2009 NSW Young People in Custody Health Survey: Full Report

By Devon Indig, Claudia Vecchiato, Leigh Haysom, Rodney Beilby, Julie Carter, Una Champion, Claire Gaskin, Eric Heller, Shalin Kumar, Natalie Mamone, Peter Muir, Paul van den Dolder, and Gilbert Whitton

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Painted by an Aboriginal young person while in detention at the Acmena Juvenile Justice Centre. He painted the birds because they are relaxing. He also made sure they were in pairs.

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Abbreviations

AAD	American Academy of Dermatology
ABAS-II	Adaptive Behaviour Assessment System, Second edition
ABS	Australian Bureau of Statistics
ADHD	Attention Deficit Hyperactivity Disorder
AHS	Area Health Service
AIC	Australian Institute of Criminology
AIHW	Australian Institute of Health and Welfare
ALF	Australian Liver Foundation
ALP	Alkaline Phosphatase
ALT	Alanine Aminotransferase
AMS	Aboriginal Medical Service
APA	American Psychiatric Association
APS	Adolescent Psychopathology Scale
APSD	Antisocial Process Screening Device
ASOC	Australian Standard Offence Classification
AST	Aspartate Aminotransferase
AUDIT	Alcohol Use Disorders Identification Test
BBV(s)	Blood Borne Virus(es)
BMI	Body Mass Index
BOCSAR	NSW Bureau of Crime Statistics and Research
BSL	Blood Sugar Level
CCPA	Children (Criminal Proceedings) Act
CIMS	Client Information Management System
COAG	Council of Australian Governments
CSNSW	Corrective Services New South Wales
CTQ	Childhood Trauma Questionnaire
D&A	Drug and alcohol
DET	NSW Department of Education and Training
DOCS	NSW Department of Community Services
DOH	NSW Department of Health
DOHA	Department of Health, Australian Government
DMF	Decayed Missing Filled
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth edition
DUCO	Drug Use Careers of Offenders
FBC	Full Blood Count
FSIQ	Full Scale Intelligent Quotient
GESA	Gastroenterological Society of Australia
GGT	Gamma-Glutamyltransferase
GP	General Practitioner
HbA1c	Glycated Haemoglobin
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HDL	High density lipoprotein
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
HSC	Higher School Certificate
HSV1	Herpes Simplex Virus Type 1
HSV2	Herpes Simplex Virus Type 2
IQ	Intelligence Quotient
JCC	Juvenile Correctional Centre
JJ	Juvenile Justice
JJC	Juvenile Justice Centre
K10	Kessler (10) Psychological Distress Scale
K-SADS-PL	Kiddie Schedule for Affective Disorders and Schizophrenia– Present and Lifetime
LDL	Low density lipoprotein
LFTs	Liver Function Tests
MCDS	Ministerial Council on Drug Strategy
MCS	Mental Component Summary
MCV	Mean Corpuscular Volume
MMR	Measles Mumps Rubella
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NOS	Not Otherwise Specified
NSMHWB	National Survey of Mental Health and Well-Being
NSW	New South Wales
ODD	Oppositional Defiant Disorder
OOHC	Out of home care
PCR	Polymerase Chain Reaction
PCS	Physical Component Summary
PEF	Peak Expiratory Flow
PRI	Perceptual Reasoning Index
PSI	Processing Speed Index
PTSD	Post Traumatic Stress Disorder
SF-12	Short Form-12 Health Survey
SD	Standard Deviation
SDS	Severity of Dependence Scale
SSHBS	School Students Health Behaviours Survey
STI(s)	Sexually Transmissible Infection(s)
TAFE	Technical and Further Education
VCI	Verbal Comprehension Index
WAIS	Wechsler Adult Intelligence Scale
WASI	Wechsler Abbreviated Scale of Intelligence
WISC	Wechsler Intelligence Scale for Children
WHO	World Health Organization
WMI	Working Memory Index
YPICHS	Young People in Custody Health Survey

