of care. This rose from 8,952 in 2016/17.
- In 2018/19, 67% of non-admitted palliative care occasions of care were provided at home, including residential aged care facilities.
- Between 2014/15 and 2018/19 there were 3,078 admissions of District residents to NSW private and public hospitals for palliative care (including same day admissions). Admissions have increased over the time period, from 581 in 2014/15 to 682 in 2018/19.
- Almost 100% of inpatient care (3,073 occasions) was provided by public hospitals. The majority of public hospital admissions (94%) were to the Districts facilities.
- 98% of palliative care admissions in 2018/19 to the Districts hospitals (total of 640 admissions) were local residents and 6% were Aboriginal people. The majority of inpatient palliative care (55%) was for cancer related conditions.
- The trend in inpatient palliative care activity has been increasing within the District. Between 2014/15 and 2018/19 the number of admissions increased by 15% (non-cancer palliative care admissions increased by 42% in the same time period).
- The average length of stay in 2018/19 was eight days.

- In 2018/19, the District procedural, small hospitals and the MPSs provided the majority of inpatient care, collectively providing 351 admissions (54% of the total inpatient palliative care).

Projected activity[58]

- By 2036, projected demand for palliative inpatient care from the District residents for District inpatient services is projected to be 859 admissions (an increase of 50%), utilising 7,221 bed days, an additional 2,122 bed days more than utilised in 2015.

TOWARDS 2025

Work with the Palliative Care Clinical Stream to ensure ongoing planning and service development

OUR PLANS

- Strengthen the networked and integrated model across the District. This is based on an agreed understanding of the needs of those approaching the end of life and provides accessible and timely specialist support for the generalists and informal primary carers who deliver most of the care.
- Maintain a strong focus on capacity building for the workforce who are not employed in a specialist palliative care role, but who support the provision of palliative and end of life care
- Improve the early recognition approach to people's end of life.
- Improve the uptake and sharing of advance care planning processes including building capacity in the non-specialist palliative care workforce to undertake advance care planning with patients and their families/carers.
- Strengthen the collaboration between agencies to better integrate and coordinate services for people requiring end of life and palliative care.
- Provide greater support for families and carers through establishing linkages between local carer programs, palliative care volunteers, palliative care champions and advocates.
- Invest in and plan for appropriate physical spaces and environments for the provision of palliative and end of life care in all inpatient facilities across the District, without the need for designated palliative care beds.
- Develop and invest in models of care that support the provision of home-based palliative and end of life care.
- Support the provision of high quality palliative and end of life care in residential aged care facilities, through capacity building initiatives and in reach by the Specialist Palliative Care Service where clinically indicated.
- Develop a virtual Specialist Palliative Care Team to support equitable access to care across the District.
- Develop and invest in systems and processes to support timely and accurate data collection for palliative and end of life care.
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Continue to focus on priority populations including Aboriginal people.

MEDICINE

1. GENERAL MEDICINE - OUR CURRENT SERVICES

The District provides admitted and non-admitted general medicine services at all of its hospitals.

There is a range of non-subspecialty medicine services provided across all facilities in the District. This ranges from care provided by physicians to General Practitioner/ Visiting Medical Officer (GP/VMO) in smaller sites.

At the rural referral facilities, there is range of senior general and sub-specialist physicians, supported by junior medical officers, nursing and allied health clinicians. Orange and Dubbo health services provide level 5 general inpatient medicine services and some level 5 sub-specialist inpatient medicine services. Bathurst Health Service provides level 4 general inpatient and some sub-specialist inpatient medicine services.

In some rural referral and procedural hospitals, GP/ VMO admit patients to Ambulatory Care (bed type 25).

Virtual Rural Generalist Service

The Virtual Rural Generalist Service (VRGS) is a support service for local medical and nursing staff. It supports local medical staff, and patients and nursing staff in facilities where no local General Practitioner Visiting Medical Office is available or the local doctor needs to rest.

Key Features of the service include:

- Videoconference consultations directly with patients presenting to small rural hospital emergency departments
- Medical management of acute inpatients admitted under the VRGS
- Virtual ward rounds for inpatients
- Clinical support for residents in Residential Aged Care Facilities (RACFs)

The service works collaboratively with vCare, a telemedicine service that is led by specialist doctors and nurses and provides 24/7 support to our smaller emergency departments.

The Rural Generalist Nurse Education Team was established in mid-2020 to provide education and support to all of the rural locations with a focus on those utilising the VRGS service.

SPECIFIC DRIVERS OF CHANGE

- Changing demographics of the population, especially ageing and related chronic disease, is driving an increased demand for general and specialist medicine services.
- General medicine is challenged by increasing numbers of patients who are presenting with multiple comorbidities and a decline in numbers of suitably trained personnel to manage these patients in the community, such as local community GPs
- Increasing sub specialist interests has its obvious benefits to the community however also presents a challenge to staffing after hours especially when dealing with presentations requiring reviews outside the sub specialist interest
- High demand for inpatient medical care resulting in difficulty accommodating additional patients during busy periods.
- There will be an increasing focus on reducing lengths of hospital stay and avoiding unnecessary admissions so as to most effectively and efficiently provide care for those that most need the care, when they need it.

WHAT DOES THE DATA TELL US?

Inpatient medical activity[59]

- In 2018/19, there were 37,396 acute medical admissions of the District resident adults (age 20+ years) to NSW State public and private hospitals. NSW State public hospitals provided 93% of total demand.
- Of the total adult resident public acute inpatient activity for medical conditions, hospitals within the District provided 93% during 2018/19.
- Between 2014/15 and 2017/18, separations from the Districts hospitals for adult acute medical conditions increased by 19% and bed day utilisation increased by 17%.
- High volume activity areas (>1,000 separations per year) in 2018/19 were for non-subspecialty medicine, cardiology, respiratory medicine, obstetrics, gastroenterology, neurology, non-subspecialty surgery, orthopaedics, haematology and urology.
- In 2018/19, there were 5,254 acute medical admissions of adult Aboriginal residents to NSW State public hospitals. This accounted for 14% of the total adult acute medical separations from NSW State public hospitals. 92% of the admissions were to hospitals within the District.

Projected medical activity[60]

- The demand for adult (16+ years) acute medical public and private hospital inpatient care by District residents is projected to increase by 50% between 2015 and 2036.
- The District acute medical activity for adults is projected to increase 48% by 2036, utilising 126,985 bed days, 30,450 bed days more than that used in 2014/15.
- The highest increases in District acute medical activity are projected for non-subspecialty medicine, cardiology, and respiratory medicine.

TOWARDS 2025

Reducing the incidence of diseases and the demand for health services hinges on investment in 'upstream' approaches to improving health, including health promotion, illness prevention, early identification and intervention and rehabilitation.

OUR PLAN

- Partner with community groups, the Western Primary Health Network, Aboriginal community controlled health services and other government and non-government agencies to reduce risk related behaviours, better integrate the care of people with chronic illnesses and build capacity within community groups and individuals to improve and 'self-manage' their health in community settings.
- Continue to build a locally based workforce to reduce the reliance on 'fly in, fly out' specialists and increase its ability to provide specialist outreach services to smaller communities.
- Review and redesign current models of care to increase efficiency and patient flow.
- Consider the future roles of the procedural and small rural hospitals and multipurpose services in a local rural locality network context.
- Focus on reducing lengths of hospital stay and avoiding unnecessary admissions through

integrated care models and expansion of ambulatory care and hospital in the home services.

- Enhance interdisciplinary rounding and case conferencing
- Expanding the delivery of increased outreach services via both Telehealth and Rural Aerial Health Service (RAHS) to meet service gaps where appropriate.
- Enhance the Virtual Rural Generalist Service to service the many rural sites without 24/7 medical cover and to alleviate the impact of rural medical workforce challenges whilst also continuing to attract local doctors to the region to set up practice.
- Develop telemedicine opportunities further and continue to see the technology as an enabler, a complement to face to face care, not a replacement.
- Develop strategies to ensure the ongoing sustainability of the general medicine workforce.
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Continue to focus on priority populations including Aboriginal people.

2. CARDIOLOGY - OUR CURRENT SERVICES

All health facilities within the District provide services to people with chronic and acute cardiac conditions either on an ambulatory or inpatient basis. Common conditions treated include acute coronary syndromes, heart failure, cardiac rhythm abnormalities, valvular heart disease and cardiomyopathies. Bathurst, Dubbo and Orange health services provide specialised coronary care services. All services have access to expert electrocardiography (ECG) interpretation via the District ECG Reading Service.

Patients requiring cardiac surgery, high risk percutaneous coronary intervention, electrophysiology studies, (EPS), implantable pacemakers, implantable cardioverter defibrillators or biventricular pacing and Cardiac Magnetic Resonance Imaging (MRI) are referred to Royal Prince Alfred Hospital for higher level care as required.

LEVEL 5 CARDIOLOGY SERVICES

Orange Health Service provides level 5 services. Nurses trained in coronary care and cardiologists oversee patient care. The cardiac catheterisation lab provides diagnostic, interventional and 'rescue' interventional cardiology services five days/week. Current services include cardiac medicine, coronary care, cardiac diagnostic, rescue and interventional services, heart failure services, cardiac and heart failure rehabilitation services. Cardiac MRI will commence in 2021, improving access to this service without the need to travel to Sydney. Cardiac MRI provides specific advantages over other cardiac imaging modalities when evaluating pathology in congenital heart disease, cardiac masses, cardiomyopathies, and in some aspects of ischaemic and valvular heart diseases. The cardiology service is covered by cardiologists 24/7.

Dubbo Health Service will transition to a similar level 5 services from 2021 with the commissioning of a cardiovascular unit and a cardiac catheter laboratory. Following accreditation of the diagnostic coronary angiography service, commencement of elective percutaneous coronary intervention will occur. Dubbo Health Service has two specialist cardiologists. Current services include cardiac diagnostic services, heart failure services, cardiac and heart failure rehabilitation services

LEVEL 4 CARDIOLOGY SERVICES

Bathurst Health Service provides level four services with coronary care trained nursing staff and general physicians managing patient care for people with acute cardiac disorders in combined coronary care and intensive care units and medical wards. Current services include cardiac diagnostic services, heart failure services, cardiac and heart failure rehabilitation services.

OTHER HOSPITALS IN THE DISTRICT

The procedural hospitals provide lower level cardiac care services and have 24 hour access to on-call GPs and virtual rural generalist service. The small rural hospitals provide level one services, involving the initial management of people presenting with acute cardiac conditions prior to their referral to Base hospitals.

SPECIFIC DRIVERS OF CHANGE

- High rates of health related behaviours that contribute to chronic conditions
- Between 2014 and 2018, the leading cause of death for the District residents was circulatory diseases.
- Between 2013 and 2017, the mortality rate for cardiovascular disease in the District was higher than that for all NSW by 23%, however cardiovascular disease death rates are trending down
- The District has high number of Aboriginal people who are over represented in the rates of chronic disease. Any focus on chronic disease must be accompanied by efforts to ensure cultural appropriateness and accessibility for indigenous populations.
- Acute Coronary Syndromes Clinical Care Standards 2019[61]

- National Guidelines[62] and NSW clinical services framework[63] for chronic heart failure (Leading Better Value Care). The LBVC Chronic Heart Disease initiative has been implemented at Orange, Dubbo, Bathurst and Parkes health services.
- State Pathway for Acute Coronary Syndrome Assessment[64]
- The future of cardiovascular care will be transformed by advances in artificial intelligence, digital health technology and mobile device as a means to prevent and treat heart disease.

WHAT DOES THE DATA TELL US?

Inpatient activity[65]

- Demand for inpatient cardiology services (excluding interventional cardiology) by the District residents has been variable over the last five years, with the highest levels of inpatient activity occurring in 2016/17 with 5,047 admissions (4,740 in 2018/19).
- In 2018/19, 95% of admissions (4,491) were to public hospitals and 14% of those public hospital admissions were for Aboriginal or Torres Islander people living in the District.
- People aged 70 years and over were the highest users of inpatient cardiology care, accounting for 52% of public hospital admissions.
- The District provided 88% of the total public hospital admissions for cardiac conditions.
- Resident demand for interventional cardiology has been variable over the last five years, peaking at 2,249 admissions in 2018/19.
- Orange Health Service cardiac catheterisation lab activity is increasing with invasive cardiac investigative procedures increasing 21% and coronary angioplasty procedures increasing by 17% between 2014/15 and 2018/19.

Projected activity[66]

- Resident demand for cardiology services (excluding interventional cardiology) is projected to increase by 63% by 2036, requiring 6,792 admission for inpatient care in public and private hospitals.
- By 2036, the District percutaneous coronary intervention activity is projected to increase by 52%.
- The District is expected to provide care for 5,633 admissions, 83% of resident demand for inpatient cardiology care by 2036.

TOWARDS 2025

The District has a high incidence of cardiovascular disease compared to NSW as a whole. A focus on prevention, early detection and secondary prevention and patient centred models to empower people to manage their own health is required to maintain optimal health and reduce avoidable hospital admissions.

OUR PLAN

- Deliver evidence based, best practice Cardiology care
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Develop a District-wide process for the recognition, prevention and management of Chronic Cardiac Disease
- Develop a networked District wide cardiology service, with central governance and clinical leadership, established patient flows and pathways of care and a coordinated approach to 'rescue' stenting
- Enhance the provision of specialist cardiac care to all residents across the District, including through outreach and virtual health services
- Work towards standardised health information systems including storage of diagnostic information
- Develop and implement initiatives targeted at achieving meaningful gains in the cardiac health of Aboriginal people
- Staged development of a Cardiac Catheterisation Laboratory and support services within Dubbo
- Explore viability of a Cardiac Implantable Electronic Device (CIED) implantation and follow-up service
- Explore viability of diagnostic loop recorders for public patients
- Further develop strategic and operational relationships, referral pathways and training support with tertiary referral hospital(s)
- Expand on site Cardiac Echo sonographers/ services to support acute and chronic disease in rural referral and procedural sites
- Develop and mature non-invasive cardiac diagnostic procedures
- Strengthen collaboration with primary health care providers and primary health care team including promoting Medicare item 699 (primary prevention)
- Expand and integrate clinical information systems and facilitate real time access at point of care
- Expand heart failure services including clinics to reduce avoidable admissions
- Undertake workforce planning for sustainable access to services, target workforce gaps and enhance networked participation in advanced cardiology training
- Introduce a networked cardiac rehabilitation service with virtual delivery options
- Support workforce education and development
- Build and strengthen partnerships with the private sector interventional cardiology service being developed at Orange
- Redesign the ECG Reading Service with consideration of operational governance
- Implement the Electronic Electrocardiograph Management solution
- Redesign cardiology/stroke services at Bathurst Health Service to establish a dedicated Cardiovascular unit

3. RENAL - OUR CURRENT SERVICES

The District renal services may be subdivided into two service networks, the Northern Sector Renal Service and the Southern Sector Renal Service. The profile of services within each sector includes hospital based haemodialysis units complemented by pre-dialysis services including renal outpatient clinics, access surgery and home training. Renal outreach services are also provided to support people living in the community with Chronic Kidney Disease (CKD) and people who are dialysing at home.

PRE-DIALYSIS SERVICES

People with CKD are referred to a nephrologist by their GP. Appropriate people are then referred to the pre-dialysis services, with care and management of patients transferring from medical therapy onto renal replacement therapy (RRT) as per CARI (Caring for Australian and New Zealanders with Kidney Improvement) guidelines[67]. This includes providing pre-dialysis education program and initiating protocols for management of people approaching RRT with particular emphasis on timely referral for creation of dialysis access or pre transplant assessment where relevant.

Patients are given a short tour through the dialysis unit, giving them the opportunity to speak to staff and other patients which can assist with their transition to RRT.

Patients referred in the Southern Sector undergo Renal Options Education as a one on one outpatient appointment with the Renal Clinical Nurse Consultant. This explores all options including dialysis, transplantation and Renal Supportive Care. While based in Orange, this can be undertaken closer to home in Bathurst, Forbes and Cowra as needed.

HOME-BASED DIALYSIS TRAINING

The Home Training Unit at Dubbo provides home-based Haemodialysis (HD) and Peritoneal Dialysis (PD) training. The Outreach Teams' nursing staff provide the PD training and home HD training with assistance from HD nursing staff. The training unit is located within the Dubbo HD Unit and consists of a single room and some office space.

The Orange Unit has a Home Training Room and currently the PD Outreach Registered Nurse (RN) provides PD training. The process of Home Haemodialysis training has commenced and Orange is currently awaiting approval for Home Haemodialysis to commence. Patients are no longer referred to Sydney Dialysis Centre for HD training, as the distances and time away from home involved have limited the choice of Home Haemodialysis.

ACCESS SURGERY

Dialysis access surgery is provided by surgeons at the Dubbo and Orange Health Services. Dubbo provides access surgery one day per month for the formation of arterio-venous (AV) fistulas and has theatre days for insertion of PD catheters and for central line insertion. Orange provides a range of dialysis access services including vascular access surgery one day per month, interventional radiology services 0.5 day per month, ultrasound clinic 0.5 day per month with ongoing routine vascular access surveillance. Dedicated theatre time is allocated for the insertion of PD catheters, central lines and the formation and repair of arterio-venous (AV) fistulas for vascular access. Central lines are also inserted in interventional radiology as required.

LEVEL 5 HAEMODIALYSIS UNITS

The two Level 5 HD units are located at the Dubbo and Orange health services.

Northern Sector Renal Service

The Dubbo Level 5 Renal Unit is the hub of renal service delivery providing a specialist service to the Northern Sector of the District. The Northern Sector Renal Service provides a mixture of specialist services to its catchment area including: pre-dialysis medical care and education; access surgery; in-centre dialysis services; emergency dialysis; initiates dialysis; home modalities training; staff training; clinical support to the facility-based sites and a renal outreach service that supports people dialysing at home and in the smaller rural facility-based dialysis units.

Southern Sector Renal Service

The Orange Health Services Level 5 Renal Unit is the hub of renal service delivery in the Southern Sector of the District, providing clinical support and outreach services that complement the services

provided by the Bathurst, Cowra and Forbes HD Units: pre-dialysis medical care and education; access surgery; in-centre dialysis services; emergency dialysis; initiates dialysis; peritoneal dialysis training; staff training; and a renal outreach service that supports people dialysing at home. Home Haemodialysis is currently limited and is awaiting approval to be provided from Orange.

The Plasmapheresis service is based in the Dialysis Unit of Orange Health Service and is overseen by the Haematology and Renal Services. The service commenced in February 2017 and has provided in excess of 650 treatments to both inpatients and outpatients. Prior to the commencement of this service, patients were transferred to a tertiary referral hospital in Sydney for treatment. Patients are accepted into the service from across the District via the Plasmapheresis Referral Pathway.

LEVEL 4 HAEMODIALYSIS UNIT - BATHURST

The Bathurst Health Service operates a Level 4 HD Unit and can initiate dialysis for medically stable patients, provide acute dialysis for existing renal patients and planned holiday dialysis. Extremely unwell people may require transfer to the Orange Unit or a Level 6 Unit in a tertiary referral hospital for higher acuity care.

LEVEL 3 HAEMODIALYSIS UNITS

The Cowra, Lachlan (Forbes) and Mudgee Health Services and Nyngan MPS have Level 3 HD Units (commonly known as satellite units). People eligible for HD in Cowra, Forbes, Mudgee and Nyngan Level 3 units have their treatment initiated at the closest Level 5 Renal Unit (Dubbo or Orange). Renal patients at satellite units are under the clinical care of the nephrologist from the hub site.

If patients from a satellite unit become medically unwell during their treatment they may need to be transferred to a Level 5 Renal Unit.

FACILITY BASED UNITS

The District provides a unique RRT option in the form of facility-based (self and/or non-self-care) dialysis service. This alternate dialysis modality was established due to patient and community demand for people to receive treatment closer to home. The majority of the health services providing this service are small rural facilities or MPSs. All the facility based units are situated in the Northern Sector of the District, are supported by the Dubbo Level 5 Renal Service and are part of the Northern Sector Renal Service.

The target group for this type of dialysis service are people who are assessed to be medically stable, self-caring or requiring limited care and therefore need only minimal assistance. However, these centres often provide treatment for people who would be categorised as suitable for 'satellite' dialysis. Staff at the local health services are trained and supported by the senior staff of the Dubbo Renal Service.

OUTREACH SERVICES

Outreach renal services are an important component of the District's Renal Service, supporting and maintaining people on home therapies. The Renal Outreach Service provision includes the provision of clinical support to the Level 3 HD Units and the facility-based units, supporting and monitoring people on home based dialysis and providing home HD and PD training. The Renal Outreach Service is provided by the multidisciplinary renal teams located at each of the Level 5 Renal Units. The use of telehealth services are utilised by both nursing and medical outreach teams to reduce patient and staff travel and provide more timely support and assistance.

MEDICAL OUTREACH CLINICS

Coordinated medical outreach services are held throughout the District. People with CKD and those receiving RRT are reviewed at these clinics. Renal specialists provide a medical outreach service which includes the initial review of new referrals and the revision of existing patients every three months. People reviewed at these outreach clinics include people dialysing at home (HD and PD), people receiving hospital-based HD, those requiring pre-dialysis education and transplant recipients.

SOUTHERN SECTOR RENAL DIETITIAN OUTREACH CLINICS

To provide equitable services across the District, clinics are booked depending upon appointment numbers or people with renal disease in the catchment area. The Renal Dietitian is available to be contacted during business hours via email for referrals and conducts in-centre consultations as

required. The dietitian is also present during the monthly blood review to monitor patients and accept referrals.

AWAY FROM HOME HAEMODIALYSIS

The Away from Home Haemodialysis (AFHH) Program is a service offered to increase flexibility for people receiving HD living in NSW. Run by Enable NSW, people now have better access to HD services when travelling away from home for purposes such as education, work and holidays. The Dubbo, Orange and Bathurst units provide planned holiday dialysis or AFHH.

PAEDIATRIC RENAL SERVICES

Specialist paediatric renal services are provided at the two Sydney specialist children's hospitals. Currently there are no children requiring renal replacement therapy in the District. In the past the Districts Renal Services have provided hospital-based HD to children and supported children receiving dialysis in the community.

HAEMODIALYSIS IN ICU AND CCU

Dubbo ICU/CCU have three designated rooms with water access for HD. There is one portable Reverse Osmosis (RO) unit that can be put to use in ICU/CCU if the need should arise.

Critical Care areas in Orange have 6 water outlets in Intensive Care and 1 outlet in Coronary Care that enable patients admitted to those areas to undergo dialysis in a monitored and medically supported environment.

RENAL SUPPORTIVE CARE

In the Southern Sector, a nurse led Renal Supportive Care service was established in 2016 to provide nursing, dietetics and social work support to CKD 4 and 5 patients who are unable or elect not to undertake dialysis or are undergoing dialysis and have a significant symptom burden. The service is a Leading Better Value Care initiative and embedded in operational service delivery. It provides interventions by outreach and telehealth.

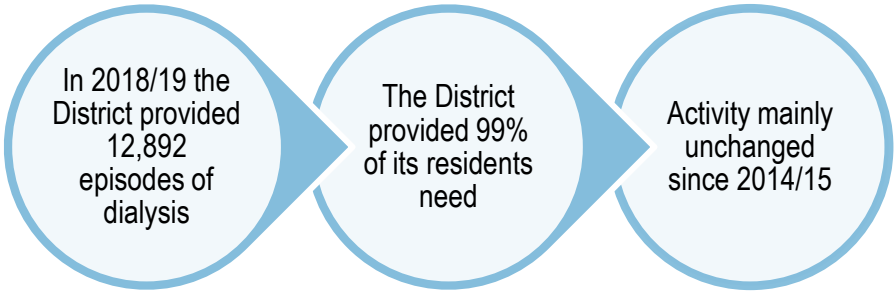
SPECIFIC DRIVERS OF CHANGE

- Between 2014 and 2018, the percentage of adults with self-reported diabetes in the District was higher than that of NSW by 11%. However, compared to 2014, diabetes prevalence among adults in 2018 was lower in in the District by 5% while that in NSW was higher by 18%.[68]
- The rate of diabetes-related hospitalisations among the District residents was higher than that for NSW by 30% and was increasing at a greater rate over the reporting period than in NSW (i.e. 28% compared to 17%).[69]
- Between 2013 and 2017, the mortality rate for diabetes in the District was higher than that for all NSW by 34%.[70]
- Between 2012-13 and 2016-17 the annual average rates of hospitalisation for dialysis among Aboriginal residents of the District were higher than that for non-Aboriginal people by 7.1 times.[71]
- Factors influencing the higher prevalence of renal disease in the District include an ageing population, the lower socioeconomic status of our communities, the high proportion of Aboriginal people and the higher prevalence of risk factors such as smoking, obesity, cardiovascular disease and diabetes. These factors combine to place the District renal services under increasing demand and capacity pressure.
- There is emerging evidence that people who are able to dialyse at home have an improved quality of life and better outcomes. Home based therapies within the District are below State benchmark of 50%. Currently only 22% of people in the Northern Sector dialysis population have dialysis at home. The Home Dialysis percentage for Southern Sector is 19.7%.
- The two District renal services (Northern and Southern Sector) vary in areas of clinical practice including community support for people with kidney disease.
- Renal dialysis is the most common reason for hospitalisation in Australia and consequently is responsible for a large amount of health expenditure.
- Renal Supportive Care Model of Care (Leading Better Value Care Initiative)[72] implemented at both Orange and Dubbo Health Services.

WHAT DOES THE DATA TELL US?

Facility based activity[73]

- Between 2014/15 and 2018/19 the District provided 64,849 episodes of facility-based dialysis
- In 2018/19 the District provided 12,892 episodes of facility-based dialysis. Activity varies across the five years 2014/15 to 2018/19, with a high of 13,297 episodes in 2017/18.
- District residents required 12,789 episodes of facility-based dialysis in 2018/19, of which the District supplied 99% (12,654 episodes)



Projected activity

- The prevalence of District residents with End Stage Kidney Disease requiring dialysis (all modalities and all settings) is projected to grow, with approximately 100 more people requiring dialysis by 2036 across the District[74]
- Much of this new activity should be provided in a client's home in line with current policy and the State target (50% of total dialysis should be home based therapy).

TOWARDS 2025

Evolve renal services to a formal networked District-wide service, with central governance and clinical leadership, consistent operating policies, funding mechanisms and clear pathways to support people through pre dialysis education and support, dialysis training and renal replacement therapy no matter where they live in the District.

OUR PLAN

- Develop a new District Renal Clinical Service Plan 2021-2026 that builds on the previous plan and guides the further growth and development of our rural services.
- Follow a 'home therapies first' policy that minimises dependence on inpatient services and assumes clinically suitable people will dialyse at home unless they choose to opt out.
- Strengthen partnerships with primary care providers including general practitioners, Aboriginal Controlled Community Health Services (ACCHSs) and other government and non-government providers to collaboratively prevent kidney disease, detect and manage people with kidney disease in the community.
- Increase the uptake of dialysis services by Aboriginal people by identifying barriers to access and increasing the cultural capability of renal services
- Adopt models of care that promote client independence (self-care)
- Increase local access to home dialysis education for people and their carers through the operationalisation of training facilities located at Orange Health Service
- Seek to provide hospital based services within a reasonable distance from home for people who are not clinically suitable for home based dialysis, where possible. Future redevelopment of haemodialysis services will be within the context of a hub (in-centre service) and spoke (satellite service) framework.
- Review existing data to improve the capture of inpatient, outpatient and home based

treatments, assist in planning for demand management, allow the monitoring of clinical outcomes and assist in identifying areas of unwarranted clinical variation

- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Consolidate the Renal Supportive Care Model of Care (Leading Better Value Care Initiative) Explore the opportunities of caring for telemetry monitored patients in Dubbo Dialysis Unit

4. NEUROLOGY - OUR CURRENT SERVICES

The District provides a hub and spoke model of care for the management of people experiencing stroke. The three hub services at Bathurst, Dubbo and Orange Health Services are each Primary Stroke Centres as described by the National Acute Stroke Services Framework 2019[75].

All three centres have a dedicated stroke unit with clinicians who have stroke expertise, written stroke protocols, Computed tomography (CT) and CT angiography capability and provide 24/7 thrombolytic therapy. Bathurst, Orange and Dubbo hospitals have well defined pathways with their tertiary referral hospital to facilitate transfer for appropriate candidates for Endovascular Clot Retrieval.

Bathurst Health Service provides stroke unit care in an allocated room within their medical ward. Orange Health Service has dedicated stroke beds located within the cardiology ward, and all stroke patients are admitted to dedicated stroke bed type. In late 2020, the new Dubbo Acute Stroke Unit will open; this is incorporated into the Critical Care floor of the new hospital building. All people admitted with acute stroke to any of these centres are provided contemporary evidenced based care by a multidisciplinary team under the supervision of a physician.

Neurologists oversee the service across the District (currently two public neurologists with good links with private neurologists). Stroke coordinators are employed for the Bathurst/Orange stroke services and the Dubbo stroke service. These coordinators work closely with the Rural Stroke Network and ACI Stroke Network.

Bathurst, Orange, Dubbo and Lourdes hospitals provide intensive inpatient rehabilitation, including physical, cognitive and psychosocial recovery following stroke.

Bathurst, Orange and Dubbo also provide a follow up clinic service for stroke and transient ischaemic attack (TIA) patients.

People presenting to District facilities other than the three Stroke hubs are transferred as soon as possible for this expert, coordinated care.

NSW Telestroke Service

The NSW Telestroke Service is a virtual telehealth service that is provided by Neurologists who have specialised in stroke care. The NSW Telestroke Service speeds up diagnosis and supports regional clinicians in deciding the best care for the patient which may include blood clot dissolving treatment or transfer for more specialist stroke care. Under the service 24/7 access to specialist stroke clinicians is provided via telehealth to deliver the best options for acute stroke management. The service commenced at Orange Health Service in September 2020, with Bathurst and Dubbo Health Services scheduled to come online by the end of 2020.

Neurodegenerative diseases

People with neurodegenerative diseases including Parkinson's disease, Multiple Sclerosis, Motor Neurone Disease and Huntington's disease have complex care needs. Treatment may require access to a range of health care professionals and may also require integration of services across government, non-government and private sector organisations. The Districts neurologists provide public neurology clinics in Bathurst, Orange and Dubbo.

SPECIFIC DRIVERS OF CHANGE

- It is estimated that 1,100 people living in the District have either Parkinson's Disease, Multiple Sclerosis, Motor Neurone Disease or Huntington's disease. These people have complex care needs. Treatments may require access to a range of health care professionals (medical, allied health, counsellors) and may also require integration of services across government, non-government and private sector organisations.
- A rise in neurodegenerative diseases is projected, associated with demographic changes and an ageing population.
- A project undertaken during 2019 to understand the current service environment for people with neurodegenerative disease across the District identified challenges with access to specialist medical care

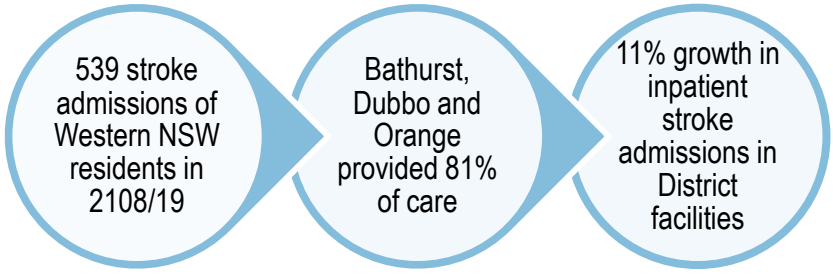
and support care programs and services, case management and management of comorbidities. As there is currently no formal clinical pathway for neurodegenerative diseases, there is no continuity of care and little opportunity to refer people for other specialist services (unless there is a clinical need to treat co-morbid conditions).[76]

- Some of these challenges may be met through the Districts Primary Health Network Movement Disorder Nurse Specialist (MDNS) Pilot Program, launched in October 2020. This pilot will improve access to specialised nursing care in the community for people living with neurological conditions. Training and capacity building activities, industry memberships and mentoring will be provided to increase the clinical knowledge and skills of 12 existing District community nurses/general practice nurses/Aboriginal Medical Service nurses working in primary care settings to better care for people with movement disorders.[77]
- Stroke hospitalisations for the District in 2018/19 are higher than the state average (158.8 per 100,000 population, compared with the state rate of 135.9). The rate of stroke hospitalisations is trending down (it was 186 per 100,000 population in 2001/02).[78]
- People living in rural areas have lower health-related quality of life and poorer management of Parkinson's Disease when compared with those living in urban areas.
- Service delivery models for neurology are changing with a focus on managing acute and chronic conditions and providing access to rehabilitation services.
- The future of neurology will be transformed by advances in diagnostic imaging, molecular genetics and integrated diagnostic and therapeutic approaches, impacting on prevention, screening, diagnosis and treatment of neurological disorders.
- National Acute Stroke Services Framework 2019[79]
- NSW Telestroke Model of Care[80]

WHAT DOES THE DATA TELL US?

Inpatient activity[81]

- In 2018/19, there were 3,087 inpatient admissions of the District residents to NSW public and private hospitals for neurological conditions. Of these, 539 were stroke admissions requiring 3,373 bed days.
- Aboriginal and Torres Strait Islander people accounted for 10% of these stroke inpatient episodes, utilising 308 bed days.
- The District hospitals supplied 84% of its residents' inpatient treatment for neurological conditions (91% of stroke admissions), with the remainder met by other NSW public and private hospitals.
- Over the period 2014/15 to 2018/19, there has been an 18% increase in admissions for neurology conditions by District residents (13% increase in stroke admissions). For our Aboriginal and Torres Strait Islander people, admissions for stroke increased by 21%.
- The hub services at Bathurst, Dubbo and Orange health services supplied 81% of the services provided within the District.
- In the District facilities, inpatient stroke admissions has increased by 11% between 2014/15 and 2018/19, with bed days increasing by 22%



Projected activity[82]

- Resident demand for stroke services is projected to increase by 19% between 2015 and 2036, requiring 575 admissions for inpatient care in public and private hospitals, utilising 2,917 bed days.
- By 2036, the District is expected to provide care for 87% of resident demand for inpatient stroke care.
- Between 2015 and 2036, inpatient neurological admissions to District facilities are projected to increase by 48% (to 3,394 admissions), with TIA admissions projected to increase by 55%, headache admissions by 44%, disequilibrium admissions by 116%, nervous system neoplasm admissions by 48% and stroke admissions by 19%
- By 2036, it is projected that there will be 536 stroke admissions to District facilities, requiring 2,643 bed days.
- The majority of inpatient stroke care (77.3%) will be provided at Bathurst, Dubbo and Orange health services.

TOWARDS 2025

Review and further develop stroke unit care within the District to ensure adequate staffing (medical, nursing and allied health) to deliver a level of care to maintain access to locally based Primary Stroke Centres.

OUR PLAN

- Revise and update the District stroke pathway as new evidence requires
- Workforce development should support improved access to neuro allied health therapies and Neurologist-led Stroke and TIA clinics, increased routine follow up and more community-based therapy options
- Explore early discharge programs and community based rehabilitation options to reduce the current reliance on inpatient care and improve the integration of people back into the community following stroke
- Strengthen the District approach to stroke management, facilitated by stroke coordinators at Bathurst/Orange and Dubbo Health Services, through the engagement of physicians and general practitioners. A District stroke stream or working group will assist in the future planning of stroke services, the development and validation of District guidelines for managing stroke, the identification of education needs of staff working at all facilities within the District and the monitoring of clinical outcomes
- Explore methods of providing consistent follow up and ongoing rehabilitation for people in the community with chronic stroke symptoms. This will include increasing access to psychological support to address the high incidence of depression post stroke
- Create research opportunities to improve stroke related services
- Continue to work with the NSW Ambulance service to enhance the timely care of patients with suspected stroke including:
  - Increase direct communications between physician/neurologist and paramedic which will allow earlier identification of patient details and ultimately quicker door to needle times from stroke to thrombolysis
  - Expand the time window for hospital bypass of acute stroke patients from 4.5 hours to 24 hours to facilitate direct access to assessment for suitability for Endovascular Clot Retrieval
- Support the development of the Dubbo Stroke Unit, due to open in 2021 as part of the redevelopment of the hospital. This will be co-located with coronary care and intensive care. New MRI and CT equipment at Dubbo Health Service will improve imaging in stroke patients
- Expand and enhance the telestroke model of care and other relevant ACI models of care
- Establish a Neurodegenerative Disease Care Coordinator position within The District to provide a holistic person-centred care approach to disease management

- Explore the role of the virtual health service in the delivery of healthcare services for people living with a neurodegenerative disease
- Establish a neurodegenerative disease community of interest
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation
- Continue to focus on priority populations including Aboriginal people.

5. REHABILITATION - OUR CURRENT SERVICES

The inpatient rehabilitation journey most often commences with an acute presentation related to acute illness (e.g. stroke), trauma (e.g. fracture), elective surgery (e.g. joint replacement) or significant functional debilitation (e.g. decreased mobility due to chronic disease or ageing). This journey continues through to transfer of care to an alternate setting or discharge from rehabilitation either with or without further support services.

Access to inpatient rehabilitation may also occur from the outpatient setting following consultation from the rehabilitation Physicians. Outpatient rehabilitation consultations also occur with referral to community therapy providers.

Specialised rehabilitation units are located at Bathurst, Orange and Lourdes (Dubbo) hospitals, and provide comprehensive, patient-centred interdisciplinary care to both inpatient and non-admitted patients. The designated rehabilitation medicine services are directed by a rehabilitation medicine physician (Fellow of the Australasian Faculty of Rehabilitation Medicine) and each patient's clinical management is under the supervision of a rehabilitation medicine physician. The three specialised rehabilitation units are members of the Australian Rehabilitation Outcomes Centre (AROC) and submit a dataset against each and every episode of rehabilitation they provide. AROC data is benchmarked with other public sector rehabilitation units, supporting quality improvement initiatives.

General inpatient and outpatient therapy services are also provided in the District by some small rural hospitals, under the care of a general practitioner. Therapy varies from service to service depending on availability of allied health professionals.

SUB-ACUTE SERVICE

The Sub-Acute Service was established within the District in 2010 following the Council of Australian Governments (COAG) National Partnership Agreement on Hospital and Health Workforce Reform. (The Sub-acute Care service expansion was rolled out over the four year period from 2009 – 2013 and then recurrently funded by the District. resources (staffing and equipment) were allocated to Orange, Bathurst and Dubbo as well as selected neighboring facilities. Note: COAG ceased in 2020 with the formation of the National Federation Reform Council. Additional

Within Orange Health Service, the teams remit is to facilitate timely access to rehabilitation services, reduce length of stay in acute care and promote the service continuum closer to home through building networks, capacity and supporting local teams in the neighbouring facilities.

The team has a clinical focus within Orange Health Service on orthogeriatrics (fragility fractures over 65 years) and also provides in-reach and outreach to other patient cohorts on a referral basis. The sub-acute team is a Multidisciplinary service based at Orange Health Service.

Bathurst Health Service has a 2 day/week subacute service (physiotherapy and occupational therapy only), providing in-reach to Blayney and Oberon MPS.

BRAIN INJURY REHABILITATION SERVICE

The Mid-Western Brain Injury Rehabilitation Service is a regional service based at Bathurst Health Service. The service covers Hartley to Condobolin and Cowra to Rylstone/Kandos area. The aim of this service is to provide a specialist home based or outpatient brain injury rehabilitation service to clients that have functional, cognitive and/or psychosocial brain injury rehabilitation goals identified. Therapy is provided by a multidisciplinary team including a rehabilitation physician, occupational therapist, speech pathologist, clinical psychologist and social worker. The service has access to a neuropsychologist and rehabilitation assistants as required. Case management and therapy is provided to clients aged 16-65 years and case management only is provided by a paediatric rehab coordinator for school aged children (5-16years) with a severe acquired brain injury.

The Dubbo Brain Injury Rehabilitation Program, based at Lourdes Hospital, provides outreach case management services across the upper The District, for adults following a severe traumatic brain Injury. Case management provides specialist advice and works with community-based therapy and rehabilitation services to meet the person's

ongoing rehabilitation goals following discharge from hospital.

OUTREACH SERVICES

The **Western Rural Spinal Cord Injury Service (RSCIS**) is an outreach service committed to ensuring that people with spinal cord injuries across the District have access to services, support, and the latest information to optimise their health. The Coordinator based at Lourdes Hospital also provides follow-up from multi-disciplinary Spinal Outreach Service clinics offered at Bathurst or Orange and Dubbo and works with local clinicians to meet the complex needs of people with spinal cord injury.

NSW Spinal Outreach Service (SOS) operates a hub and spoke model from Royal Rehab, Sydney. It supports a rural spinal coordinator in each of the rural Local Health Districts and operates specialist spinal multidisciplinary clinics, consultancy and education across the state.

In the District a specialist clinic has occurred annually in Dubbo and Orange (or Bathurst) since 2007 and the Western Spinal Cord Injury Coordinator position has been based with the Brain Injury Rehabilitation Program (BIRP) service.

The **Spina Bifida** Adult Resource Team (SBART) and clinicians from the Royal Prince Alfred Hospital hold outreach specialist multidisciplinary clinics for adults with spina bifida. Clinics are held in Orange, Dubbo and Bathurst.

Southern Prosthetics and Orthotics supports Orange and Bathurst Health Services, and **Hunter Prosthetic and Orthotic Service** supports Dubbo Health Service. These two services hold outreach clinics and provide local prosthetic and orthotic needs.

ENABLE NSW

EnableNSW provides equipment and services to people in NSW with chronic health conditions or disability to assist them with mobility, communication and self-care. As part of HealthShare NSW. EnableNSW is responsible for the administration of NSW Health disability support and other assistance programs

CHRONIC PAIN SERVICE

The District-wide chronic pain service is based out of Orange Health Service, with tertiary links to Royal Prince Alfred Hospital. It is a tier two service and provides inpatient and outpatient care and has staffing of physician, physiotherapist, psychologist, nurse and administrative support. The service provides multidisciplinary assessment and treatment for people suffering from chronic pain that is not responding to usual treatment in the inpatient or primary care sector, or from community based specialist management. Complex pre and post-surgical review of cases not responding to the usual reduction of analgesics may also be seen in this environment.