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Foreword

Juvenile Justice and Justice Health have worked in partnership to look after the health and rehabilitation of young people in juvenile detention since 2003. Just prior to Justice Health taking on the responsibility of managing the healthcare of young people in custody, Juvenile Justice with research and clinical support provided by Justice Health conducted a health survey assessing the health status of young people in custody (the 2003 NSW Young People in Custody Health Survey). Similarly, Juvenile Justice, Justice Health and the University of Sydney collaborated on a health survey of young people on community orders from 2003-2006 (2003 Young People on Community Orders Health Survey). These surveys illustrated the social disadvantage and poor physical and mental health status of young people in contact with the criminal justice system. The findings from these surveys have been used extensively to inform policy development and service delivery enhancements to improve the health status of young people in custody.

In the past decade the number of young people in juvenile detention has steadily increased in New South Wales (NSW) to nearly 450 at any point in time, despite gradual decreases across Australia as a whole. The increase in NSW is due mainly to changes in the criminal justice system's response to offending, rather than changes in offending itself, having a greater effect on the most marginalised. An increasing number of young people in custody are on remand and stay in custody for less than a week. There has been an increase in the number of young people who are of Aboriginal origin, who comprise approximately half of young people in custody, despite making up around 4% of the adolescent community in NSW.

The 2009 NSW Young People in Custody Health Survey (YPICHS) has been developed and implemented in partnership between Juvenile Justice and Justice Health. The 2009 YPICHS retains many of the same questions and instruments used in the 2003 YPICHS to enable assessment of trends over time. Importantly, the 2009 YPICHS has incorporated a 3, 6 and 12-month follow-up survey and a five year data linkage study which will provide a more comprehensive picture of the health of young people who come into contact with the criminal justice system.

Key findings of the report highlight the disadvantaged backgrounds of young people in custody. Nearly half (45%) had parents with a history of incarceration, with Aboriginal young people twice as likely to have a parent who had been imprisoned. Six in ten young people had a history of some form of child abuse or trauma, with young women being nearly twice as likely to have a history of abuse as young men. The majority (87%) of young people were found to have at least one mental health diagnosis and most had significant problems with alcohol or other drugs (78% were risky drinkers; 89% had ever used illicit drugs, of which 65% had used drugs at least weekly in the year prior to custody).

This survey would not have been possible without the primary funding provided by Juvenile Justice and the NSW Health Centre for Aboriginal Health, while Justice Health also provided financial and operational support. Juvenile Justice and Justice Health are committed to providing the best possible services to improve the health and well-being of vulnerable young people in contact with the criminal justice system. The findings of this study will inform targeted interventions and programs to improve health and reduce recidivism. At the heart of our efforts is our dedication to helping young people in contact with the criminal justice system to have more opportunities for good health and a brighter future.

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Executive Summary

Introduction

In 2003, the NSW Department of Juvenile Justice (now Department of Human Services - Juvenile Justice, but referred to in this report as Juvenile Justice), with research and clinical support provided by Justice Health (previously known as Corrections Health Service), conducted the first Young People in Custody Health Survey (YPICHS) among 242 young people. The survey highlighted the social disadvantage, poorer physical and mental health and high prevalence of risk behaviours such as alcohol and drug abuse among participants. The findings from the survey were utilised by Juvenile Justice and Justice Health (who became responsible for the health of young people in custody in February 2003) to guide policy and program development, including providing important evidence to support applications for additional funding.

Juvenile Justice and Justice Health worked together to repeat the YPICHS survey in 2009. The primary aim of the 2009 YPICHS was to gain a picture of the health status of young people in juvenile detention across NSW, including monitoring trends in health status and risk factors between 2003 and 2009. The 2009 YPICHS included the following components:

- Baseline Survey including a health questionnaire, physical health examination (including blood and urine tests), dental examination, offending behaviour and psychological assessment
- Follow-up Surveys at 3, 6 and 12 months
- Data linkage over five years for key health and offending data collections

This report presents main findings for the baseline survey only, with results presented by gender and Aboriginality. Where possible, comparisons are made with indicators collected in 2003. Future reports will include the findings from the follow-up surveys and the data linkage study.