SPECIFIC DRIVERS OF CHANGE

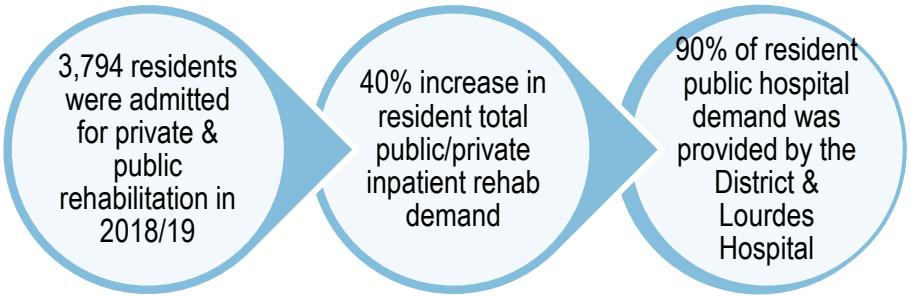
- With the increasing ageing population in the District, there will be an increasing need to focus on falls prevention to reduce the health impact for people in their older years and the social and health service costs associated with inpatient care, rehabilitation and reduced functionality for individuals
- Service delivery models for cardiology, neurology and respiratory services are changing with focus on managing acute and chronic conditions and providing access to rehabilitation services.
- New technologies including robotics and various forms of electrical stimulation are currently the most researched rehabilitation approaches, suggesting technology will play a lead role in the future of Spinal Cord Injury rehabilitation. New treatments for spinal cord injury aim to facilitate functional recovery including locomotion.
- There is increased risk of deconditioning patients within the current siloed approach to services. Rehabilitation services are not always engaged until a person is ready to be transferred from the acute setting. Acute care and rehabilitation services need to work collaboratively throughout the entire journey and apply a holistic approach that places more emphasis on avoiding functional decline in patients regardless of their inpatient setting.

- Community expectation is that rehabilitation services are provided as close to home as possible and the District considers the maintenance of family and community connection is vital to good outcomes for people. Realignment of current rehabilitation services is required. Services are predominantly inpatient based. There are minimal community based services available.
- ACI *NSW Rehabilitation Model of Care* (2015)[83]
- Osteoarthritis chronic care program Leading Better Value Care Initiative[84]. Initiative has commenced at Bathurst and Orange Health Services.
- Osteoporosis re-fracture prevention Leading Better Value Care Initiative[85]. Initiative has commenced at Bathurst and Orange Health Services.
- Hip Fracture Care Clinical Care Standard[86] and ACI Hip Fracture care organisational models (Leading Better Value Care)[87]. Hip fracture care initiative has commenced at Orange and Dubbo health services.

WHAT DOES THE DATA TELL US?

Inpatient activity[88]

- In 2018/19 the District's residents were admitted for inpatient rehabilitation on 3,794 episodes into public and private facilities in NSW. Total resident demand for rehabilitation services has increased by 40% since 2014/15.
- The greatest increase has been in the private sector with rehabilitation activity increasing by 94%.
- In 2018/19, the District provided 24% of the total District resident demand. Of the Districts residents total public hospital demand, the District facilities (including Lourdes Hospital) provided 90% (920 admissions) of the residents public hospital demand for inpatient rehabilitation. This activity utilised 18,816 bed days.
- In District facilities in the period 2014/15 to 2018/19, the greatest demand was for rehabilitation following orthopaedic fractures (24%), stroke (16%), 'other orthopaedic' rehabilitation including fractured neck of femur (13%) and joint replacement (12%).
- In 2018/19, Aboriginal and Torres Strait Islander people were admitted for inpatient rehabilitation on 73 occasions accounting for 8% of the District's facilities inpatient rehabilitation activity. There has been a 49% increase in inpatient rehabilitation admissions by Aboriginal and Torres Strait Islander people over the period 2014/15 to 2018/19.



Projected activity[89]

- By 2036 inpatient rehabilitation admissions by the Districts residents to private and public hospitals are projected to increase three times the number of admissions in 2014/16 to 9,004 admission per annum utilising over 72,000 bed days.
- It is projected that there will be 1,649 inpatient rehabilitation admissions to the District's three specialist rehabilitation units (Bathurst, Orange and Lourdes Dubbo) in 2036, requiring 29,422 bed days. This is a 93% increase from 2015 (856 admissions).

TOWARDS 2025

Develop a District-wide rehabilitation service with clear linkages between the smaller hospitals and health services and specialist services. This may need to consider the role of the sub-acute service to meet demand.

OUR PLAN

- Develop and grow the new Rehabilitation Stream
- Enhance coordination between the hub services at Lourdes (Dubbo), Orange and Bathurst hospitals to improve the continuity of care during transition from acute care to rehabilitation and back to the community.
- Develop an outpatient rehabilitation service in Dubbo, Bathurst and Orange.
- Establish Tele-rehabilitation Service to support rehabilitation / sub-acute care in the smaller facilities, general practice, community settings and ambulatory care.
- Expand in-reach to acute wards and outreach to ambulatory, community and smaller hospital settings
- Improve effective communication both within the rehabilitation team and with other service providers to streamline the patients' rehabilitation management
- Expand Leading Better Value Care hip fracture care initiative to other sites in the District
- Scale up Leading Better Value Care Osteoarthritis Chronic Care Program (OACCP) ('Joint Partners') and osteoporosis re-fracture prevention initiatives across the District.
- Maintain a quality improvement focus and reduce clinical variation between the District inpatient rehabilitation units through:
  - enhanced engagement with data, including promotion of existing Australasian Rehabilitation Outcomes Centre (AROC) online resources designed to assist facilities to interpret their AROC data
  - enhanced participation in the annual joint AROC/ACI Rehabilitation Network Clinical Benchmarking and Quality Improvement Forum
  - ongoing commitment to continuous quality improvement
  - ongoing monitoring of performance and service evaluation.
- Develop a policy related to type-changing patients who have completed their active rehabilitation to 'maintenance'
- Support active patient management within the specialised rehabilitation inpatient units by:
  - continuing to implement best practice clinical pathways and guidelines including stroke guidelines
  - exploring mechanisms for enhancing the amount of time patients spend engaged in active rehabilitation
  - undertaking early discharge planning with the assistance of benchmarks to complement clinical decision making and setting patient and family expectations
  - continued commitment to timely and accurate functional assessments pre and post rehabilitation intervention
  - identify and address process issues that impact on patient flow or care provision.
- Create a greater role for procedural and smaller rural health services in providing inpatient and community-based rehabilitation, re-ablement and restorative care / sub-acute services with the support of specialist outreach services
- Continue to consider the role of specialist rehabilitation units in the District for the NDIS cohort
- Review the workforce structure to ensure the right services are provided in the right place, based on patient and community need rather than historical positioning
- Support workforce development and education and promote leadership skills.
- Continue to focus on priority populations including Aboriginal people.

6. ENDOCRINOLOGY - OUR CURRENT SERVICES

This chapter focuses primarily on diabetes services recognising the disease profile in the District. It is recognised that other endocrinology services provided within the District such as thyroidectomies and management of hyper / hypothyroidism will continue to evolve over time.

Delivery of diabetes services across the District is provided by a range of health care providers including General Practitioners (GPs), Medical Specialists, Endocrinologists, Nurse Practitioners, Dietitians, Credentialed Diabetes Educators, Podiatrists, Diabetes Resource Nurses, Optometrists and Ophthalmologists.

HUB SERVICES

Orange, Bathurst, Dubbo, Mudgee, Lightning Ridge and Bourke provide outreach hub services to a number of smaller sites in the form of visits from diabetes educators and/or clinics.

ORANGE DIABETES SERVICE

Orange Diabetes Service provides a range of services including diabetes clinics, hospital inpatient service, gestational diabetes care and management, dietetic group education, continuous insulin infusion therapy, paediatric diabetes clinics (monthly), twice yearly outreach paediatric clinic (Paediatric Endocrinologist from Westmead), pharmacy in-services and awareness sessions, health promotion and diabetes education including the Aboriginal Aunty Judy Program. There is also a High Risk Foot Clinic.

BATHURST DIABETES SERVICE

Bathurst Diabetes Service provides a range of services including diabetes outpatient clinics / consultations, group education sessions, hospital inpatient diabetes one-to-one intensive education and self-management, insulin pump therapy/ continuous glucose monitoring system education and clinical staff education. The Diabetes Educator also participates in weekly Obstetric Gestational Diabetes Mellitus clinics and fortnightly paediatric clinics. Given challenges in providing outreach clinics to Blayney and Oberon, a virtual service is being investigated.

There is a High Risk Foot Clinic. The Chronic Care Nurse Practitioner supports a variety of chronic conditions including diabetes.

Marathon Health provides a diabetes service in Bathurst which includes diabetes educator, endocrinologist and high risk foot clinic. This is free for Aboriginal clients. A clinic is also provided in Oberon.

DUBBO DIABETES SERVICE

Dubbo Diabetes Service provides a range of services including hospital diabetes education, community diabetes service, individual education (Type1,Type 2, gestational diabetes mellitus (GDM) and pre diabetes), specialist medical clinic, diabetes podiatry service and high risk foot clinic, telehealth paediatric diabetes clinics (fortnightly), continuous glucose monitoring, insulin pump education and stabilisation and health promotion / education.

The **Dubbo High Risk Foot Service** also provides an outreach and virtual service for remote communities in the north western region of the District. The podiatry led model utilises a Multi-disciplinary team focusing on whole person assessment in an outpatient setting. The model prevents multiple hospital visits whilst providing all necessary expert care for both medical and socio-economic needs.

The **Diabetes Outreach RN** from Dubbo provides monthly visits to Cobar and Lightning Ridge, teleheatlh support to clients and staff as needed, education to GPs and nurses and upskilling of local diabetes educators.

The **Aboriginal Health Practitioners** from Dubbo provide twice weekly wellness exercise groups, fortnightly Allira Elder group (health check clinic), Fortnightly Outreach Elders Group, Marang Dhali 6 week program (3-4 times per year), monthly chronic disease support group, monthly Koori Yarning Group (health check clinic), education to health professional and community groups as required.

MUDGEE DIABETES SERVICE

Mudgee Diabetes CNC provides support and education to all clients living with diabetes, including continuous glucose monitoring and insulin pump education. Diabetes CNC assists GPs with diabetes

management and provides education to District staff as per request. Telehealth endocrinology services are available at both GP practices at Mudgee provided by a private endocrinologist.

Mudgee provides outreach services to Gulgong, Rylstone, Dunedoo and Coolah and clinics are provided as per demand (currently monthly clinics at Rylstone and Gulgong, limited demand and referrals received from Dunedoo and Coolah).

BOURKE DIABETES SERVICE

The Bourke Diabetes Educator provides outreach services to Brewarrina plus the surrounding localities of Enngonia, Weilmoringle, Louth, Byrock and Ford's Bridge. Staff from the Bourke Community Health Centre (Aboriginal Health Workers (AHWs) and Nurses) provide care, and AHW's from the Aboriginal Medical Service visit fortnightly-monthly.

The Outback Eye Team visit Enngonia once a year. Wanaaring is supported by the Royal Flying Doctor Service (RFDS). Patients from the outlying areas also visit Bourke and Brewarrina weekly so often attend clinic. Endocrinologist visit 2nd Monthly to Bourke and Brewarrina for 1 day visits. Occasional follow ups by videoconference are held in between clinic visits.

A National Diabetes Services Scheme sub agency provides access locally to purchase diabetes consumables such as test electrodes and insulin needs. The sub agency is run out of the Bourke Towers Drug pharmacy.

BREWARRINA SERVICES

There are numerous health programs which focus on health promotion and on awareness of diabetes prevention. Regular screening programs are delivered from a variety of health care providers. All attempts are made to share resources and to prevent duplication of programs by using effective communication pathways amongst health care providers.

LIGHTNING RIDGE DIABETES SERVICE

The Diabetes Educator from Lightning Ridge covers Walgett 3 days a month working out of the Walgett Aboriginal Medical Service (AMS) and GP surgery, and Collarenebri 1 day a month working out of the Collarenebri Multi-purpose Service. A visiting service to Goodooga is provided 2 days a month supporting the Walgett AMS GP clinics at the Multi-Purpose Service. Lightning Ridge is serviced 3 days a month by a diabetes clinic working from the Community Health Centre and GP Practice. The frequency of visits to all sites is driven by referral numbers. The Diabetes Educator provides glucometers and other equipment when needed by clients.

INTEGRATED CARE

The District Integrated Chronic and Complex Care program provides integrated care interventions to people with chronic disease (12-week model of care), focusing on wellness and enablement.

The program targets people over the age of 16 living with chronic diseases including diabetes who are at risk of unplanned hospital presentations. Patients are identified through the Chronic Conditions Patient Algorithm (CCPIA) or community referral. Integrated care coordinators work in partnership with clients to better understand and manage their health and identify community based care and services that address individual's health and social care needs. Clients have access to care coordination, care navigation, health coaching and self-management support.

COLLABORATIVE COMMISSIONING FOR TYPE 2 DIABETES

A partnership of the Western NSW and Far West Local Health Districts, the Western NSW Primary Health Network and the NSW Rural Doctors Network is driving collaborative commissioning in the District. The initial focus is on establishing a collaborative commissioning model for diabetes care in the District. A patient-centred and fit for purpose Diabetes Model of Care will be developed. This will seek to complement existing local arrangements to increase opportunities to create value.

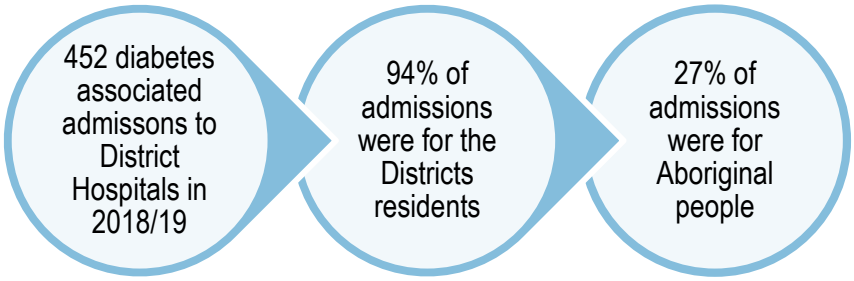
SPECIFIC DRIVERS OF CHANGE

- High rates of health related behaviours that contribute to chronic conditions
- Between 2014 and 2018, the percentage of adults with self-reported diabetes in the District was higher than that of NSW by 11%[90]
- Between 2013 and 2017, the mortality rate for diabetes in the District was higher than that for all NSW by 34%[91]
- The rate of diabetes-related hospitalisations among the Districts residents was higher than that for NSW by 30% and was increasing at a greater rate over the reporting period than in NSW (i.e. 28% compared to 17%)[92]
- Inpatient management of diabetes mellitus model of care (Leading Better Value Care Initiative)[93]. Implemented at Orange, Dubbo and Bathurst Health Services.
- Diabetes high risk foot services model of care and standards (Leading Better Value Care Initiative)[94]. Implemented at Dubbo Health Service (with virtual and outreach services to northern sector facilities such as Lightning Ridge, Walgett and Coonamble). There is an outpatient foot clinic in Bathurst but this was not established under the LBVC model.
- Between 2011 and 2016, the proportion of pregnant mothers with gestational diabetes in the District was lower than that of NSW by 27%; however, by 2016, the proportion was twice that of 2011. Similarly, by 2016, the proportion of mothers with pre-eclampsia was twice that of 2011.[95]

WHAT DOES THE DATA TELL US?

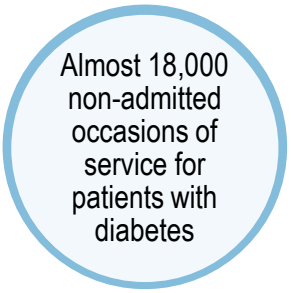
Inpatient activity[96]

- Diabetes accounted for 452 admissions (2,339 bed days) within the Districts facilities in 2018/19
- 426 admissions (94%) were for people living in the District
- Between 2014/15 and 2018/19 there was an 8% increase in admissions for diabetes.
- Aboriginal people accounted for 124 admissions, 27% of total diabetes associated hospitalisations



Outpatient services activity[97]

- In 2018/19 diabetes specific service units in the District provided 17,992 non-admitted occasions of service.
- This activity does not include non-admitted occasions of diabetes related services provided by endocrinologists, integrated care or chronic and complex care services



TOWARDS 2025

Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.

OUR PLAN

- Continue to build links with other private services including endocrinologists
- Enhance Dubbo High Risk Foot Clinic through expansion of outreach/virtual service delivery
- Enhance the high risk foot clinics in the Southern Sector of the District
- Improve access for children to specialised endocrinology services
- Improve access to psychology support for patients with Diabetes
- Focussed efforts of upskilling generalist staff regarding management of diabetes to assist with increasing demand (e.g. District Diabetes Interest Network and/or quarterly diabetes education meetings)
- Improve diabetes specific referral pathways and templates
- Consider and implement emerging models of care to improve service delivery including virtual outreach models of care.
- Develop and implement a service delivery model that aligns diabetic management funding and approaches across health systems
- Implement the District actions under the *The District Eye Health Plan 2020-2025*
- Improve outcomes for people with diabetes and reduce surgical interventions associated with unmanaged diabetes.
- Continue to focus on priority populations including Aboriginal people.

7. RESPIRATORY - OUR CURRENT SERVICES

All hospitals within the District provide treatment for people with respiratory conditions. The majority of care required by people with respiratory disease is community based care including that provided by general practitioners, nurses and allied health clinicians. The District's three rural referral centres at Orange, Dubbo and Bathurst are the hub sites for specialist respiratory services in the District. Dubbo has a formalised respiratory laboratory.

BASE AND PROCEDURAL HOSPITALS

Rural Referral Centres
Rural referral centres at Bathurst, Dubbo and Orange Health Services provides specialist consultation services and have capability to manage people requiring high acuity care including intensive care. The management of people with chronic and acute respiratory conditions is mainly by generalist clinicians (medical, nursing, allied health and Aboriginal Health Practitioners), supported by respiratory physicians (2 at Orange, 2 at Dubbo and 1 at Bathurst Health Services) and a respiratory scientist at Dubbo.

Procedural Hospitals
Procedural hospitals provide emergency and short term management of people with acute conditions, under the care of generalist clinicians.

VISITING RESPIRATORY SPECIALISTS

Private respiratory specialists also provide visiting services within the District.

SMALL RURAL HOSPITALS AND MULTI-PURPOSE SERVICES

Small rural hospitals and multipurpose services provide first line emergency care prior to transfer to a larger site.

MODELS OF CARE

Services have been supported by the development of care guidelines and clinical pathways for chronic obstructive pulmonary disease and asthma.

There are also several nursing and allied health clinician led models in place for providing comprehensive respiratory services to our population.

Respiratory Coordinated Care Programs
The Orange and Bathurst Health Services run a Respiratory Coordinated Care Program targeting patients with chronic obstructive pulmonary disease who are at high risk of readmission. Dubbo currently does not conduct a Respiratory Coordinated Care Program, although a generalist chronic disease Nurse Practitioner informally fills a portion of this role. The Respiratory Clinical Stream has identified this as a service need requiring further investigation.

Respiratory Coordinated Care Program staff members participate in ward rounds and accept referrals from various sources to identify and enrol patients with moderate to severe chronic obstructive pulmonary disease. Patients are then invited to participate in a program which provides home based community follow-up and support.

Chronic Care Nurse Practitioners
These practitioners all fulfil a generalist role where they support a variety of chronic conditions. These not only include respiratory conditions but also include illnesses such as diabetes and Chronic Heart Failure. There is a Heart Failure Nurse Practitioner located at Orange Health Service. Chronic Care Nurse Practitioner respiratory services are located at Dubbo, Parkes/ Forbes and Bathurst.

Community Chronic Obstructive Pulmonary Disease management, community asthma management and smoking cessation are the main respiratory services provided by the Chronic Care Nurse Practitioners.

Integrated Respiratory Care
The District Integrated Chronic and Complex Care program provides integrated care interventions to people with chronic disease (12-week model of care), focusing on wellness and enablement.

The program targets people over the age of 16 living with chronic diseases including respiratory disease who are at risk of unplanned hospital presentations. Patients are identified through the Chronic Conditions Patient Algorithm (CCPIA) or community referral. Integrated care coordinators work in partnership with clients to better understand and manage their health and identify community based care and services that address individual's

health and social care needs. Clients have access to care coordination, care navigation, health coaching and self-management support.

AMBULATORY CARE

Ambulatory Care services throughout the District provide opportunity for patients with respiratory conditions to better manage their condition and acute exacerbations which would otherwise require emergency presentation, hospital admission or lengthened hospital day.