Background

The population of young people in juvenile detention in NSW has increased steadily in the past decade and currently comprises just under 450 young people at any point in time. Aboriginal young people are disproportionately represented among young people in juvenile detention, comprising approximately 50% of detainees, despite making up approximately 4% of the general adolescent community in NSW. The length of stay for most young people is short, with 57% of young people in 2008/2009 staying in custody for a week or less (Juvenile Justice, 2009). In each of the past two years, there have been approximately 5,000 admissions into custody at Juvenile Justice, with many young people being detained multiple times in a year (Juvenile Justice, 2009).

Justice Health (NSW) is responsible for providing health care to adults and young people who come into contact with the criminal justice system. For young people, this includes the following four key areas:

- Pre-custody: including diversion of young people with mental illness and/or drug or alcohol problems in the juvenile court system away from custody into treatment, through the Adolescent Community and Court Team (in seven children's courts) and the Youth Drug and Alcohol Court.
- Custody: for juvenile detainees (in nine Juvenile Justice Centres and one Juvenile Correctional Centre). The health care provided includes screening, triage, treatment and monitoring in areas such as primary health, population health, sexual health, mental health, drug and alcohol and Aboriginal health.
- Inpatient: inpatient healthcare services provided by the Forensic Hospital (primarily responsible for mentally unwell people), which includes an adolescent ward.
- Post-release: including the Community Integration Teams which assist in integrating people with a drug and alcohol problem and/or mental health issues into community-based services.

Juvenile Justice is responsible for providing services to young offenders to decrease their offending and increase their capacity to successfully integrate into their communities. Examples of these services include:

- Assessment and intervention services for young offenders remanded into custody or sentenced to community-based or custodial orders
- Supervision and rehabilitation of young offenders on bail or sentenced to community-based or custodial orders
- Administration of youth justice conferences and programs to assist young people to integrate into their communities
- Support for young offenders to meet the conditions of bail
- Psychological assessment and treatment for young people with mental health disorders, alcohol and other drug abuse and/or intellectual disability. These services can be provided before, during and after custody.

Juvenile Justice and Justice Health have a strong commitment to their partnership in assisting young people in contact with the criminal justice system to improve their health and expand their opportunities for engaging in their communities. This commitment is assisted by extensive partnerships with government and non-government health and human service agencies to support the needs of young people in contact with the (juvenile) justice system.

Methodology

The 2009 YPICHS took place between August and October 2009 across all nine Juvenile Detention Centres operated by Juvenile Justice and the one Juvenile Correctional Centre operated by Corrective Services NSW. The baseline survey components included a health questionnaire, a physical health examination, a dental examination, offending behaviour and psychological assessment. A total of N=361 young people participated in the survey, which represented 80% of all young people in custody and 95% of young people approached to participate in the study. The sample was 88% male, 48% of Aboriginal origin, with an average age of 17 years.

Ethics approvals were obtained from the Justice Health Human Research and Ethics Committee, the Juvenile Justice Research Committee, the Corrective Services NSW ethics committee and the Aboriginal Health and Medical Research Council ethics committee. All participants provided informed consent to participate (including seeking parental consent if aged less than 14 years). Implementing the survey components took nearly a full day for the young people, who were provided with food and drink during the day and reimbursed with $10 for their involvement.