HOSPITAL IN THE HOME

Respiratory conditions that may be safely managed by HiTH include pneumonia, upper respiratory tract infections and Chronic Obstructive Pulmonary Disease (COPD). HiTH is available at the base and procedural hospitals, and a growing number of small rural and multipurpose services. Paediatric HiTH is available at Bathurst, Dubbo and Orange health services.

REMOTE IN-HOME TELE-MONITORING

Remote In-Home Tele-Monitoring (RiHM - remote biometric monitoring associated with health coaching and escalation of irregularities as appropriate) is available to the District residents with a chronic disease including respiratory diseases. The RiHM initiative commenced in May 2020

Long term Remote In-Home Tele-Monitoring may be provided by Non-Government Organisations as part of the Commonwealth Home Support Program (CHSP), Home Care Package, or other government-funded programs.

PULMONARY REHABILITATION

Pulmonary rehabilitation remains a cornerstone of chronic obstructive pulmonary disease care and has shown to have many benefits including reduced symptoms, increased patient self-management, risk factor modification and reduction in avoidable hospital admissions. It provides vital patient education and linkages into outpatient support services.

There are 28 mainstream pulmonary rehab sites across the District that provide evidenced based care in accordance with the District provision of pulmonary and cardiac rehab policy. Each of these sites preform a comprehensive assessment, education, exercise and behavioural coaching to reduce risk factors and increase exercise capacity.

There are also many volunteer physical activity groups throughout the District. However, these groups are more often sporadic in nature and often not well linked into the mainstream services.

SMOKING CESSATION SERVICES

The District has approximately 45 staff trained as smoking cessation champions. These Cessation Champions are geographically dispersed across the district and predominately work within the community health setting. The Cessation Champions provide one-to-one patient clinical assessment, identify individual smoking triggers and provide behavioural counselling, education, carbon monoxide monitoring and advice on nicotine replacement therapy.

District staff have a role in reducing smoking rates through supporting brief interventions and opportunistic cessation practices. Health promotion staff are involved in public health initiatives to reduce global smoking rates in the community through initiatives such as smoke free hospitals, smoke free dining, sale of tobacco to minors and general smoking education and prevention campaigns.

IMMUNISATION

Opportunistic immunisations for all people with chronic obstructive pulmonary disease is in line with evidence-based best practice. People should be screened on hospital admission, in pulmonary rehabilitation and in community respiratory programs.

SPECIFIC DRIVERS OF CHANGE

- The mortality and hospitalisation rates for COPD in the District were higher than that of NSW by 58% [98]
- Between 2012-13 and 2016-17, the annual average mortality rate for COPD in the District was higher than that for NSW by 65%. Compared to 2012-13, mortality rates in 2016-17 had increased by 46%.[99]
- Between 2014-15 and 2018-19, annual average age-standardised rates of COPD were 51% higher than that of NSW. Compared to 2014-15, rates in 2018-19 were lower in the District by more than 10%.[100]
- Between 2012-13 and 2017-18, the rates of 'past' and 'current' asthma among children aged 2-15 years in the District were higher than that for all NSW by 19% and 12%.[101]
- Projected increased demand for respiratory services means that acute care, rehabilitation pathways and chronic disease management programs need to be in place to prevent hospitalisation, improve outcomes for people and manage demand from an ageing population.
- There is a lack of specialist respiratory services in the District. For example, sleep disorders affect approximately 6% of the population, however public overnight sleep monitoring laboratories are not available within the District.
- Digital health technologies, including health sensors, connected devices and wearables, will increasingly aid the diagnosis and management of chronic respiratory diseases.
- National COPD guidelines[102] and NSW best-practice COPD models of care (Leading Better Value Care initiative)[103]. The LBVC COPD initiative is a District-wide strategy and has been implemented already at many sites including Orange, Dubbo, Bathurst, Mudgee and Cowra.
- Bronchiolitis model of care[104]

WHAT DOES THE DATA TELL US?

Inpatient activity[105]

- In 2018/19, the Districts residents were admitted to either a private or public hospital, for a respiratory attributable condition, on 5,828 occasions, utilising 23,832 bed days.
- Total District resident demand for respiratory inpatient care has varied over the 5 year period 2014/15 to 2018/19, with a high of 6,484 admissions in 2016/17.
- In 2018/19, the District provided 89% of resident demand (5,168 occasions) utilising 20,978 bed days. Including patients from outside of the District, there were 5,404 inpatient respiratory admissions to District facilities in 2018/19.
- Respiratory infections/inflammation and chronic obstructive airways disease accounted for 49% of the respiratory medicine activity provide by the Districts facilities.

Projected activity[106]

- Public and private hospital admissions for District residents with respiratory disease are projected to increase to 8,065 episodes per annum by 2036. If nothing changes, the projected increase of 30% will utilise an additional 4,782 bed days compared to that used in 2015.
- Increases in demand will be for both acute and chronic respiratory conditions.
- Respiratory disease admissions to District facilities are projected to increase by 39% between 2015 and 2036 (to 6,859 admissions), with a 19% growth in bed days.
- The increase in demand will flow on to other services including emergency department services, intensive care services and rehabilitation and ambulatory based services.

TOWARDS 2025

Strengthen and support the respiratory networks through enhanced communication, team building, education and networking to reduce silos across the District.

OUR PLAN

- Promote opportunistic vaccination for influenza and pneumococcal
- Implement the Western NSW Local Health District Tobacco Strategic Plan 2015-2021 and support the development of a new plan as required
- Implement effective and new models of care in smoking cessation
- Integrate a palliative care model into chronic disease management
- Actively promote and implement guidelines to increase the uptake of lung function testing and peak flow monitoring to facilitate the early detection and treatment of chronic conditions
- Engage with patients and communities to improve health literacy and patient self-management.
- Increase the capability of Aboriginal staff to provide respiratory services
- Work in partnership with Aboriginal Medical Services and District Managers of Aboriginal Health to identify and address barriers to accessing services
- Support and further develop site practice improvement plans under Leading Better Value Care (COPD model of care) and Planned Care for Better Health, which replaces the Integrated Care for People with Chronic Conditions model)
- Adopt learnings from the Leading Better Value Care COPD project sites across the District. Checking
- Roll out the LBVC Bronchiolitis initiative across the District
- Expand access to pulmonary rehabilitation programs including through virtual service delivery models
- Support effective and new models of care in outpatient respiratory services
- Support use of best practice care bundles for chronic obstructive pulmonary disease management across the District
- Measure the uptake and use of chronic obstructive pulmonary disease and asthma action plans as endorsed by the Australian Lung Foundation and develop strategies to increase their use.
- Continue to support the existing clinical stream to ensure it operates at a high functional level
- Increase the use of Telehealth Models of Care among respiratory service providers including one on one and group consultations
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Identify and develop strategies to address clinical service variation in relation to the delivery of respiratory services in the District

- Strengthen and support the Pulmonary Rehabilitation Networks through training programs for staff and capacity building
- Improve handover and transfer of care back to primary care providers through improving discharge summaries and collaboration between services
- Undertake a gap analysis and develop strategies to improve patient access to diagnostic respiratory services. This may include partnering with the Primary Care Network and Aboriginal Medical Services.
- Increase the provision of respiratory specialist outreach services to rural and remote regions.
- Increase networking with the Agency for Clinical Innovation, Primary Health Networks and the Aboriginal Medical Services by promoting membership of these service partners on the Respiratory Clinical Stream and/or seeking out joint projects
- Strengthen linkages between the respiratory stream, health promotion, pulmonary rehabilitation, the Chronic Care Nurse Practitioners, the respiratory physicians, the respiratory scientist, Integrated Care and Leading Better Value Care to ensure an all of District approach to respiratory care.
- Utilise and/or develop tools to measure and monitor patient experience and patient reported outcomes and to improve experience outcomes in response to issues identified.
- Progress the strategies laid out within the *District Respiratory Service Plan 2019-2024*

ORAL HEALTH

OUR CURRENT SERVICES

Oral Health Services in each local health district are accessed through a Dental Contact Centre. In the District, the contact centre is operated by our District and is based in Dubbo. The Dental Contact Centre provides a single point of contact for the Western NSW and Far West Local Health District Oral Health Services, including initial triage, enquiries and appointment management. Oral Health Services can be accessed via a free call number. In NSW, public oral health services are provided free of charge to children under the age of 18 years and to eligible adults who hold a concession card.

Services provided include general dentistry such as examinations, preventive dental care, fillings, tooth extraction and dentures.

Across the District, there are multi-chair community dental clinics providing both adult and child dental services and which are capable of supporting some specialist services. These adult and child dental clinics are based at Bathurst, Dubbo, Mudgee, Orange and Parkes. There are also smaller staffed clinics for children at Cowra and Forbes. A range of visiting outreach clinics are also provided across the District, some for both adults and children and some for children only.

A Mobile Oral Health Centre operates across the District focused on smaller communities with no or limited local dental services and with high Aboriginal populations.

Services are also provided by partner organisations at Bourke Aboriginal Health Service Dental Clinic, Walgett Aboriginal Medical Service Dental Clinic, Coonamble Aboriginal Medical Service Dental Clinic, Condobolin Aboriginal Health Service Dental Clinic, Orange Aboriginal Medical Service Dental Clinic and Brewarrina Shire Dental Clinic. The RFDS also provides services in Bourke, Lightning Ridge, Collarenebri and Goodooga.

Some services are provided via the Oral Health Fee for Service Scheme (OHFFSS), which enables public oral health services to fund care through a private practitioner using a voucher system.

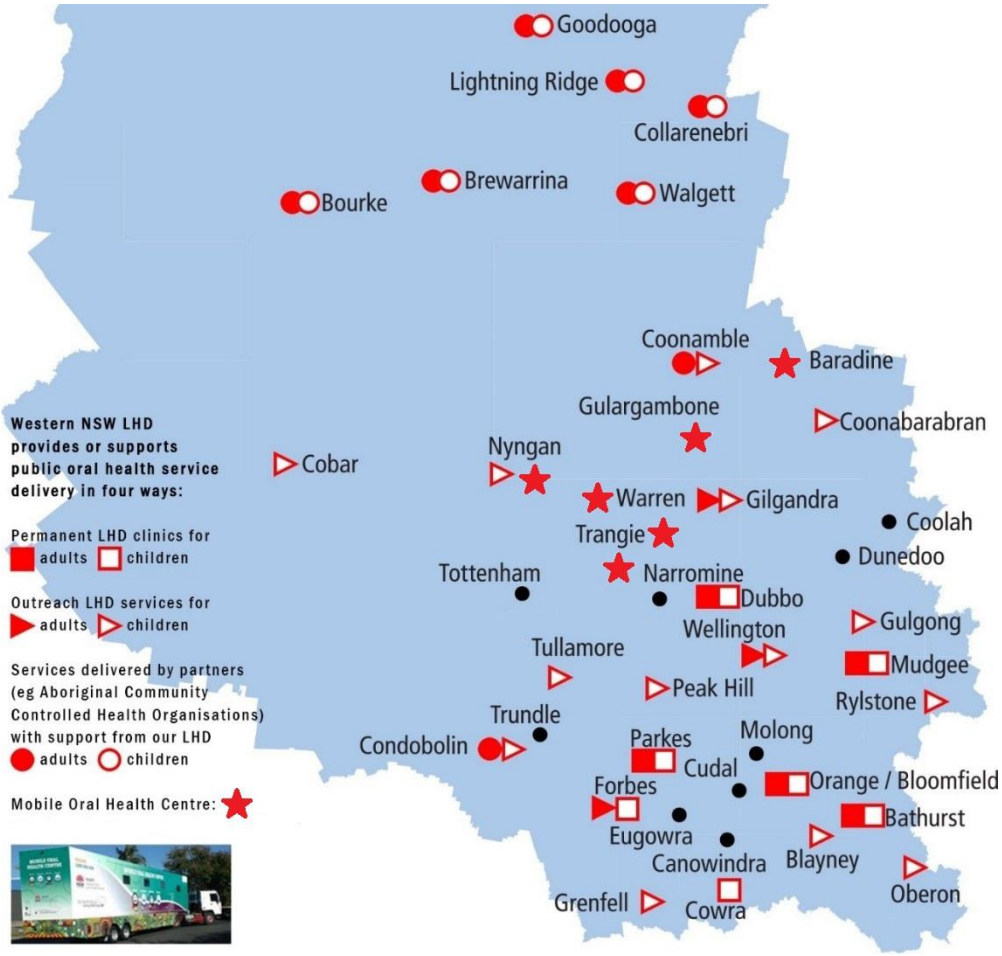
The District's Oral Health Service is committed to improving the oral health of our most vulnerable people. Priority populations for the Oral Health Service in this District include eligible people in the following groups:

- Aboriginal communities
- Pregnant women
- Vulnerable Children and Families, including those that experience socio-economic disadvantage
- Older People, especially those that require support for daily living
- People with chronic and complex conditions
- Persons in rural and remote communities, particularly those without access to fluoridated water and affordable oral health resources.

Oral health promotion services are provided by Oral Health Service staff direct to priority groups and to organisations that support these groups. A range of resources are provided by the Oral Health Service, free of charge, to support not for profit organisations, schools and other District departments in promoting good oral health. Resources are intended to assist in reducing disparities in the oral health of the Districts population.

The Oral Health Service hosts up to 100 students each year on final year clinical placement in its dental clinics. This is a strategic activity which aims to attract new graduate clinicians, to increase the general dental workforce understanding of public sector and regional/rural oral health, to provide supervision opportunities to more experienced clinical staff to support staff retention and to provide care to our patients.

Location of our oral health services



SPECIFIC DRIVERS OF CHANGE

- Demand for Oral Health Services is high and criteria is in place to prioritise emergencies, those people in most need and at highest risk of disease and those that fall into the District's Oral Health Service priority populations.
- Aboriginal populations continue to experience poorer oral health compared to the non-Aboriginal population.
- Complete and significant tooth loss remains high among both younger and older populations in rural areas and there is still strong demand for full dentures.
- There are also strong indicators that dental caries and periodontal diseases are more prevalent and more severe for residents in aged care facilities. This needs to be a particular focus for the District because of its commitment to the high number of aged care residents residing in our MPSs.
- Water fluoridation programs are still not present in all towns across the District. For many smaller communities (<500 people), community water fluoridation is not feasible. For other communities water fluoridation is feasible but Local Government workforce retention of staff qualified in fluoride dosing poses a significant barrier to implementation.
- The link between tobacco and drug use and poor oral health is well documented[107]. Also, taking care of gums and teeth is important for managing heart disease.[108]
- Oral Health 2020: A Strategic Framework for Dental Health in NSW[109]

WHAT DOES THE DATA TELL US?

Service activity

- Oral health services, unlike other health services, are not covered by the principle of universal access. However, a significant proportion of the adult population and all children in the District are eligible. This equates to over 78,000 adults and over 66,000 children and represents approximately 54% of the total District population.
- In a typical year over 38,000 appointments will be provided across our District's dental clinics.
- A range of further services are provided through the Oral Health Fee for Service Scheme. Activity levels vary depending on funding but have exceeded $3 million per annum under the Commonwealth National Partnership Agreement and through revenue the District can currently raise through the Commonwealth Child Dental Benefits Schedule.

Projected activity

- Demand for services for adults far outstrips the capacity of the service to deliver clinical care. Funding, infrastructure and staffing are the main barriers to improving timely access to services within the District.
- With additional funding, the Oral Health Fee for Service Scheme can be utilised to deliver additional services, particularly to adults. However for larger regional centres, infrastructure and additional staff represent the best value investment toward increasing the volume of care.
- At any point in time there are over 7,000 adults waiting for oral health services in this District.

TOWARDS 2025

Plan and promote our services to more effectively reach our priority populations

OUR PLAN

- Plan our services to more proactively address equity issues and improve access for priority populations, including a strong focus on providing care as close to home as possible
- Ensure that service planning considers the needs of a changing population
- Design and deliver direct-to-public promotional activities that raise awareness of service availability and eligibility across our communities, with a focus on priority populations
- Design and deliver cross collaboration promotional activities to raise awareness of service availability and eligibility amongst relevant District teams/partners/local organisations who have access to our priority populations
- Ensure that our Dental Contact Centre is working effectively for those who need it most.
- Continue to work with the District's hospitals to provide care under general anaesthetic for patients who are unable to receive priority dental care in the dental chair and to support appropriate management of dental emergencies.
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.

PERIOPERATIVE

OUR CURRENT SERVICES

Rural referral hospitals, procedural hospitals and some small rural hospitals and Multipurpose Services (MPS) provide surgical and procedural services in the District.

LEVEL 5 SURGICAL SERVICES

Orange and Dubbo health services have level 5 capabilities, providing a comprehensive range of elective and emergency surgery and major diagnostic and treatment procedures on people assessed as good, moderate or bad risk. Specialist and general surgeons perform regular surgery supported by specialist anaesthetists, skilled nursing staff and surgical registrars. Orange Health Service anaesthetists can give anaesthetics to children aged 2 years and older.

Orange and Dubbo health services operate an acute surgical service 7 days/week. Orange Health Service provides the only endoscopic retrograde cholangiopancreatography (ERCP) service in the District, with Dubbo commencing in 2021.

An acute pain service is available at both Orange and Dubbo health services.

Orange Health Service is the trauma centre for the District.

LEVEL 4 SURGICAL SERVICES

Bathurst Health Service provides level 4 services, performing elective and emergency intermediate surgery and selected major surgical procedures on people assessed as good or moderate risk. Specialist and general surgeons perform regular surgery, supported by specialist anaesthetists, GP anaesthetists, skilled nursing staff and registrars.

LEVEL 3 SURGICAL SERVICES

Procedural hospitals at Cowra, Lachlan (Parkes and Forbes) and Mudgee provide level 3 services with capability to provide elective and urgent intermediate surgery and some major surgery and procedures on people assessed to be of good or moderate risk.

Specialist, General Surgeons and GP Proceduralists perform regular surgery, supported by GP Anaesthetists, skilled nursing staff and registrars.

LEVEL 2 SURGICAL SERVICES

Bourke Multipurpose Service (MPS) is a level 2 service and provides limited perioperative services including ophthalmology surgery, gastroscopy and colonoscopy procedures. Visiting ophthalmologists from South East Sydney who are employed by the Outback Eye Service provide eight sessions annually. An Endoscopist Physician from Dubbo performs endoscopies, supported by visiting anaesthetists, GP anaesthetists. Local nursing staff are supported by the District travelling operating nursing team.

LEVEL 1 SURGICAL SERVICES

Coonabarabran Hospital is a procedural site (level 1) and provides gastroscopy and colonoscopy procedures, supported by specialist Anaesthetists or GP Anaesthetists. Local nursing staff are supported by the District travelling operating nursing team

STERILISING SERVICES

Sterilising services are a key interdependency for the District's surgical services.

SPECIFIC DRIVERS OF CHANGE

- Demand for surgery is projected to increase as a result of an ageing population and population growth in the District's larger centres.
- 26.9% of the Districts people aged 16 years and over are obese.[110] For a number of people, lifestyle and medical interventions are ineffective pathways for weight loss, particularly for those within the higher categories of obesity where bariatric surgery is indicated[111].
- The District has a high proportion of Aboriginal people (13%). Aboriginal people generally have lower rates of procedures and surgery compared to non-Aboriginal people, and they are more likely to be admitted when

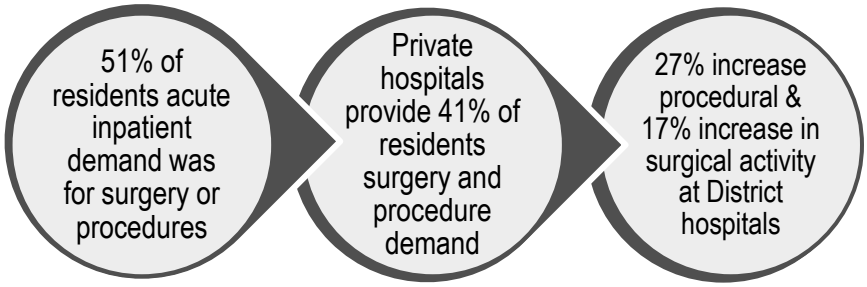
requiring emergency treatment.[112] Aboriginal people have higher rates for myringoplasty / tympanoplasty and coronary artery bypass graft than other Australians.[113]

- The National Bowel Cancer Screening Program is driving an increase in demand for colonoscopy.
- A continued focus on timely access to surgery and NSW Health Elective Surgery Access Performance requirements are driving strategies to improve waiting list management, theatre efficiency and productivity and patient throughput.
- In 2018/19, the median waiting time for non-urgent elective surgery in the District was 277 days. While this equates to 98% of patients receiving their non-urgent surgery within clinically recommended time, it is the second highest Local Health District wait time in NSW.
- In 2018/19, ophthalmology and ear nose and throat (ENT) surgery had the longest elective surgery waiting times, a median waiting time of 244 and 243 days respectively. 2.5% of patients waiting for an elective ENT surgical procedure waiting longer than 365 days.
- Theatre activity across the District is centred on the three rural referral centres, with associated demand pressures. Capacity exists at each of the District's level 3 facilities.
- Orange's status as a Regional Trauma Centre requires the hospital to balance emergency and elective surgery requirements. Future support from District sites to undertake some elective surgery is under consideration.
- Currently, emergency orthopaedics is not available at Bathurst Health Service. There are however plans to introduce two half-day lists from 2021 under a shared model with Orange Health Service.
- The District is already experiencing challenges in maintaining a skilled surgical workforce, particularly at the procedural and smaller rural sites including Bourke MPS and Coonabarabran Health Service. This is likely to be harder in the future due to an ageing workforce and the increasing subspecialisation of clinicians
- The larger centres require a critical mass of anaesthetists, surgeons including specialists such as ENT, urology, orthopaedic and ophthalmology, to sustain on-call services and meet the current and future demand for services.
- Allied health clinicians including pharmacists, dietitians, physiotherapists and occupational therapists play an important role in pre-admission assessment, pre-rehabilitation, inpatient management and discharge planning of people admitted for procedures or surgeries. However access to these allied health services at appropriate levels is not always available.
- Provision of high quality surgical care guided by initiatives such as the National Surgical Quality Improvement Program[114]
- The need for and approaches to optimising recovery and rehabilitation is a common challenge for health services.[115] Prehabilitation is an evolving model of care. Examples include Enhanced Recovery After Surgery (ERAS) which uses protocolised strategies to optimise the patient's condition for surgery and recovery[116]
- Technology advances will continue to drive down length of stay and improve recovery.
- ACI *Perioperative Toolkit*, facilitating high-quality, patient-centred anaesthetic and perioperative care[117]
- Colonoscopy Clinical Care Standard[118]
- Osteoarthritis of the Knee Clinical Care Standard[119]
- Osteoarthritis chronic care program Leading Better Value Care Initiative[120]. Initiative has commenced in Dubbo, Orange and Bathurst Health Services.
- Osteoporosis re-fracture prevention Leading Better Value Care Initiative[121]. Initiative has commenced in Dubbo, Orange and Bathurst Health Services.
- Direct access colonoscopy Leading Better Value Care Initiative. Implemented at Orange and Dubbo Health Services.

WHAT DOES THE DATA TELL US?

Inpatient surgical and procedural activity[122]

- In 2018/19, 91,712 residents of the District had an acute admission to hospital (public or private) resulting in 272,141 bed days.
- 51% of these admissions were procedural (15,451) or surgical (31,247).
- 41% of the District resident procedural or surgical admissions were in private hospitals and day centres. 84% of the resident public hospital admissions were in the Districts facilities.
- Over the five year period from 2014/15 to 2018/19 there was a 16% increase in procedural demand and an 811% increase in surgical demand by the Districts residents.
- Acute procedural and surgical admissions utilised 29% of total acute bed days provided by the District in 2018/19.
- 84% of the District's acute procedural and surgical activity (separations) was undertaken in the three rural referral hospitals, 14% at the four procedural hospitals, 1.0% at Coonabarabran and 0.5% at Bourke.
- The Districts procedural and surgical activity has increased between 2014/15 and 2018/19. In 2018/19 the District facilities provided 8,904 acute inpatient procedural episodes and 15,431 acute inpatient surgical episodes.
- Procedural activity in District facilities has increased by 27% between 2014/15 and 2018/19, utilising an additional 4,117 bed days than that used in 2014/18.
- Surgical activity in the District facilities increased by 17% during the same period, utilising an additional 7,280 bed days than that used in 2014/15.
- Over the five years 2014/15 to 2018/19, the most growth in surgical/procedural activity (separations) has occurred at Dubbo (33%), Bathurst (24%), Cowra (20%) and Orange (17%) health services. Positive growth has also occurred at Mudgee (9%). Numbers have remained steady at Bourke and Coonabarabran health services, and decreased at Forbes (-20%) and Parkes (-14%).
- The most common procedures performed at the 4 procedural hospitals are scopes (colonoscopy, gastroscopy) and extraction of optic lens. Coonabarabran provides gastroscopy and colonoscopy procedures. 83% of surgical/procedural activity at Bourke MPS is for extraction of optic lens.



Projected activity[123]

- Future projections for procedural and surgical activity indicate that residents of the District will have an increased demand for services between 2015 and 2036.
- There will be a 33% increase in procedural admissions (additional 4,812) and a 34% increase in bed days (additional 7,742). There will be a 32% increase in surgical admissions (additional 8,397) and a 20% increase in bed days (additional 14,390).
- It is projected that 47% of demand will be met by private hospitals and day procedure centres.
- Procedural and surgical activity at the District facilities is projected to increase by 31% and 25% respectively by 2036, requiring an additional 4,879 procedural bed days and 7,520 surgical bed days.

TOWARDS 2025

Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.

OUR PLAN

- Enhance / consolidate direct access colonoscopy activity across the District, with consideration of a two hub model (at Orange and Dubbo) and with reference to the LBVC model of care
- Scale up LBVC OACCP ('Joint Partners') across the District
- Identify low risk surgery and procedures that may be redistributed within the District, building on the work currently undertaken at Parkes Health Service
- Expand access to prehabilitation programs
- Improve emergency surgery and elective waiting list management and operating theatre efficiency including pooled waiting lists where appropriate
- Improve emergency surgery access and management through the implementation of a electronic emergency surgery booking program spanning the entire District
- Improve elective surgery efficiencies through the implementation of an electronic elective surgery booking program
- Develop formalised surgical networks linking District procedural sites with hub sites.
- Utilise the Surgical Stream platform to facilitate planning and implementation of innovative models of care within the surgical domain.
- Develop an Anaesthetic and Acute Pain Management Community of Practice to facilitate a high level of clinical service between disciplines and across the District.
- Develop an Acute Orthopaedic Service to cover emergency orthopaedics in Orange and Bathurst
- Investigate our role in the provision of bariatric surgery to meet the health needs of our population
- Explore a model of District-wide cover for ENT and Urology, replacing facility-based weekend coverage
- Work in partnership with Aboriginal Community Controlled Health Services and District Managers of Aboriginal Health to:
  - identify and address barriers to accessing procedural and surgical services
  - actively engage Aboriginal health practitioners and workers in the delivery of perioperative services
  - ensure services are culturally appropriate
- Establish allied health outreach models incorporating virtual health and remote consultation to increase access to services
- Examine opportunities for private-public partnerships
- Expand outreach and virtual health models of care to improve access to surgical services
- Implement district wide credentialing for anaesthetists, surgeons and proceduralists to facilitate the redistribution of surgical services
- Explore opportunities to enhance rural generalist training across both anaesthetic and surgical/procedural disciplines.
- Develop formalised partnerships with tertiary specialist services to improve access to services, clinical support and training.
- Implement a Perioperative Nursing Workforce enhancement program – Transition to Perioperative Practice.

WOMEN, KIDS AND FAMILIES

OUR CURRENT SERVICES

FIRST 2000 DAYS

The following universal and targeted services focus on a range of strategies to provide prevention, early intervention, and tailored clinical related services for children, women and families.

MATERNITY SERVICES

The District's birthing hospitals range from level 1 to level 5 maternity services. The District's neonatal care units range from level 4 to level 2 neonatal services. A proposed Level 2 Maternity / Level 1 Neonatal service is scheduled to recommence at Lachlan Health Service (Forbes campus) in 2021.

Several rural hospitals and MPSs in the District provide community based antenatal and postnatal services for mothers and babies.

There are no private birthing services within the District.

A rural maternity model of care provides collaborative outreach antenatal care that includes local and outreach midwives and specialist services.

ABORIGINAL MATERNAL AND INFANT HEALTH SERVICE (AMIHS)

AMIHS provides high quality maternity care that is responsive to the needs of Aboriginal people and their communities. The four care areas of AMIHS are clinical excellence, community development, partnerships within the community and health services and access to culturally sensitive services.

FIRST 2000 DAYS DEMONSTRATION MODELS

The District has implemented several trial sites that focus a whole of locality approach to health and social care for the first 2000 days of life. The Walgett and Coonamble Family Health and Wellbeing Program identifies children 0 – 5 years with chronic illness and developmental vulnerabilities; and provides comprehensive health and development assessment and linkages in to social care supports as a multi-agency approach to improve health and educational outcomes.

The learnings from these models of care will inform further rollout of sustainable models of care tailored to the needs of communities and supported by District wide outreach and virtual services.

STATE WIDE EYESIGHT PRESCHOOLER SCREENING (StEPS)

This collaborative program involves staff from health, education and preschools to provide a universal, scientifically based, free visual acuity screen to all four year old children in the District. The screening uses the HOTV screening chart at three meters to assess a child's vision. Early referral to an eye health professional can significantly improve health outcomes and life-long learning.

STATE WIDE INFANT SCREENING – NEWBORN HEARING (SWISH)

Early intervention for children with significant hearing impairment can lead to considerable improvement in health, educational and social outcomes. This screening program is provided to all newborns born within the District. In 2020/21, the District will be implementing new, state-of-the-art equipment to ensure continued improvement and identification of unilateral or bilateral hearing loss.

ABORIGINAL EAR HEALTH PROGRAM

The Aboriginal Ear Health Program is a NSW Health initiative delivered in collaboration with maternity and Child and Family Health services, Aboriginal Community Controlled Health Organisations and other non-government organisations. The program reduces the number of young Aboriginal children 0 – 6 years affected by middle ear infections by working with families to reduce risk factors and increasing awareness. In 2020/21, a new program is being developed and piloted in the District that will target specific age groups (0-2 years) and (3-6) years to enable age appropriate education, promotion and learning culture through story and song.

CHILDREN, YOUNG PEOPLE AND FAMILIES

Child and Family Health Services

Child and Family Health Services in the District provide support, education and developmental assessments for families with children aged from 0-5 years. All families with a newborn are offered a Universal Health Home Visit (UHHV) by a Child and Family Health Nurse (CFHN). Child and Family Health nurses are located in, or outreach to, most communities within the District, working closely with maternity units, specialty health services, general practitioners and specialty community services. Services are provided in a number of ways including home visits, clinic and outreach to monitor child health and development, maternal health and welfare and family welfare.
Services include:

- Universal health home visiting
- Child and Family Health clinics
- Immunisation clinics
- Culturally appropriate developmental assessment for Aboriginal children using ASQ-TRAK, a developmental screening tool for observing and monitoring the development progress of Aboriginal children

Building Strong Foundations Program (BSF)

This program is located at Bathurst Community Health Service and provides culturally sensitive early identification and intervention childhood health services for Aboriginal children to school entry age and their families.

Paediatric Services

Level 3 and 4 medical and surgical paediatric services are provided at Bathurst, Dubbo and Orange health services. These services are provided within a model of integrated inpatient, HITH, Paediatric Ambulatory Care, short stay, specialist consultation, non-admitted and community health services for most paediatric medical conditions. Moderate and selective major surgical procedures are performed by surgeons credentialed in paediatric surgery with support from specialist anaesthetists.

Newborn & Paediatric Emergency Transport (NETS)

NETS is a state-wide service hosted by the Sydney Children's Hospitals Network. It provides expert clinical advice, clinical coordination, emergency treatment and stabilisation and inter-hospital transport for the very sick babies and children up to 16 years.

WOMEN'S HEALTH SERVICES

The Districts Women's Health Service provides culturally appropriate access to evidence based women's health programs and health care services with a focus on early detection, illness prevention and health screening.

Speciality trained women's health nurses can assist females from puberty to menopause. The Women's Health Service actively seeks women of priority populations who may have poor access to services and / or high health risk and poor health outcomes. The priority populations include Aboriginal women and children, those from culturally and linguistically diverse backgrounds, those socially disadvantaged, those with a disability or those who are carers.

Women's Health Nurses are located in Bathurst, Condobolin, Grenfell, Cobar, Walgett, Cowra, Dubbo, Forbes, Mudgee and Orange and provide outreach services and clinics to most communities across the District.

Services include cervical screening, breast awareness, pregnancy testing and counselling, contraceptive advice, postnatal checks, older women's information and support, domestic violence advocacy and education and health promotion services.

Gynaecology surgeries/procedures are performed in the three rural referral hospital and four procedural hospitals.

PREVENTION AND RESPONSE TO VIOLENCE, ABUSE AND NEGLECT (PARVAN)

Child Protection Services

Child protection services are provided by a number of positions, units and programs including:

- The *Western Child Wellbeing Unit* is a child wellbeing and child protection telephone advice service for all health workers in the District and affiliated health services
- The *Child Wellbeing Coordinator* assists the District to implement reforms to Child Protection and acts as a link between the Child Wellbeing Unit (CWU) and the District.

The coordinator works closely with health workers, providing advice, education, CWU data, and information on referral pathways and available services.

- The *Health Out of Home Care (OOHC) Health Pathway* aims to improve health outcomes for children and young people in OOHC. The OOHC Health Pathway provides an important opportunity for initial health screening, referral for comprehensive assessment, joint development of Health Management Plans and ongoing monitoring of identified health needs.
- The *Rural New Street Western* provides specialist counselling services for children and young people aged 10 – 17 years who have sexually harmed others, and their families and carers. The service operates from a cottage in Dubbo and currently provides counselling services to Dubbo and outreach to other towns as required. The service offer consultation/ training to health colleagues and interagency partners.
- *Child Protection Counselling Services* provide specialist counselling and support to children, young people, parents and carers (including out of home care carers) where there has been substantiated physical / emotional abuse, domestic violence or neglect. Child Protection Counsellors are based in Bourke, Dubbo, Orange, Bathurst, Mudgee and Forbes Community Health Centres and provide long term interventions specialising in complex developmental trauma
- *Central Contact Point* is a centralised service point that receives and responds to Chapter 16A requests for the District. Under Chapter 16A of the Children and Young Persons (Care and Protection) Act 1998, the District can be requested to provide and share any information it holds relating to the safety, welfare or wellbeing of a particular child or young person.

Sexual Assault Services

The District's sexual assault services integrates child and adult sexual assault counselling, advocacy, medical services and forensic and crisis counselling. Twenty four hour crisis medical/forensic and crisis counselling services operate from Orange, Bathurst and Dubbo hospitals. A crisis service is also available at Bourke. Follow up counselling services are provided by counsellors based at Orange, Bathurst, Dubbo, Lightning Ridge, Coonamble, Cowra, Mudgee, Bourke, Forbes, Parkes and Coonabarabran. Outreach services are also be available as required. Sexual assault services also provide community education, professional training and consultation to other health professionals who work with victims of sexual assault.

Joint Child Protection Response Program (JCPRP)

The program is a tri-agency response with partnerships between NSW Police (Child Abuse Unit), Communities and Justice and NSW Health. They investigate the sexual abuse, physical abuse and neglect matters for children and young people, providing a joint response to the criminal, child protection and health issues resulting from allegations of severe abuse against children and young people. Police focus on the Criminal investigation, Communities and Justice focus on the Safety of children and young people, and health clinicians focus on the health and wellbeing of children young people and their non-offending carers. Health clinicians are co-located with Police and community services in Bathurst, Dubbo and Bourke.

Throughout the JCPRP process support is offered to children and their non-offending carers and appropriate referrals are completed to assist with presenting needs and concerns.

Violence Prevention and Response Strategies

This program provides direction for integrated violence prevention strategies within the District and is responsible for leading key priorities of the NSW Health Policy for identifying and responding to domestic and family violence.

Violence Prevention and Response Strategies Program includes:

- Provision of education and consultation to clinical staff who work with victims of Domestic and Family Violence (DFV), and implementation of policies from the Ministry of Health relating to DFV
- Prevention and Response to Violence Abuse and Neglect (PARVAN) Domestic and Family

Violence Counselling Service providing support to women and their families who have experienced violence abuse and neglect.

- PARVAN Pathway Coordinators – provide clinical support to staff in relation to domestic and family violence, represent the District at local high risk Domestic Violence Interagency Safety Action Meetings and Lead projects and implement training packages to improve domestic and family violence responses within the District.

SPECIFIC DRIVERS OF CHANGE

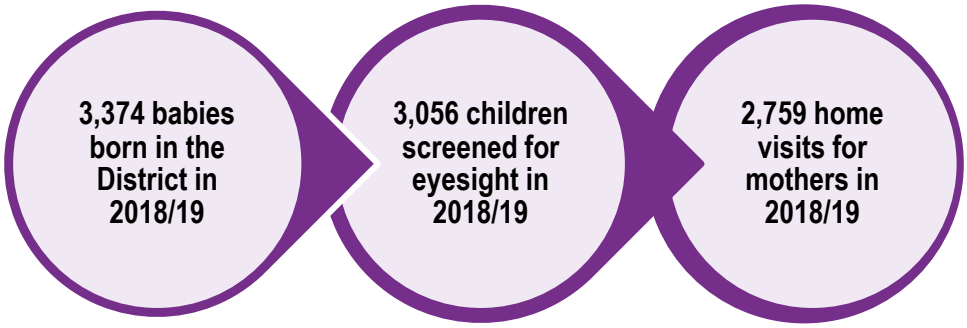
- The District has a high fertility rate (2.2 births per woman compared to 1.7 for NSW) and more young mothers aged up to 19 years (approximately three times that of NSW).[124]
- Pregnant women in the District are more likely to smoke during pregnancy (2.5 times NSW rate), but the rate is declining.[125]
- Rates of gestations diabetes and pre-eclampsia are increasing (between 2011 and 2016).[126]
- More babies are born with a low birth weight (7% higher than that of NSW). Stillbirths were 9% higher than NSW (2013 to 2018). Perinatal death rate among WNSWLHD Aboriginal newborns was 58% higher than their non-Aboriginal counterparts.[127]
- 77% of WNSWLHD infants discharged from hospital were exclusively fed breast milk (2013 to 2018).[128]
- While fruit consumption among children living in the District is high and increasing, vegetable consumption is lower and declining (2009-10 to 2017-18). Only 32% of children aged 5-15 years have adequate physical activity (2010-11 to 2018-19).[129]
- In the District, the proportion of developmentally vulnerable children on two or more domains averaged over 2009, 2012, 2015 and 2018 was 30% higher than that for NSW. [130]
- During July – December 2019, there were 93 Emergency Department presentations for an Aboriginal Otitis Media related illness costing the District $35,000 with 71 hospital admission costing an additional $229,000.[131]
- Mortality rates among 0-4 year olds in the District were 22% higher than that for NSW, while deaths among 5-17 year olds were higher by more than 40%. The leading cause of death for 0-4 year olds included the maternal, neonatal and congenital conditions while that for 5-17 year olds was injury and poisoning.[132]
- Evidence shows that certain interventions in the first 2000 days of life can make a significant improvement to children's early life experiences, health and development.
- The first 2000 days of life (from conception to age 5) is a critical time for physical, cognitive, social and emotional health.[133] 90% of a child's brain development occurs by age 5. What happens in the first 2000 days has been shown to have an impact throughout life. Making sure more children are developmentally on track when they start school is the first step to achieving full participation and lifetime health, education, social and economic benefits.[134]
- Children and young people in OOHC are recognised as a highly vulnerable group who often have a range of unidentified and untreated health issues, including health and mental health issues, developmental delays and risk factors for long-term health outcomes. NSW Health guidelines guide the provision of care to children and young people in OOHC.[135]
- Cervical screening data shows that the District rate of 52.3% is below the NSW rate of 55.3%. Only one LGA has a cervical screening rate above the NSW rate.[136]
- National and state policy directions in maternity care and early childhood services guide local care and service provision, including *Women-centred care: Strategic directions for Australian maternity services*[137], *NSW Women's Strategy 2018-2022*[138], *NSW Women's Health Framework 2019*[139], *NSW Health The First 2000 Days Framework*[140] and *Health Safe Well: A strategic health plan for children, young people and families*.[141]

- The Maternal Transfers Redesign Initiative and the statewide approach to consultation, referral and transfer of pregnant women with complex pregnancies who need higher level maternity care. The District is part of the Nepean Hospital Tiered Perinatal Network.[142]
- There are a many different maternity models of care including Midwifery Group Practice, Midwifery Antenatal and Postnatal Program, Midwifery in the Home, Aboriginal Maternal Infant Health Service, Midwives clinic, private obstetrician, complex pregnancy antenatal clinic, shared care (midwife/GP, midwife/high risk clinic, midwife/obstetrician) and the Rural Maternity Service, all of which are in use within the District.

WHAT DOES THE DATA TELL US?