Key Findings

Social Determinants

- The majority (89%) of participants had been born in Australia, with more young women (95%) born in Australia than young men (88%). Among non-Aboriginal young people, 79% had been born in Australia. Similarly, 86% of participants grew up speaking English, including all (100%) young women and 84% of young men. Just under three-quarters (72%) of non-Aboriginal young people grew up speaking English.
- A high proportion of young people had been removed from their families with 27% of participants ever being placed in care. Significantly more young women than young men (40% vs 25%) and significantly more Aboriginal than non-Aboriginal (38% vs 17%) young people had a history of out of home care.
- Few young people (38%) were attending school prior to custody. Aboriginal young people were more often attending school than non-Aboriginal young people (42% vs 34%). Among those who had left school, the average age they left was 14.4 years, with Aboriginal young people leaving school at a significantly younger age than non-Aboriginal young people (14.0 vs 14.7 years).
- Just over a quarter (26%) of young people were working in the six months prior to custody, with significantly more young men than young women (28% vs 13%) and significantly more non-Aboriginal than Aboriginal young people (34% vs 17%) working.
- Accommodation was a significant issue for young people with young women significantly more likely to have problems with their accommodation than young men, including being more likely to have unsettled accommodation (18% vs 4%) and moving four or more times in the previous six months (23% vs 8%).
- Aboriginal young people were significantly more likely to come from a rural area than non-Aboriginal young people (71% vs 23%).
- Parental imprisonment was common with nearly half (45%) of young people ever having a parent in prison and 10% having a parent currently in prison. Significantly more Aboriginal than non-Aboriginal young people ever had a parent in prison (61% vs 30%) or currently had a parent in prison (16% vs 4%).
- Over a quarter (27%) of young people had ever been bullied, with no significant differences by gender or Aboriginality. Over half (52%) of participants had ever bullied others, with a significantly higher proportion of Aboriginal young people reporting bullying others than non-Aboriginal young people (55% vs 50%).

Offending behaviour

- Over two-thirds (79%) of the young people had a history of previous juvenile detention, with significantly more Aboriginal than non-Aboriginal young people having a detention history (85% vs 73%). Aboriginal young people were also significantly more likely to have had their first juvenile detention at a younger age (13.6 vs 14.9 years) and to have been in detention more times (6.4 vs 4.1) than non-Aboriginal young people.
- Just under half (45%) of young people were currently on remand, with significantly higher proportions of young women than young men (69% vs 42%) on remand.
- Nearly all (97%) young people admitted to ever committing some offence, with the most common offences being stealing (84%), possession of illicit drugs (77%), vandalising property (76%), or assaulting someone (75%). Aboriginal young people admitted to committing significantly more types of crime (7.7 vs 6.4) than non-Aboriginal young people.