Activity[143,144]

- In 2018/2019 the Women's Health Service performed 1,150 cervical screening tests, achieving 78% of target.
- In 2018/19 the StEPS screened 3,056 children, achieving 76% of target
- In 2018/19, SWISH screened 3,410 children, achieving 99.7% of target
- In 2018/19 the District conducted 2,759 Universal Health Home Visits achieving 81% of target
- In 2019/20 the District conducted an additional 564 Home visits for 322 families achieving a target of 56% for families identified as vulnerable or at risk
- In 2018/19,16,822 children received a weight and height growth assessment, achieving 81% of target
- In 2018/19 Child Protection Counselling Services received 32 referrals (no target set)
- In 2018/19, 1493 gynaecological surgeries/procedures were performed in District hospitals. 38% of this activity was at Dubbo Health Service, 25% at Orange Health Service, 20% at Bathurst Health Service and the remainder in the four procedural hospitals.
- The number of gynaecological surgeries/procedures performed has remained steady over the last five years.
- In 2018/19, there were 3,374 births in District facilities. This has remained steady since 2014/15 (0.3% increase), but there are nuances in growth rate across the District.
- Most births are in the three rural referral centres (in 2018/19, there were 1,246 births in Dubbo. 1,032 in Orange and 496 in Bathurst). Orange Health Service births has grown by 8% over the last 5 years, Dubbo Health Service births has grown by 6% and Bathurst Health Service births have declined by 11%.
- Births in the four procedural hospitals have remained relatively steady or declined. In 2018/19, there were 133 births at Cowra Health Service (steady over five year period), 133 in Forbes (22% decline over five years), 216 in Mudgee Health Service (18% decline over five years) and 116 in Parkes (variation over five year period, with a high of 143 births in 2015/16).
- Acute paediatric admissions to District facilities has increased by 30% over the period 2014/15-2018/19. Most admissions are medical (77% in 2018/19). The biggest growth is at Dubbo Health Service (74% increase between 2014/15 and 2018/19, rising to 3,860 admissions).
- The most common reasons children were admitted to a District facility were qualified neonates, respiratory conditions including upper respiratory tract infections and tonsillectomy & adenoidectomy.



PROJECTED ACTIVITY[145]

- Projections indicate the annual number of births between 2015 and 2036 will remain largely unchanged, noting that this is nuanced across the District and projections differ between locations.

TOWARDS 2025

Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.

OUR PLAN

- Continue a focus on the following priority populations:
  - Aboriginal kids and families
  - Kids and families from socioeconomic disadvantage
  - Vulnerable groups from culturally and linguistically diverse backgrounds
  - Kids living in out of home care
  - Kids and families living in remote areas with limited access to services.
- Continue to provide universal health services, offered across the whole community and at multiple contact points.
- Provide targeted services focused on children, families and communities who have additional needs or increased likelihood of poor health or developmental outcomes.
- Provide specialist services tailored to respond to individual child and family situations.

First 2000 days

- Develop and evaluate co-designed models of care
- Provide access to early antenatal care across the District
- Reduce smoking rates in pregnancy and increase breast feeding rates
- Increase rates of vaginal births
- Improve health screening
- Reduce rates of developmentally vulnerable children
- Evaluate the *First 2000 Days Operational Plan* within the *Kids and Families Strategy*, using the First 2000 Days Monitoring and Evaluation Framework
- Implement local strategies to meet the priorities of the NSW Health First 2000 Days Framework Implementation Plan
- Post evaluation of the current family health wellbeing projects (Coonamble and Walgett) confirm future directions and potential roll-out of this service model of care across the District.

Children, young people and families

- Maintain or improve immunisation rates
- Implement more actions to reduce childhood obesity
- Consistently provide high quality universal service across the District
- Improve identification of vulnerable children and connect more 'at risk' children to appropriate services
- Complete more primary health assessments for children and young people in Out of Home Care

Prevention and response to violence, abuse and Neglect (PARVAN)

- Complete the PARVAN redesign project
- Expand 24/7 On-call Service including Sexual Assault, Domestic Violence and Child Protection to:
  - provide more systematic screening
  - provide improved access to responsive high quality care
- Improve awareness across all services of the long term health impacts of violence, abuse and neglect.

Women's services

- Implement the endorsed recommendations of the strategic review of women's health services
- Initiate organisational redesign for Women's Health Services as per recommendations
- Improve internal awareness of scope of Women's Health Services and establish

appropriate referral pathways to and from the Women's Health Services

- Consolidate the focus on the Women's Health Services priority populations and ensure that activity is appropriately captured and recorded in the data systems.

Maternity services

- Delivery of maternity services is nuanced to local population needs as part of a networked approach across the District.

MENTAL HEALTH, DRUG & ALCOHOL

OUR CURRENT SERVICES

Mental health and drug and alcohol services (MHDA) have been structured as a clinical stream for a number of years, maintaining a District-wide approach to clinical and corporate governance, service development, policy formulation and workforce planning and recruitment. The service provides secondary and tertiary mental health and drug and alcohol services for the District's local population and is a major referral centre for patients needing more specialised care and treatment from the rest of NSW. A number of state-wide inpatient mental health units are located on the Bloomfield campus in Orange.

The service is divided into three regions, with hubs in Bathurst, Dubbo and Orange.

MDHA Service Regions

INPATIENT MENTAL HEALTH CARE

There are 72 acute inpatient beds in the District, 8 state-wide mental health intensive care beds, 10 child and adolescent beds with a supra district function, 42 adult and 12 older person's beds.

There are 20 adult sub-acute beds in the District (in Bathurst and Dubbo). These units are operated in partnership with a non-government organisation.

State-wide non-acute psychiatric rehabilitation beds total 64, with a 20 bed medium secure unit, two 16 bed secure rehabilitation units - one male and one female -and a 10 bed transition to community unit.

There is 20 bed state-wide medium secure forensic unit operated in partnership with the Justice Health and Forensic Mental Health Network. This unit operates at capacity at all times.

A state-wide 8 bed involuntary drug and alcohol rehabilitation unit also operates on the Bloomfield campus and is one of two such units in NSW.

COMMUNITY MENTAL HEALTH AND DRUG & ALCOHOL SERVICES

Community mental health drug and alcohol services are provided using a hub, node and spoke model. Hub teams are located in Orange, Bathurst and Dubbo, with smaller teams in Cowra, Parkes, Forbes, Mudgee, Wellington, Bourke, and Lightning Ridge.

Teams link with hospital services (general inpatient and emergency departments) to provide consultation and improve continuity of care across settings. Services provided include psychiatric assessment and review, case management and continuing care, acute response to crisis, and consultation to emergency departments, general practitioners, and other service providers as appropriate.

Larger teams provide outreach services to smaller centres, and to more remote areas without dedicated staff. Virtual services are able to provide support as and when required 24/7.

Dedicated MHDA consultation and liaison services are provided within the Orange Health Service, Bathurst and Dubbo hospitals.

Opioid substitution therapy is provided in many facilities across the District. Buvidal Clinic Pilot commenced October 2020 in Bourke.

VIRTUAL SERVICES

Mental Health Emergency Care (MHEC) is a telepsychiatry program established in the District to provide accessible specialist emergency mental health care. It provides access to a regionally-based team of mental health specialists for everyone across the region via a freecall number and is available 24/7. MHEC provides advice and support as well as emergency clinical services– emergency triage and video assessments via telehealth technologies for local providers.

MHEC also provides a virtual service delivering mental health education, clinical supervision within the Community Mental Health Teams (CMHT's). It also provides support to psychiatric trainees and general and sub specialist consultants via community video clinics to several CMHTs in the District as well as the AMSs.

This service also incorporates the State Mental Health Telephone Access Line (SMHTAL).

Mobile MHEC is a video trial established by MHEC in October 2020. Mobile MHEC enables the Police Area Command and Ambulance officers to use iPads to videolink with MHEC for rapid assessment, de-escalation and risk assessment in the home, rather than transferring to an emergency department or psychiatric unit. Initially piloted in Cowra, the project is scalable with plans being developed to roll out to other communities.

Mental Health In the Home (MHITH) is a trial being undertaken at Bathurst, introduced as a COVID-19 service response. The service provides mental health care and services in the clients' own homes. Using technology, MHITH connects people with an array of services including psychiatric and allied health consultations and retains access to group work, which is a cornerstone of the recovery process.

Virtual Community Mental Health, Drug & Alcohol Team is being piloted in response to COVID-19 Mental Health initiatives. The service provides non-emergency community mental health and drug and alcohol services for consumers across the life span including children, youth, families, adults and older people. Commencing initially within six communities that rely on outreach services and do not have resident community mental health and drug and alcohol teams, the service provides intake, triage, referrals and support via telehealth, as well as brief and short-term interventions where appropriate to a consumers need and capacity.

SPECIALISED PROGRAMS AND INITIATIVES

Specialised drug and alcohol services include:

- Opioid Treatment Program
- Magistrates Early Referral into Treatment Program (MERIT)
- Cannabis Clinic
- Drug and Alcohol Help Line
- Youth Alcohol and Other Drugs Clinical Support Network
- Substance Use In Parenting Pregnancy Programs (SUPPPs).

Specialised mental health services include:

- Mental Health Older Persons Program
- Infant, Child, Youth and Family Mental Health Services
- Perinatal & Infant Mental Health Service (PIMHS)
- Eating disorders
- SAFE START, : improving mental health outcomes for parents and infants
- Getting on Track in Time - Got It! - school based mental health early intervention program
- School-Link
- Youth Day Program
- Drought support workers
- Cognitive Remediation Therapy For People With Schizophrenia - Computerised Interactive Remediation of Cognitive – Train for Schizophrenia CIRCuiTs,
- Pathways to Community Living Initiative (PCLI)
- Community Forensic Services
- Intellectual disability clinics for adult and adolescent
- Rural Adversity Mental Health Program
- Aboriginal mental Health Trainee Workforce Program
- Family & Carer programs
- Peer Workers
- Mental Health Pathways in Practice (MHPIP)
- Vulnerable population initiatives in response to COVID-19 including exercise physiologists, intellectual disability and community forensic mental health support.

SPECIFIC DRIVERS OF CHANGE

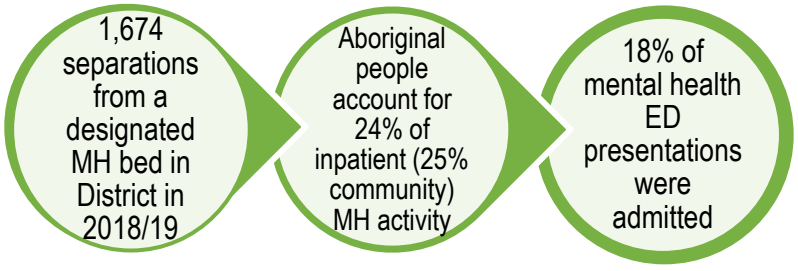
- The rates of alcohol-attributable deaths and ED alcohol presentations are higher than that for NSW. Hospitalisation rates of Aboriginal residents living in the District was twice that of their non-Aboriginal counterparts.
- The most common (identifiable) illicit substance responsible for ED presentations was opioids, including substances such as heroin and fentanyl but excluding methadone.
- Compared to NSW, residents of the District have a similar rate of psychological distress.
- While the mortality rates related to mental-behavioural disorders is similar to that of NSW and the hospitalisation rate significantly lower, the rate of suicide is higher than that of NSW (by 23% between 2013 and 2017). Suicide rates in 2017 were higher by 52% compared to 2011.
- The rate of mental-behavioural ED presentation rates are increasing (by 16% between 2014/15 and 2018/19). Brewarrina LGA reported the highest rate (per 100,000), followed by Parkes and Walgett.
- The drivers for change in specialist mental health and drug and alcohol services mirror many of the priorities of the larger health system.
- There will be a reduced need for acute hospital services and a continued focus on community-based care options and integrated care across sectors, settings and teams.
- Prevention and early intervention, person-centred approaches to engagement and recovery, and inclusiveness and recognition of the needs of a highly diverse population are key drivers for change, as is better coordination and integration of public health and human services, non-government organisations and other support resources. Peer workers will continue to have an important role in supporting the recovery of individuals in care.
- Acute and non-acute inpatient services will remain an essential and important component of the service continuum.
- Drivers of change in emergency mental care are being driving by a range of factors including equity of access of care for people with mental health issues in the emergency department; increasing demand for people presenting with mental health issue; management of both physical and mental health injuries; timely mental health assessment and coordination of most appropriate care; virtual health options and transfer of mentally unwell patients from outlying hospitals.
- Virtual health services including tele psychiatry will continue to enhance access to specialist mental health services.
- There are a range of government, private and non-government service providers across the spectrum of mental health drug and alcohol care including housing and psycho-social support, which can lead to a lack of cohesion and complex patient journeys. This requires collaborative care arrangement and functional relationships.
- Multidisciplinary, team-based care is key to providing high quality mental health drug and alcohol care, requiring a rebalancing of the ratio of allied health to nursing staff. This includes the traditional allied health disciplines involved in mental health services (occupational therapy, social work and psychology) but access to dieticians, physiotherapy and exercise physiology, and speech pathology are also needed. Pharmacists are essential members of the team in monitoring and maintaining the quality of psychopharmacological treatments, in the community as well as the hospital.
- Workforce shortages in the clinical professions are more severe in rural areas. The access to old age psychiatrists is particularly challenging and remains a high need given the ageing of our population.
- Changing demographics will drive the need for specialist mental health services for older people.
- There is an ongoing need for consultation psychiatry, providing an important link between mental health services, general hospital wards and emergency departments.
- The National Disability Insurance Scheme (NDIS) will continue to influence mental health services, particularly rehabilitation and support services for individuals with severe mental illness and disability

- People with mental health issues, particularly those with severe and complex disorders, have significantly poorer physical health outcomes, requiring strong partnerships with primary care providers.
- NSW Premier's Priority of *Towards Zero Suicides* (reduce the rate of suicide deaths in NSW by 20% by 2023) and state led initiatives of Zero Suicides in Care, Alternatives to Emergency Departments and Assertive Suicide Prevention Outreach Teams.
- Ongoing focus on *Pathways to Community Living Initiative*[146]
- Mental health service provision is guided by a national standards[147], legislation and state and national policy directions[148, 149,150] and a range of key performance indicators (KPIs)
- Redesign of alcohol and other drug services within the District has commenced, following an earlier service review. This will involve developing and implementing new service models

WHAT DOES THE DATA TELL US?

Mental health activity[151,152]

- Between 2013/14 and 2018/19 there were 8,426 separations from designated mental health inpatient wards in the District (Bathurst, Dubbo and Orange Bloomfield), accounting for 270,105 bed days.
- 60% of separations and 84% of bed days were at the designated mental health inpatient wards at Orange (Bloomfield)
- Aboriginal people accounted for 24% of all admissions to the Districts designated psychiatric beds
- In 2018/19 there were 1,674 separations and 38,918 total days spent in designated mental health wards in the District
- In 2018/19 the average length of stay was 23.2 days compared with 28.2 days in 2014/15
- In 2018/19, there were 5,509 mental health presentations to emergency departments across the District. 18% were admitted. Dubbo Health Service has the highest number of mental health ED presentations (23% of the District's total activity in 2018/19).
- In 2018/19, the community mental health services across the District provided 141,239 contacts to 8,743 clients. 2,151 clients (25%) identified as Aboriginal. 1,763 clients (20%) were aged 0-17 years and 932 clients (11%) were aged 65+ years.[153]
- In 2018/19, MHEC provided 3,966 assessment and triage contacts.[154]



Alcohol and other drugs activity[155,156]

- Between 2014/15 and 2018/19, there were 2,989 acute inpatient admissions related to alcohol and other drugs to District facilities.
- Over this time period, alcohol and other drugs admissions has increased by 15% (647 separations and 3,903 bed days in 2018/19).
- 50% of the activity was at the three rural referral hospitals (Bathurst, Orange and Dubbo).
- Aboriginal people accounted for 31% of all alcohol and other drugs admissions in the District.

- In 2018/19, there were 117,372 non-admitted occasions of service by alcohol and other drugs and addiction medicine services across the District. Of these 85,097 (73%) were for the supervised administration of opioid substitution treatment medications.
- Aboriginal people accounted for 49,399 OOS (42%).
- 16% of OOS were by counsellor / psychiatrist / social workers combined, and 2% by addiction medicine specialist / specialist GP / specialist physicians combined.
- Opioid substitution therapy activity was highest at Orange (18,504 OOS or 22% of all non-admitted AOD activity), Dubbo (17,222 or 20%), Bathurst (14,301 or 17%) and Wellington (12,116 or 14%).

Mental health projections[157,2]

- The prevalence of all mental illness in the District communities is projected to increase by 6% over the period 2017/18 to 2035/36, with severe mental illness projected to grow by 8%.
- It is estimated that 132 state-funded mental health inpatient beds (acute, non-acute and sub-acute including step up/down and residential) are required by 2036 to meet the needs of the Districts residents (all ages). 45% of these will be required for people aged 65+ years (with and without Behavioural and Psychological Symptoms of Dementia), in line with the ageing of the population.
- The requirement for mental health inpatient beds for children residents of the District is projected to remain stable, although the need for beds for children aged 12-17 years is projected to increase by 2%.
- The mental health inpatient bed requirement for people aged 65+ years with or without BPSD will increase by 41% over the period 2017/18 to 2035/36.
- It is estimated that over 210,000 non-admitted mental health occasions of service will be needed by 2036. This is a 6% increase from 2017/18 levels, with the largest projected increase (by 41%) seen in the 65+ (including BPSD) population cohort.
- The bulk of the community mental health service work is projected to be in providing continuing care and mobile intensive treatment team services to adults (44% of total).

[2] Projections are from the National Mental Health Service Planning Framework (NMHSPF). The NMHSPF outputs are national average modelled estimates that have been derived under a set of assumptions and do not reflect local context, such as sociodemographic factors impacting on demand or differences in how local services are arranged and delivered.

TOWARDS 2025

Redevelop inpatient models of care to more appropriately meet the needs of the community. Support the transition of consumers with complex needs into community settings. Develop and implement services to support the mental health and drug and alcohol needs of youth through the creation of models of care and access to age appropriate environments.

OUR PLAN

- Provide better access to specialist care in remote areas as one way of contributing to "Closing the Gap" in health outcomes for the Aboriginal population
- Support training and education of Aboriginal people interested in careers in Mental Health Drug and Alcohol (MHDA)
- Continue to expand virtual mental health and drug and alcohol services to improve access to treatment and services for the population outside of the regional centres. Inclusive of virtual teams, Mental HiTH, supervision and training enabling greater access to both District and Non-Government Organisation (NGO)/AMS services
- Continue to provide community MHDA teams with nursing and medical specialist support through the use of video consultation via MHEC
- Improve the capacity of the MHDA service to provide multidisciplinary, team-based care
- Enhance team-based care, which in turn will support adoption of more comprehensive approaches to treatment
- Better integrate care across hospital and community. Emphasis the "step-up/step-down" care model to increased community-oriented environments
- Improve collaboration between primary care and specialist providers; the mental health and drug and alcohol teams, psychiatrists, and GPs
- Reduce the need for acute inpatient by enhancing and restructuring community services
- Continue to implement the state-initiated *Pathways to Community Living Program* (Stage 2)
- Build collaborative relationships with NGOs and other government agencies to support a person-centred recovery orientation for care
- Complete Infant, Child, Youth and Family MHDA service network / hub (Orange) capital works, and develop and implement referral pathways and service models
- Complete the redesign of Alcohol and Other Drugs services within the District, and design and implement service models and workforce profile
- Develop an ambulatory detox model in partnership with NGOs to enable consumers to be able to detox at home where appropriate
- Undertake Opioid Treatment Program (OTP) service review to ensure growth in workforce meets growth in consumer need and develop a business case to support workforce growth
- Enhance the current Involuntary Drug and Alcohol Treatment (IDAT) program to include voluntary withdrawal beds
- Expand CIRCuiT (A program to provide guidance where a persons cognitive difficulties impact on their recovery and resilience), to support consumers with schizophrenia across the District to develop essential skills to support living in the community
- Embed adult and child & adolescent Intellectual Disability Mental Health clinics, virtual and face-to-face, and enhance psychiatric consultations for these consumers
- Work with the PHN to develop a regional integrated mental health and suicide prevention plan, building on the foundation plan. This is a requiring under the Fifth National Mental Health and Suicide Prevention Plan
- Maintain a Patient and Public Involvement and Engagement (PPIE) focus including through dedicated programs such as Mental Health First Aid and mental health nurses in schools
- Establish a Recovery College where people with lived experience, carers, family members, those who work in the mental health and the AOD sectors and interested community

members can come together to develop skills, and share knowledge and experiences in relation to health and wellbeing. The Recovery College to be collocated with the Obrien Centre.

- Redevelop the O'Brien Centre creating a fit for purpose centre where people with lived experience of MHDA can come together and share experiences and develop skills in a safe environment
- Expand the number of peer worker roles to support others with mental illness and represent hope that is often missing in people's lives.
- Implement *Towards Zero Suicides* Initiative to address priorities under the Strategic Framework for Suicide Prevention in NSW 2018-23 inclusive of after care initiatives and alternatives to emergency department initiatives
- Implement the MHPIP (Mental Health Pathways in Practice) - a new education and training program to introduce a standardised learning pathway to support the knowledge and skill acquisition of health professional working in mental health and drug and alcohol in partnership with Health Education and Training Institute (HETI)
- Embed the *Lived Experience Framework* across all MHDA service models
- Expand the Youth Alcohol & Other Drug Clinical Service Network to include a youth detox service within the District. This should be District-led in partnership with NGO.
- Implement the patient safety program for MHDA working in partnership with consumers, carers and families to improve safety in mental health services.
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Implement initiatives to improve the physical health and wellbeing of those accessing services.
- Continue to implement the District Eating Disorder Service Plan and enhance initiatives and service improvements across the District, in line with new state directions and models of care.