Physical health

- Being overweight was a common issue with four in ten young people (42%) being overweight or obese. Significantly more non-Aboriginal young people were found to be overweight than Aboriginal young people (49% vs 36%). The majority (84%) of young people reported playing sport or doing other exercise prior to custody, with 69% exercising at least twice a week.
- Poor nutrition is a common risk factor for disadvantaged young people. The diet of young people improved while in custody: eating fresh fruit three or more times a week increased from 43% in the community to 90% in custody; and eating vegetables three or more times a week increased from 57% in community to 77% in custody.
- Audiometry testing revealed that 18% of young people had mild to moderate hearing loss in one or both ears, with a further 32% having at least one ear with a degree of hearing loss. Significantly more young women than young men (53% vs 35%) reported a history of ear infection.
- Young women were significantly more likely than young men (28% vs 8%) to report their health as fair or poor. Young women were also more likely (35%) to report having a disability or illness which bothered them for six months or more, compared with 20% of young men.
- Just under one in four (23%) young people reported ever having asthma, which was more common in young women than young men (30% vs 22%).
- A high proportion (37%) of young people reported currently taking medications, including 48% of young women and 35% of young men. The most common medication reported was for mental illness.
- Oral health was often found to be inadequate. Aboriginal young people brushed their teeth significantly less often than non-Aboriginal young people, with 65% indicating they brushed their teeth two or more times per day, compared with 78% of non-Aboriginal young people. The majority (56%) of young people indicated their last dental visit took place in custody, with significantly more young men reporting this than young women (58% vs 42%). When an oral health examination was performed, nearly half (49%) of participants were found to have moderate to abundant plaque, with significantly more Aboriginal young people (60%) than non-Aboriginal young people (40%) having a substantial amount of plaque.
- One-third (32%) of young people reported having ever had a head injury with a loss of consciousness, with no significant differences by gender or Aboriginality. Nearly two-thirds (64%) of participants reported that they had been in a physical fight in the past six months.
- Having a tattoo was found among nearly one-third (32%) of participants, with significantly more non-Aboriginal young people having a tattoo compared to Aboriginal young people (39% vs 25%). Nearly twice as many young men had a tattoo as young women (34% vs 18%).
- Early initiation to sex and unsafe sex were very common. Almost all (95%) young people reported having had sex. Nearly a third (30%) of young women had ever been pregnant. Aboriginal young people were significantly more likely to have a child of their own than non-Aboriginal young people (12% vs 5%) and to have had sex at a younger age than non-Aboriginal young people (13.1 vs 13.6 years). Approximately two in five (39%) young people reported always using condoms with casual partners.
- Detection rates of sexually transmissible infections were low with early screening and treatment routine in custody. Nine young people (all male except one female) were found to have chlamydia, four young men were found to have gonorrhoea and none were found to have syphilis. Just over one-third (35%) of young people reported ever having symptoms of a sexually transmissible infection. The majority of these were cold sores. On testing, 76% had been exposed to Herpes Simples Virus type 1 or 2 which can cause cold sores or genital herpes.
- Hepatitis C antibodies were detected in four young women, who all had a history of injecting drug use. Hepatitis B core antibodies were detected in six young men, one of whom was also hepatitis B surface antigen positive. Over two-thirds (67%) of young people had vaccine-conferred immunity to hepatitis B, with significantly more non-Aboriginal young people being immune than Aboriginal young people (73% vs 61%). No young person was found to be HIV positive.

Smoking, alcohol and illicit drugs

- Nearly all young people in detention had ever smoked cigarettes. Significantly more Aboriginal young people reported ever having smoked cigarettes (99% vs 90%), and starting smoking at a significantly younger age (11.7 vs 12.7 years). Young women who smoked were significantly more likely to smoke 20 or more cigarettes a day than young men (71% vs 42%). Just under half (46%) of participants indicated they currently smoked or will smoke when they are released, since smoking is prohibited in juvenile detention centres. Aboriginal young people were significantly more likely to report their parents currently smoked than non-Aboriginal young people (90% vs 67%).
- The majority (93%) of young people had ever been drunk, with significantly more Aboriginal young people reporting being drunk (97% vs 89%) and being drunk for the first time at a younger age (13.2 vs 13.6 years) than non-

Aboriginal young people. Two-thirds (66%) of young people reported being drunk at least weekly in the year prior to custody. A high proportion (78%) of young people were found to be risky drinkers, with significantly more Aboriginal young people drinking at risky levels than non-Aboriginal young people (83% vs 73%). Six in ten (61%) young people identified that their alcohol consumption had caused them problems in the past year, with significantly more Aboriginal young people identifying this than non-Aboriginal people (71% vs 52%). Many of the young people indicated they thought their parents had problems with alcohol, which was significantly higher for young women than young men.

- Most (89%) young people in custody reported ever using illicit drugs, with significantly higher rates among Aboriginal young people (93% vs 85%). The most common illicit drug used was cannabis (87%) followed by ecstasy (41%) and amphetamines (29%). Approximately two-thirds (65%) of young people used illicit drugs at least weekly in the year prior to custody, with significantly more Aboriginal young people reporting weekly drug use than non-Aboriginal people (72% vs 58%); predominantly cannabis. Less than half (45%) reported that their drug use caused them problems in the past year.
- Two-thirds (65%) of young people reported ever committing crime to obtain drugs or alcohol and a similar proportion (69%) were intoxicated at the time of their offence. Seven percent of young people reported ever injecting drugs, with significantly more young women than young men having a history of injecting (18% vs 6%). Significantly more young women had ever received drug and alcohol treatment than young men (38% vs 21%).

Mental health

- The majority (87%) of young people were found to have at least one psychological disorder, and nearly three-quarters (73%) were found to have two or more psychological disorders. Young women were significantly more likely than young men to have an attentional or behavioural disorder (82% vs 68%), an anxiety disorder (54% vs 28%), a mood disorder (56% vs 19%) or two or more psychological disorders (92% vs 70%). Aboriginal young people were significantly more likely than non-Aboriginal young people to have an attention or behavioural disorder (75% vs 65%) or an alcohol or substance use disorder (69% vs 58%).
- Young women were also significantly more likely to have high psychological distress (55% vs 24%), to have ever attempted suicide (23% vs 8%), to have ever self-harmed (35% vs 14%) and to have ever been admitted to a psychiatric unit (28% vs 6%).
- Over half (60%) of young people had a history of child abuse or trauma. Significantly more young women reported a history of abuse than young men (81% vs 57%). A high proportion of young women had been physically (61%) or sexually abused (39%).
- Intellectual ability in the range indicating possible intellectual disability was common. One in five (20%) Aboriginal young people were assessed as having a possible intellectual disability (IQ scores less than 70); a significantly greater proportion than the 7% found for non-Aboriginal young people. One-third (32%) of the young people scored in the borderline range for intellectual ability (IQ 70 to 79); again, a higher proportion of Aboriginal than non-Aboriginal young people were affected (39% vs 26%).

Conclusions

Young people in custody experience multiple health problems, including mental illness and drug and alcohol abuse. Their poorer health and risk-taking behaviours mean that for these young people, there is an increased likelihood of developing chronic diseases. Improving their health status is challenging. A significant proportion of young people in custody have parents with a history of incarceration, drug and alcohol dependence and low socio-economic status. Childhood abuse and neglect limits psycho-social development, and contributes to higher rates of mental illness, drug and alcohol abuse, early school leaving and anti-social behaviour. These factors result in social exclusion. Many of these social determinants, health problems and risk behaviours are significantly worse for Aboriginal young people in custody. Custody provides an opportunity to assess health needs, provide social and emotional support, and improve life skills and health status for this highly disadvantaged population. These improvements need to be sustained and developed further upon release into the community. Juvenile Justice and Justice Health are committed to using the findings of this research to guide policy and practice to improve the health and well-being of this disadvantaged group of young people.