AMBULATORY, COMMUNITY AND INTEGRATED CARE

OUR CURRENT SERVICES

PRIMARY HEALTH CARE

Primary health care is the first level of contact individuals, families and communities have with the health care system. It includes a broad range of activities and services, from health promotion and prevention, to treatment and management of acute and chronic conditions. Primary health care services are delivered in settings such as general practices, community health centres, ambulatory clinics and homes by medical, nursing and allied health professionals, pharmacists, dentists and Aboriginal Community Controlled Health Services.

The **Western NSW Primary Health Network** supports frontline health services and focuses on increasing the efficiency and effectiveness of primary health care.

NSW Ambulance services are increasingly providing more treatment on site for chronic and lower acuity illnesses and injuries, through models of care such as the Extended Care Paramedic program and partnership models with health services like Paramedic Connect.

COMMUNITY HEALTH

The District's community health teams provide a range of services, including:

- Prevention, early intervention and promotion of healthy lifestyles
- Assessment, triage and streamlining referrals to the most appropriate service(s)
- Provision of a wide range of clinical services for post-acute and ongoing care
- Continuing care – care of those with chronic and complex conditions in partnership with relevant primary care providers
- Planning with other health and social care services for holistic approaches.

There are 50 sites where community health services are provided from within the District, some of which are co-located with hospital services.

Community services include nursing, allied health, Aboriginal Health, maternal, child and family health, prevention and response to violence abuse and neglect, mental health and drug and alcohol, oral health, chronic care, cancer, and palliative and end of life care. Rural referral and procedural health services include some specialist services and a range of allied health services. They provide outreach services to smaller communities. Some small rural health services have access to locally based allied health services and all communities have access to generalist community nurses.

HealthOne facilities, which aim to integrate a range of services that may include general practitioners, other health and social care services and community health staff, are established in Blayney, Coonamble, Gulgong, Molong and Rylstone.

Partnership arrangements are in place with Aboriginal Community Controlled Health Services and general practices through HealthOne NSW and Integrated Care models to better integrate primary and community health services.

OUTPATIENT SERVICES

A range of outpatient specialist and generalist clinics and services are offered throughout the District, for adults and children. This includes Ambulatory Care Units/Clinics, haemodialysis units, oral health services, medical, nursing and allied health outpatient clinics, child and family health, allied health outpatient consultations, mental health drug and alcohol outpatient consultations and opioid substitution therapy, outpatient cancer services and group exercise, therapy and education sessions.

AMBULATORY CARE

Ambulatory Care is a broad term that can be used to describe care that takes place as a day attendance at a health care facility or at the patient's home or other setting (e.g. school or workplace). Ambulatory Care covers a broad range of care delivery, from preventative and primary care through to specialist services and tertiary level care and these services are collectively referred to as 'non-inpatient' care.

Ambulatory Care Units / Clinic offer multidisciplinary services on an outpatient basis. Services including the administration of infusions which previously might have required a ward

admission, IV antibiotics, venesections, wound care, health reviews, peripheral or central intravenous line management and urinary catheter management. There are large ambulatory care units in 3 hospitals and smaller ambulatory clinics in most other hospitals in the District.

HOSPITAL IN THE HOME (HiTH)

Hospital in the home (HiTH) is admitted acute/sub-acute care in the patient's home or in the community as a substitute for in-hospital care. Instead of receiving care and hospital accommodation, patients receive hospital level care whilst being accommodated in their own home.

As care cannot always be provided in a patient's home or in a community setting, HiTH services may include care in an ambulatory/clinic environment.

Adult HiTH services are available in ten towns throughout the District. Paediatric HiTH services are available in Bathurst, Orange and Dubbo.

REMOTE HOME MONITORING

Remote patient monitoring allows patient health information to be gathered remotely in the home so that it can be reviewed in conjunction with information held in the patient record. It is an enhancement of usual care and includes supporting patients with biometric measures, telehealth, health surveys, education, health coaching and care coordination.

Remote in-home monitoring has potential to reduce hospital length of stay, provide additional health information to improve assessment & treatments plans, enable patients to learn more about their health condition & change health behaviours and assist in healthcare with patients who cannot make it to the health facility.

The Districts Remote in-Home Monitoring (RiHM) Initiative commenced in May 2020 to optimise remote monitoring virtual care technologies to enhance usual care, minimise exposure to COVID-19 and ease the demand on hospitals while ensuring the safe delivery of patient-centred healthcare.

The RiHM initiative will enable access to remote monitoring technology to WNSW clinicians; develop a sustainable infrastructure to support RiHM with targeted patients and increase access to patients in the District where RiHM has potential to enhance their usual care, patient experience & health outcomes

The initiative will test and evaluate a phased approach to remote monitoring in Bathurst, Orange and Dubbo, procedural and rural sites.

INTEGRATED CHRONIC & COMPLEX CARE

The District's Integrated Chronic and Complex Care program provides integrated care interventions to people with chronic disease focusing on wellness and enablement. It is aimed at improving outcomes for vulnerable and at risk populations including people with complex health and social needs and reducing preventable hospitalisations by strengthening care provided in the community.

The program targets people over the age of 16 living with chronic diseases including respiratory disease who are at risk of unplanned hospital presentations. Patients are identified through the Patient Flow Portal via an algorithm or community referral. Clients are enrolled in a comprehensive 12 week model of care which provides a holistic person centred approach and ensures a more coordinated approach to service delivery.

Integrated care coordinators work in partnership with clients to better understand and manage their health and identify community based care and services that address individual's health and social care needs. Clients have access to care coordination, care navigation, health coaching and self-management support.

COLLABORATIVE COMMISSIONING

A partnership of Western NSW and Far West Local Health Districts, Western NSW Primary Health Network and the NSW Rural Doctors Network is driving collaborative commissioning in The District. The initial focus is on establishing a collaborative commissioning model for diabetes care in the District.

The whole-of-system Collaborative Commissioning will seek to complement existing local arrangements to increase opportunities to create value. It is expected that current structure, alliances, mechanisms for engagement and frameworks will be leveraged as appropriate.

Sustaining Small Rural Communities (4Ts) Project

Under the Sustaining Small Rural Communities Project – or the '4Ts' project – a new integrated health care model is being trialled in Tullamore, Trangie, Tottenham and Trundle. This is a unique model of sub-regional primary health care. It has been co-designed by local communities and supported by the Western NSW Collaboration, which comprises the Western NSW Primary Health Network, Western NSW Local Health District, Far West Local Health District and NSW Rural Doctors Network.

The model of care aims to meet the specific health needs of the communities, improve health service delivery and address workforce shortages. The '4Ts' project will test the suitability and sustainability of a shared health workforce across the region. Part of this will include shared GP services and telehealth to support access to care and referred services. The trial is being supported through Commonwealth funding announced under the 2020-21 Federal budget.

The Commonwealth has also announced support for the Western NSW Collaboration projects located in the Canola Fields (Canowindra) as well as Parkes and Forbes areas.

VIRTUAL ALLIED HEALTH SERVICES

The Districts Virtual Allied Health Services provides in-reach virtual service to small rural hospitals and multipurpose services within the District within the disciplines of dietetics, physiotherapy, psychology, occupational therapy, social work and speech pathology. Significant benefits have been realised as the VAHS has increased access to allied health services, improved safety through interventions that prevent and ameliorate hospital acquired complications and produced positive patient, clinician and family experiences. This model enables patient access to a wider range of allied health services than would previously be provided in their home communities.

VIRTUAL CHRONIC PAIN SERVICE

Based out of Orange Health Service, the virtual chronic pain service provides access to pain specialist expertise via multidisciplinary team or single-discipline telehealth chronic pain consultations. It is highly accessible without the costs and challenges involved in patient transport and accommodation.

VIRTUAL CLINICAL PHARMACY SERVICE (VCPS)

This service commenced in April 2020 to address a significant gap in clinical pharmacy services in the smaller sites across the District. The provision of clinical pharmacy services has significantly increased through the launch of the service at Bourke, Canowindra, Cobar, Gilgandra, Narromine, Warren (Western NSW Local Health District) and Balranald and Wentworth (Far West Local Health District). VCPS clinical pharmacists complement existing onsite and virtual clinical activities, and perform medication reconciliation and review, antimicrobial stewardship, smoking cessation assessment, patient counselling and drug information and medication education for clinical staff

LEADING BETTER VALUE CARE (LBVC)

A number of the LBVC initiatives are based totally or partially in ambulatory / community settings, including the High Risk Foot Service, Osteoarthritis Chronic Care Program (OACCP), Chronic Obstructive Pulmonary Disease and Chronic Heart Disease.

SCHOOL-BASED SERVICES

Some community and primary health services are provided in school settings to children throughout the District, including:

- StEPS eyesight screening in kindergarten transition classes
- Care coordination with school principals / student support officers for children with chronic and complex conditions as required (e.g. stoma care)
- Public health school immunisation program
- Outreach school-based allied health services in some locations and schools, including psychology, occupational therapy and speech therapy.

- The Healthy Canteen Strategy and Crunch and Sip programs support health promotion in our schools.

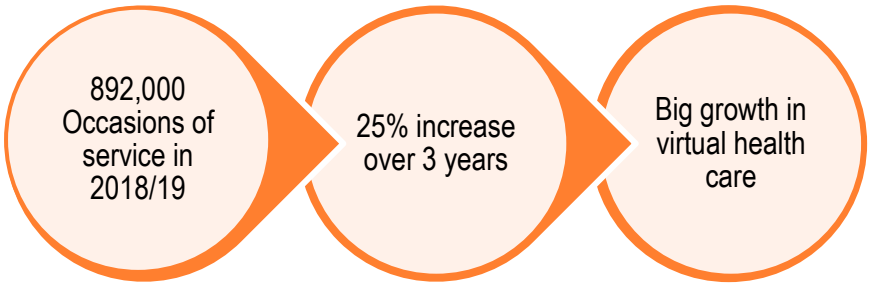
SPECIFIC DRIVERS OF CHANGE

- Australia's health system is still geared towards treating illness and the majority of resources are spent supporting hospital care.
- Hospitals do not necessarily improve a person's health. Evidence demonstrates the risks of unnecessary hospitalisations and extended hospital stays. These include functional decline, iatrogenic injury, hospital acquired infections and falls.
- There is a broad consensus that to achieve high-quality, sustainable health and care services that can meet the changing needs of the population, there will need to be a radical shift in the focus of care from hospital to community health services.
- National, state and District strategic policy focus on shifting appropriate activity from hospital settings to ambulatory and community settings and improving the management of people with chronic diseases within the community to prevent hospitalisations. This will drive the ongoing development of innovative primary and community health care models.
- NSW Premier's Priority to improve outpatient and community care by reducing hospital visits by 5% through to 2023 by caring for people in the community
- Improving the health of individuals and communities and meeting the demand for acute care services into the future is dependent upon growing our primary, community and ambulatory care services. This must be done in partnership with general practitioners, the Western NSW Primary Health Network, Aboriginal community controlled health services and multiple Government and non-government organisations.
- Primary healthcare needs to be an increasing focus. There needs to be a focus in people seeing the right practitioner straight away and treating people well in the community.
- The lack of General Practitioners in many of the Districts towns is changing the model of primary care.
- Digital transformation and clinical developments will provide opportunities to increase the type of home based and ambulatory services that can be provided into the future. Smart AI and interoperable data including always-on sensors could help identify illness early, enable proactive intervention, and improve the understanding of disease progression.
- Planned Care for Better Health (PCBH) model is being introduced to replace the Integrated Care for People with Chronic Conditions model. PCBH moves away from a disease specific focus and better considers the health determinates, risk factors and multi morbidities across a broad range of chronic conditions for people over the age of four.
- Integrating health services with other sectors in rural communities, such as education, housing, disability and community services will have the biggest impact on improving health outcomes by addressing the broad social-determinants of health.
- Care will increasingly be driven by and organised around the consumer.
- Delivering truly integrated care is one of three strategic directions in the *NSW State Health Plan towards 2021*[158].

WHAT DOES THE DATA TELL US

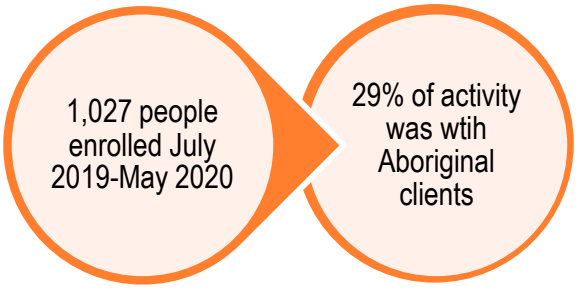
Non-admitted activity[159]

- In 2018/19, there were 892,000 non admitted occasions of service provided to 130,541 clients by a range of community and outpatient services across the District.
- There has been a 25% growth in activity over three years (2016/17 – 2018/19)
- The following services all had more than 10,000 non-admitted occasions of service in 2018/19: Orange Radiotherapy Treatment Service, Orange Opioid Substitution Therapy, Dubbo Opioid Substitution Therapy, Dubbo Home Enteral Nutrition Service, Orange General Nursing Service, Bathurst Opioid Substitution Therapy, Wellington Substitution Therapy, Orange Midwife Obstetrics Clinic, Dubbo Diabetes Service, Orange Medical Oncology CNS Allied Health Consultation.
- In 2018/19, 20% of non-admitted activity was in the patient's home including residential aged care facilities and other community residential facilities. Over the years 2015/16 to 2018/19, home-based care has risen by 11%.
- In 2018/19, there were 4,024 virtual non-admitted occasions of service (telehealth / videoconference). By 2019/2020 this had risen to 10,656.



Integrated chronic and complex care activity[160]

- Between July 2019 and May 2020, 1,027 people were enrolled into the Integrated Chronic and Complex Care Program across 22 sites.
- In this period, 9,098 occasions of service were provided. 29% of activity was with Aboriginal people.



HiTH activity[161]

- In 2018/19, 5.2% of all acute inpatient activity were Hospital in the Home (HiTH) admissions.
- This equates to 2,050 separations across the District. Dubbo had the most HiTH activity (602 separations), followed by Bathurst (541 separations).
- The District's HiTH activity is concentrated at the three rural referral hospitals (77% of activity) and four procedural hospitals (17%), with HiTH activity also recorded at Blayney and Peak Hill MPS and Cobar Health Service.

- 32% of HiTH separations were for children aged 0-16 years and 32% was for people aged 65 years and older.
- 23% of HiTH separations (479) were for skin, subcutaneous tissue and breast issues predominately cellulitis and 15% (311 separations) were for respiratory system issues.
- 3.4% (134 separations) of all chronic potentially preventable hospitalisations were cared for under HiTH. There were 29 HiTH separations associated with COPD and 37 associated with congestive cardiac failure.
- In 2018/19, there were 1,124 ED presentations that were referred to HiTH for ongoing care. This represents 5.3% of all ED presentations.

TOWARDS 2025

The District will focus on shifting appropriate activity and resources from hospital settings to ambulatory and community settings and improving the management of people with chronic diseases within the community to prevent hospitalisations.

OUR PLAN

- Design and implement pan-health system collaborative ways of working to ensure patients receive the best care in the best setting.
- Maintain a quality improvement focus and continue and/or undertake new projects to improve care and/or patient outcomes, and undertake ongoing monitoring of performance and service evaluation.
- Whole of District approach and service realignment to support the premier's priority of improving outpatient and community care and reducing potentially preventable hospital visits by 5%.
- Continue to expand HiTH services across the District and improve access to HiTH services after hours and/or weekends.
- Extend the geographic range of Integrated Care across the District so it becomes business as usual in all communities.
- Expand the scope of Integrated Care from a disease specific focus to better consider the health determinates, risk factors and multi morbidities across a broad range of chronic conditions for people over the age of four. This will include earlier identification of people at risk of hospitalisation in line with the state wide Risk of Hospitalisation Initiative and evidence-based methodology.
- Continuously improve Integrated Care through a program of quality improvement, research and evaluation.
- Build the capacity of health, community and social care services to deliver integrated care, including developing health care neighbourhoods.
- Extend the use of the Health Care Home concept and expand this to include Health and Social Care Neighbourhoods.
- Establish integrated approaches to consumer and community engagement so that all partners are hearing community voices and receiving consistent messages.
- Develop professional roles and workforce models that will support integrated models of care across services.
- Maintain a targeted focus on preventing illness and promoting healthy lifestyles, addressing the key health needs of the Districts residents (as per health needs assessment) and recognising the ageing of our population
- Strengthen the focus on agreed health priorities with partners across sectors.
- Include community care and social support services as collaborators and partners.
- Strengthen collaborative partnerships between health and social care sectors: defining relationships, roles and accountabilities, and embedding the vision, definitions and

principles of integration in the work of the partnership and of each member organisation.

- Strengthen internal and external alliances to implement integrated health and social care principles to service delivery.
- Create, and implement, a regional, rural and remote approach to collaborative commissioning led by the community, general practices, other local health districts and our partners, strengthening primary care and supporting better patient health outcomes.
- Implement a collaborative commissioning approach to clinician informed shared care across our health landscape.
- Strengthen shared governance and whole of health service and community approach, with joint governance groups comprising key partners from the community and health and human services, with local clinically led regional groups informing and guiding decision making
- Ensure commitment across all partners by engaging clinicians, services, patients, Aboriginal peoples and communities in all stages of developing and managing service delivery using principles and methodology of integrated care and collaborative care.
- Create a strong foundation for sharing patient information and co-ordinating data through aligning policies across sectors and establishing inter-organisation agreements.
- Examine the feasibility of a shared care record, including opportunities to use My Health Record
- Ensure sustainability for the partnership as a whole and for individual service providers by exploring new funding streams and innovative business models.
- Build individual and community health literacy, strengthen support for self-management and enhance community resilience.
- Build capacity to collect, share and use data for planning and evaluation
- Continue to develop and implement the *Sustaining Small Rural Communities Project* including in Parkes/Forbes and Canola Fields (Canowindra)
- Adopt the principles of the NSW Health Outpatient Services Framework (GL2019_011) and implement the Outpatient Services Framework procedures and processes to enable effective management of outpatient services in the District.
- Implement remote in-home monitoring technology, model or care and service delivery to optimise usual care
- Strengthen access to and delivery of virtual health services in community/primary/integrated care and HiTH/Ambulatory Care
- Strengthen resources and workforce capacity of community, ambulatory and HiTH services.

HEALTH PROMOTION, PUBLIC HEALTH & HEALTH PROTECTION

1. HEALTH PROMOTION - OUR CURRENT SERVICES

DISTRICT HEALTH PROMOTION SERVICE

The District Health Promotion Service focuses on improving the health of our population with an emphasis on promotion of health and prevention of chronic disease. It responds to priority population issues and determinants of health common to people living across the District. The Health Promotion (HP) Team provide health promotion services to Far West Local Health District under an annual Service Level Agreement. HP focuses on the areas of Healthy Eating and Active Living (HEAL) & Tobacco Control. HP works in a capacity building way by increasing staff and partner skills and enabling evidence based programs to be delivered addressing the population's needs. The majority of programs are at scale with high reach. With COVID 19, many of the HP programs have developed virtual delivery models.

The NSW Ministry of Health (MOH) sets Local Health District annual targets for a range of programs in the childhood and adult settings with a focus on reducing overweight and obesity, smoking and falls and increasing physical activity.

The NSW Healthy Children Initiative (HCI) delivers key childhood obesity programs in primary schools and early childhood services across Western NSW and Far West Local Health Districts. The HCI programs include: Live Life Well @ School, Munch & Move, and Healthy Canteens. Other childhood programs funded Aboriginal Go4Fun & Go4Fun Online.

In the Adult setting, there are other targeted Healthy Eating and Active Living (HEAL) initiatives. Some are locally grown and others supported by the Ministry of Health addressing overweight and obesity and increase rates of physical inactivity.

These include:

- Physically Active Communities: Community Exercise and Aqua Fitness to increase access to affordable and quality physical activity programs in targeted communities.
- Healthy & Active for Life (HAL) 10-week program targets over 60 year olds to be more physically active. Over the 10-week program, 2-hour sessions are held weekly that include 60 minutes of circuit exercises and a 45 minute facilitated discussion focused on healthy diet and lifestyle.
- Stepping On, a community-based seven week falls prevention program targeting frail older people who have fallen or fear falling.
- NSW Food & Drink Framework in NSW Health Facilities. Oversee the implementation for this MOH program.
- Food security and healthy built environments are emerging areas of work. Drought has brought these areas into focus for our District.

TOBACCO CONTROL

HP oversees the governance of the Districts Tobacco Plan 2015-2021, including capturing and reporting on implementation across the District. Other Tobacco Control programs and initiatives include:

- Smoke Free for Bub & Me - contributes to the District's Performance Agreement targets to reduce rates of smoking in pregnancy with a focus on Aboriginal women who smoke. Aims to increase engagement with the target population and health care workers who support them.
- Stop Smoking, Start Living project- A two-year CINSW grant program to develop social media messaging with Aboriginal communities.

SPECIFIC DRIVERS OF CHANGE

- Most of the preventable death and chronic disease burden in Australia can be attributed to a small number of activities, including tobacco smoking, physical inactivity, obesity, fall injury among older people and lack of fruit and vegetables in the diet.
- The District residents have high rates of health related behaviours including smoking, harmful use of alcohol, obesity and low levels of physical activity.
- Prevention will be the key to improving the health of our ageing population into the future. The ageing population in the District will see an increasing need to focus on healthy ageing to reduce the health impact for people in their older years and the social and health service costs associated with inpatient care, rehabilitation and reduced functionality for individuals.
- Health promotion activities are guided by the Ottawa Charter for Health Promotion[162] and key state[163] and District[164,165] policy directions and focus areas. Current priority areas are healthy eating and active living and tobacco control.
- Health promotion activities focus on improving health at a population level. Economic appraisals have shown that health promotion activities are effective disease prevention strategies and are cost effective.
- Health is influenced by many interrelated social, environmental and economic factors. A range of stakeholders play a role in promoting good health. The District Health Promotion team must work in partnership to ensure programs are implemented at the reach and scale required to effect change in the population. This means their work often takes a capacity building focus, is settings based, or targets policy and environments where people live, work and play.
- Health promotion and prevention cannot be seen as purely the remit of the District Health Promotion service. Rather, it needs to be considered 'everyone's business' and all clinicians need to be actively engaged in health promotion and prevention at the clinician-patient interface.

WHAT DOES THE DATA TELL US?

Health status of our people[166,167]

- There are on average 715 deaths in the District each year due to circulatory disease (period 2017-2018)
- There are around 7,180 admissions of District residents for circulatory disease conditions (period 2018-2019). The hospitalisation rate for circulatory disease admissions is higher in the District than the total NSW State rate
- The smoking attributable death rate for the District in 2018 was 82.5 per 100,000 people compared to NSW which was 71 per 100,000. In 2018, 333 District residents died from tobacco smoking
- Smoking attributable hospitalisation rate for the District in 2018/19 was 755.6 per 100,000 people compared to NSW which was 663 per 100,000
- The hospitalisation rate for Aboriginal residents is 1.9 times that of non-Aboriginal people (period 2012/13-2016/17)
- The rate of potentially preventable hospitalisations in the District is higher than that for NSW by 13%. Potentially preventable chronic condition hospitalisations of District residents continues to be high. In 2018/19 there were 3,435 admissions
- The rate for potentially preventable chronic condition hospitalisations of Aboriginal people remains higher than that for Non-Aboriginal people

TOWARDS 2025

The *Western NSW Local Health District Health Promotion Strategy 2018-2023* reflects the District's commitment to improving the health and wellbeing of some of our most vulnerable people in our communities. The Strategy continues to build on past achievements and looks to the future with investment in innovative and evidenced based approaches with specific focus on reducing childhood and adult overweight and obesity rates and reducing harm from tobacco smoke (especially in pregnant women).

OUR PLANS

- Deliver evidence-based and sustainable programs which empower individuals and communities to improve their health and wellbeing
- Co-design programs with communities, especially Aboriginal people
- Implement a partnership model that assists and engages with internal and external partners to work collaboratively with Health Promotion
- Build leadership around the delivery of effective health promotion programs in rural and remote settings
- Improve the health and wellbeing of rural people in the areas HEAL initiatives and Tobacco Control
- Reduce overweight and obesity rates in children by 5% by 2025
- Create health promoting environment in hospitals, child care settings, schools, workplaces and communities
- Encourage active living through physical activity programs and healthy built environments
- Implement the Districts Tobacco Strategic Plan
- Reduce smoking rates, especially in the Aboriginal population and pregnant women
- Protect people from exposure to environmental tobacco smoke
- Implement innovative local programs targeting specific at-risk populations and to address the priority health needs of the people
- Continue our focus on providing public health education pathways including attracting public health trainees to the District.

2. PUBLIC HEALTH & HEALTH PROTECTION - OUR CURRENT SERVICES

HEALTH PROTECTION SERVICES

The Public Health Unit (PHU) provides health protection services to the people of Western NSW and Far West Local Health Districts, including environmental health, communicable disease surveillance and control, immunisation services and epidemiology. The PHU provides the public health component of the District's response to emergency management.

The PHU works with a wide range of stakeholders and key partners (both Government and non-Government) to achieve public health outcomes. These include general practitioners, hospitals, schools, childcare centres, local councils and residential aged care facilities. The PHU also works closely with the Department of Primary Industry, to assist with management and control of zoonotic diseases.

COMMUNICABLE DISEASES CONTROL (CDC)

The Communicable Diseases team is responsible for the surveillance, investigation and control of conditions notifiable under the NSW Public Health Act 2010.

The PHU is notified of confirmed cases of communicable diseases by doctors, laboratories, hospitals, childcare centres, aged care facilities and schools. The Communicable Diseases team responds to these notifications and works closely with the case, their contacts and the treating doctor to implement the public health guidelines to prevent further spread of disease.

The team provides information and advice on infectious disease outbreak management in institutional settings, such as influenza and gastroenteritis outbreaks in childcare centres, schools, hospitals and aged care facilities. The team also participates in targeted research projects to improve the quality and standard of Immunisation and CDC services.

The PHU provides specialist services in the assessment, management and treatment of Tuberculosis (TB), including TB undertakings for immigration. Free treatment of clinical and latent TB is accessed through the TB virtual chest clinic. Specialist TB clinicians are available to liaise with General Practitioners (GPs) and other health care providers. TB testing is offered every month and BCG vaccination clinics are held as required in Bathurst, Dubbo and Orange

IMMUNISATION SERVICES

The District's Immunisation team supports and conducts a variety of vaccination programs across the District each year. These programs include:

- Early childhood clinics for children aged 0-5 years
- Aboriginal Immunisation Program
- School Vaccination Program
- Seasonal Influenza and Pneumococcal vaccination programs for older people
- Occupational health vaccines for health care workers
- Protection of newborn babies from Whooping Cough by maternal vaccination of pregnant women
- Protecting mothers and their newborn babies from influenza by vaccinating women during pregnancy
- Neonatal Hepatitis B Vaccination Program
- BCG clinics for children under 5 years of age who are travelling regularly to TB endemic countries.
- Advice and support for doctors with Q Fever vaccination and Yellow Fever accreditation.

The Immunisation team supports all immunisation providers across the District in all aspects of immunisation practice and policy, including cold chain management and storage of vaccines, and responding and notifying all adverse events following immunisation.

ENVIRONMENTAL HEALTH

The Environmental Health Team plays an integral role in the PHU in responding to and managing environmental health issues. The Environmental Health team responds to issues from the community, local councils, Aboriginal Land councils, other government departments and the Environmental Health Branch of the NSW Ministry of Health.

Services include:

- Water quality control
  - Safe drinking water
  - Recreational use of water
  - Public swimming pools water quality
- Special industries services
  - Skin penetration industries
  - Funeral industries
  - Sex Industries
- Tobacco compliance
  - Smoke free areas
  - Tobacco advertising
  - Sale of tobacco products to minors
- Arbovirus control through the sentinel chicken program and mosquito trapping
- Environmental Toxicology services
- Microbial control through Legionella testing programs
- In collaboration with local government agencies
  - Waste management
  - Sewage management
- Responding to environmental health complaints from the public
- Review of Local Environment Plans submitted by local government
- Collaboration with external partners to improve the safety of housing for Aboriginal people through Housing for Health programs
- Providing air quality warnings during high pollen and bushfire smoke periods
- Public Health emergency management.

HIV & RELATED PROGRAM (HARP) SERVICES

The HARP Team provides services to both Western and Far West Local Health Districts. The primary roles of the HARP clinicians are to provide the Sexual Health, Human Immunodeficiency Virus (HIV) & Blood Borne Virus clinical services.

Sexual health nurse led and Aboriginal Sexual Health worker led clinics are provided from Orange, Dubbo, Lightning Ridge and Bourke sites and via outreach weekly, monthly or when required across the District. The Sydney Sexual Health Centre (SSHC) provide Sexual Health specialists for sexual health / HIV clinics (48 days of medical clinics per annum, outreach and virtual) and support for nurse-led clinics.

The sexual health and hepatitis / liver services ensure the delivery of safe, accessible and equitable services and they also provide support to hospital based clinicians and general practitioners throughout the District. Daily / weekly and monthly nurse led hepatitis / liver clinics are provided at Bathurst, Orange and Dubbo with many outreach sites covered within the District. These services are supported by the monthly medical liver clinics with gastroenterology specialists at Bathurst and Orange and a Hepatologist in Dubbo.

The HARP Service provides sexual health support to a range of District services including emergency department, drug and alcohol, mental health drug and alcohol, maternity and also participate in many of the statewide planning and development of sexual health and HIV medicine services.

HARP Health Promotion and Well Being

HARP clinicians participate in many state, national and international awareness days and weeks as well as a range of sustained health promotion programs addressing blood borne virus and STI risk in higher risk populations. Including:

- Promotion of Community Sharps services
- Youth Week and Sexual Health Partnerships
- Ending HIV Campaign[168]
- Dried Blood Spot – priority population focused HIV and Hepatitis C screening campaign
- Positively Hep and Deadly Liver Mob – incentivised viral hepatitis education, screening and treatment programs targeting at-risk communities
- Peer Supported Programs are delivered in partnership with NGOs utilising peers to educate within identified groups, recruiting to screening, vaccination, and treatment.

Needle and Syringe Program

This provides population level blood borne virus prevention, harm reduction and health promotion initiatives through:

- Provision of sterile injecting equipment
- Provision of community sharps disposal
- Education
- Recruitment to testing and treatment
- Advocacy
- Addressing the social determinants of health, particularly the stigma and discrimination experienced in health settings by people who inject drugs.

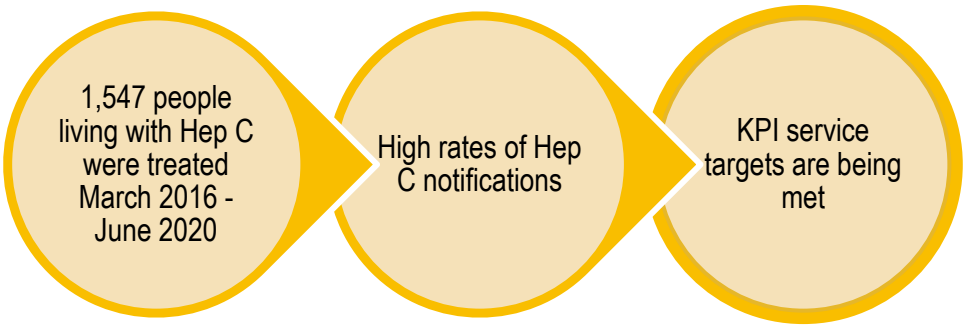
SPECIFIC DRIVERS OF CHANGE

- Legalisation and a range of strategic policy documents including the NSW Health Protection Network Plan 2019-24[169] and National Environmental Health Strategy[170] drive local focus and service provision.
- Health protection is achieved through a complex array of activities involving multiple people and agencies. This requires a partnership approach.
- Ongoing COVID-19 pandemic threat, and planning and service responses for novel viruses.
- Immunisation is one of the most effective and cost-efficient public health measures for the control of vaccine preventable diseases.
- Changes to the NSW immunisation schedule and potential new immunisations
- Creating healthy environments can be complex and relies on continuing research to better understand the effects of exposure to environmental hazards on people's health.
- Poor environmental quality has its greatest impact on people whose health status is already at risk. Environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.
- Climate change including droughts, bush fires and floods and associated impact on environmental health
- New infrastructure developments (e.g. mining) that may have an impact on the environmental health of the population
- New and evolving technologies that will improve efficiencies in and enhance disease surveillance, control and response
- HARP activities are similarly guided by national[171] and state[172,173,174,175,176] strategies and targets such as the virtual elimination of HIV transmission by 2020 and the elimination of Hepatitis C by 2028. In addition, the District's Service Agreement with NSW Health has Blood Borne Virus KPIs that drive local service provision.
- Untreated Hepatitis C Virus (HCV) and Hepatitis B Virus (HBV) lead to chronic liver inflammation, cirrhosis and hepatocellular carcinoma (HCC) and is the leading cause for liver transplant in Australia[177]. The District has a large number of socially and geographically disadvantaged community members with high rates of chronic disease.
- Balancing HARP health promotion activities with the delivery of clinical services can be difficult and requires a combination of planned and opportunistic prevention efforts. It also requires working in partnership with a large and diverse range of organisations, including government, NGOs and education and research institutions.
- HARP related programs fall within the spheres of both chronic and communicable disease. This means health promotion in HARP necessitates a clinical screening, vaccination, and treatment aspect to addressing social determinants of health, improving community health and wellbeing, and achieving population health prevention outcomes.
- Priority groups for HARP Services are some of the most vulnerable in society. In addition, most HARP clients will experience additional and multiple layers of risk, stigma and discrimination. Comorbidities, which may include co-infection of communicable disease as well as related or unrelated chronic disease management, can further amplify their vulnerability and exacerbate barriers.
- HARP clients access our health system at across multiple disciplines, including alcohol and other drugs, Domestic Violence, and/or Mental Health services. Effective health promotion for these groups includes reducing barriers to service access, bringing clinical services to times and spaces within settings which best suit community and providing clinical interventions and education in partnership with other services.
- Early access to testing and treatment through HARP service can significantly improve health across the lifespan while effectively avoiding compounded health costs resulting from unmanaged communicable and chronic disease.

WHAT DOES THE DATA TELL US?[178, 179,180,181]

- In 2019, 96.5% of all children aged one year living in the District were fully immunised, up from 91.5% in 2014
- By the time children living in the District reach five years of age, 98.3% are fully immunised, up from 94.7% in 2014 (Aboriginal children 98.6%, non-Aboriginal children 96.9%
- In 2018/19 there were 1,625 hospitalisations due to influenza and/or pneumonia (a 9.4% increase on 2014/15 hospitalisations).The rate of hospitalisations for influenza/pneumonia for residents of the District remains higher than that of NSW (840.6 per 100,000 compared with 692.8 per 100,000 people).
- In 2017/18 there were 52 deaths attributable to influenza and or pneumonia, up from 32 recorded in 2013/14
- In 2018/19, there were 393 hospitalisations to the District facilities for vaccine preventable conditions, up from 227 recorded in 2013/14 (but significantly less than the 716 recorded hospitalisations in 2017/18). This is representative of the impact of recent influenza seasons, increased use of pathology confirmation

- In 2019, the rate of Hepatitis C notifications was higher in the District that that of NSW (59.8 per 100,000 people compared with 40.4), or 112.3 per 100,000 people aged 25-44 years compared with 66.1.
- In 2019 -2020, there were 130 District residents initiated onto Direct Acting Antiviral Treatment people which was 52% of the annual KPI target of 250. The Kirby Institute has estimated that there are approximately 3500 people living with chronic hepatitis C within the District. If we are to eliminate Hep C by 2028 we are to meet the treatment targets of 250 per year
- In 2019 – 2020, the sexual health clinics and other services that provide HIV testing e.g. emergency departments, Mental Health Drug & Alcohol did 1109 HIV tests exceeding the target by 20%
- In 2019 – 2020, the Needle Syringe Program (NSP) has been meeting or exceeding the yearly NSP targets reported quarterly to the NSW Ministry of Health
- During the period March 2016-June 2020, the District treated 1,547 people living with Hepatitis C



TOWARDS 2025

Implement strategies to keep the community safe from communicable disease.

OUR PLAN

- Support strategies to reduce the burden of influenza on the health system and the community generally.
- Promote the uptake of recommended effective vaccines across all age and risk groups and improve their capture into the Australian Immunisation Register.
- Monitor antimicrobial resistance in priority notifiable organisms to inform guidelines on public health and clinical management.
- Support TB prevention and control services in NSW in line with elimination goals of the Strategic Plan for Control of Tuberculosis in Australia and the World Health Organisation End TB Strategy.
- Integrate whole genome sequencing technology into routine communicable disease surveillance and control to better identify disease clusters and their causes.
- Improve the health of Aboriginal communities and other disadvantaged groups through community partnership initiatives such as Housing for Health, the Aboriginal Water and Sewerage program and Closing the Gap immunisation.
- Support the provision of safe drinking water and improve the management of drinking water-related risks.
- Improve oral health through continuing advocacy for water fluoridation.
- Protect health by regulating, assessing and reducing the risks associated with hazards in the natural and built environment.
- Minimise the health risks of climate change by building community resilience and promoting environmental sustainability. (NSW Health Protection Network Plan 2019-24)
- Be guided by the *NSW Sexual Health, Blood Borne Viruses and Harm Minimisation Service Plan* and related state frameworks and implement local strategies focused on harm minimisation and improving health outcomes.
- Review liver disease services within the District to ensure goals of viral hepatitis elimination occur by 2028.

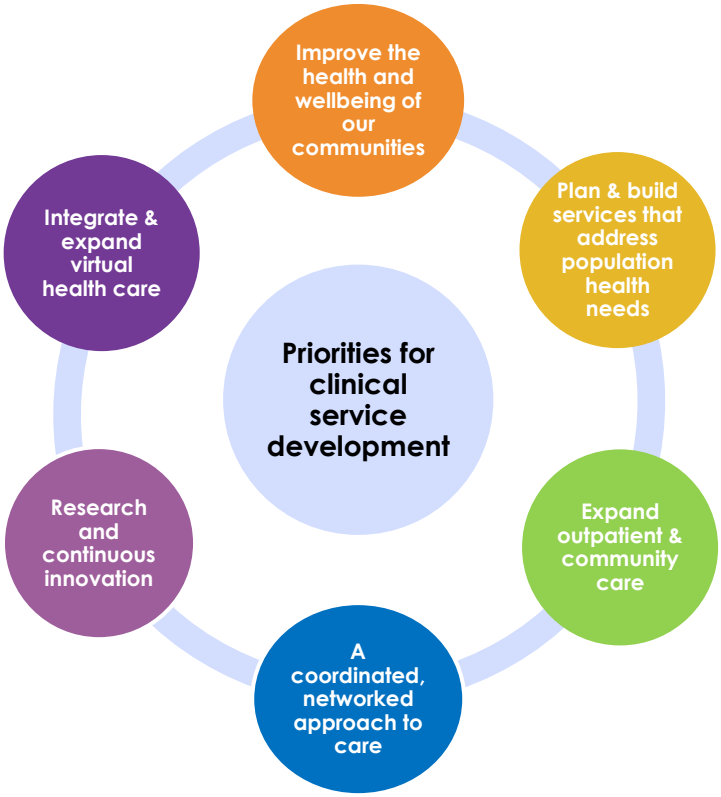
EMERGING CLINICAL SERVICES

In addition to the core clinical services discussed in previous chapters, we recognise other sub-specialty services that play an important role in delivering high quality care to our communities.

These include but are not limited to:

- Ophthalmology
- Haematology
- Infectious Diseases
- Dermatology
- Gastroenterology.

These services will continue to grow and evolve over time in response to need and demand. Service planning, development and redesign will be guided by the Districts Planning Principles and our six key priorities for clinical services.



CLINICAL & NON-CLINICAL SUPPORT SERVICES

Clinical support services including medical imaging, pharmacy, pathology, sterilising, biomedical engineering and clinical education services will need to grow and evolve in line with the service developments of the core clinical services. These developments and their future directions are also guided by the business or service plans of these particular units.

Similarly, non-clinical support services such as workforce and human resources, assets and maintenance and communication and engagement services should be cognizant of the directions within this document, adapting to these as required.

WHERE TO FROM HERE

This **Clinical Services Framework** recognises that our clinical services must evolve to meet a changing service environment and emerging healthcare needs of our people. The Framework is intended to guide service planning, design and delivery into the future.

It outlines six priorities for clinical service development and future directions for each core clinical service.

Implementing these will help us to provide integrated, connected health care at the appropriate place, utilising advancements in medical technologies, including virtual health where appropriate, and guided by new models of care and the changing evidence base. It will help address the health needs of people living in the District, with the support of partnerships with the community and service providers.

The Clinical Services Framework provides the foundation to grow and evolve our clinical services and our health care system to meet the changing needs of our communities into the future.

Increasingly rural health care into the future will need to consider a regional approach and better integration of services right across the spectrum from promoting healthy lifestyles to tertiary level care. This Framework recognises the need for a regional approach to health care and a networked model of service delivery. It recognises that improvements in health outcomes cannot be achieved in isolation – it requires a partnership approach with other health and social care providers, councils and community groups and individuals. The Framework helps to set the directions for our clinical services to support a more regional and integrated approach to health care across the District.

Implementing the Framework will be positive for the District and our staff, positive for the health system more broadly and positive for people and communities in our region. It will help us realise our vision of

Healthier rural people, thriving communities.

How to use this document

This document should guide the development of

- Clinical Services Plans
- Service or operational plans, and the planning focus of the Clinical Streams
- Clinical service design and delivery
- Development of new services and models of care
- Other health service planning to meet the needs of rural communities.

The **Planning Principles** and **Clinical Service Priorities** should underpin service planning and development of new services. This will help to meet health service needs and demand of our population. The Framework will also guide the distribution of resources.

Mid Term Review

This framework sits within a 5 year horizon. However, we will need to be agile and responsive to new information, technology and models of care. Ongoing performance monitoring and service evaluation will show progress with implementing the priorities in the CSF and their outcomes and impact. A mid-term review and refresh of the Clinical Services Framework is planned.

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