Table i Summary of 2009 YPICHS key indicators

Indicator	Young Men	Young Women	Aboriginal	Non-Aboriginal	Total
Social determinants					
Born in Australia	87.5	95.0	99.3	78.5	88.5
English spoken when growing up	83.5	100.0	100.0	72.4	85.6
Placed in care aged <16 years	25.4	40.0#	38.3	17.2^	27.2
Attending school prior to custody	38.2	35.9	42.3	34.0	37.9
Age left school (mean)	14.5	14.1	14.0	14.7^	14.4
Working in six months prior to custody	27.6	12.8#	17.0	33.8^	25.7
Unsettled or 'no fixed abode' accommodation prior to custody	4.4	17.5#	6.0	6.1	6.1
Moved four or more times in six months prior to custody	8.0	22.5#	11	6	17
Rural (vs. urban) place of residence in year prior to custody	45.6	45.0	70.5	22.7^	45.5
Have children	8.3	7.5	11.7	4.9^	8.2
Parent ever in prison	44.1	47.5	61.1	29.5^	44.6
Parent currently in prison	10.0	10.0	16.1	4.3^	9.9
Ever been bullied	40.0	25.6	25.3	29.5	27.4
Ever bullied others	51.3	60.0	55.2	49.7^	52.4
Offending behaviour					
Previous juvenile detention custody	78.1	83.3	84.5	73.3^	78.7
Age first time in juvenile detention custody (mean)	14.3	14.3	13.6	14.9^	14.3
Number of times in juvenile detention custody (mean)	5.1	6.0	6.4	4.1^	5.2
Currently on remand	42.3	69.1#	46.0	44.9	45.4
Admit to any offence	96.6	100.0	99.3	94.9^	97.4
Number of crimes admitted to (mean)	7.0	6.8	7.7	6.4^	7.0
Physical health					
Disability or illness that bothered them for more than six months	20.2	35.0#	22.8	21.5	22.1
Currently taking medication	35.2	47.5	39.2	34.6	36.8
Ever have asthma	22.3	30.0	23.4	23.2	23.3
Ever have head injury with loss of consciousness	32.3	32.5	33.8	30.9	32.2
Overweight/obese	41.3	50.0	36.2	48.7^	42.4
Played sport/other exercise prior to custody	84.5	82.5	88.2	80.6	84.2
Exercised at least twice a week prior to custody	69.4	65.0	73.5	64.4	68.8
Eat fresh fruit three or more times a week, prior to custody	43.3	40.0	45.8	40.1	42.9
Eat fresh fruit three or more times a week in custody	88.7	95.0	86.9	92.0	89.5
Eat vegetables three or more times a week, prior to custody	55.6	62.5	60.1	53.1	56.5
Eat vegetables three or more times a week in custody	76.6	76.9	76.5	77.0	76.8
Hearing loss in at least one ear	17.6	23.6	19.2	17.4	18.4
Previous ear infection	35.2	52.6#	35.3	39.2	37.3
Fair/poor self-rated health	8.0	27.5#	11.1	9.8	10.4
Brushing teeth two or more times a day	80.4	82.5	65.6	78.0^	71.9
Last dental visit in custody	58.1	42.1	55.0	57.0	56.0
Moderate to abundant plaque	49.8	42.3	60.0	39.9^	49.2
Physical fight in past six months	62.8	72.5	68.4	59.9	64.0
Have any tattoos	34.3	17.5#	25.3	38.7^	32.2
Ever have sex	95.0	92.5	96.8	92.6	94.6
Age at first sex (mean)	13.3	13.6	13.1	13.6^	13.4
Ever been pregnant (women only)	-	-	28.6	31.6	30.0
Always use condoms with casual sexual partners	39.3	37.5	40.0	38.1	39.1
Ever have a sexually transmitted infection	35.0	37.8	38.3	32.4	35.3

Indicator	Young Men	Young Women	Aboriginal	Non-Aboriginal	Total
HIV positive	0.0	0.0	0.0	0.0	0.0
Hepatitis C antibody positive	0.0	21.1#	1.0	2.8	1.9
Hepatitis B core antibody positive	2.4	0.0	3.8	0.7	2.2
Hepatitis B surface antigen positive	0.4	0.0	0.8	0.0	0.4
Hepatitis B surface antibody positive	69.3	61.1	64.0	73.3	68.8
Vaccine-conferred hepatitis B virus immunity	67.2	61.1	60.8	72.5^	66.8
Smoking, alcohol and Illicit drugs					
Ever smoked cigarettes	93.5	97.5	98.7	89.6^	94.0
Age first smoked cigarettes (mean)	12.3	11.5	11.7	12.7^	12.2
Smoke more than 20 cigarettes a day prior to custody	41.8	71.0#	41.5	50.8	46.0
Currently smoke/plan to smoke when released from custody	42.6	67.5#	52.0	39.8	45.7
Parents current smokers	77.5	82.0	90.0	66.9^	78.1
Ever been drunk	92.6	95.0	96.7	89.2^	92.9
Age first drunk (mean)	13.5	12.9	13.2	13.6^	13.4
Drunk at least weekly in year prior to custody	66.0	68.4	69.2	63.3	66.4
Drinking alcohol at risky levels	77.2	84.2	83.4	72.7^	78.1
Alcohol consumption caused problems in the past year	59.5	73.7	70.9	51.7^	61.3
Mother has problems due to alcohol	11.2	30.0#	18.2	9.2^	13.6
Father has problems due to alcohol	16.6	30.0#	20.1	16.6	18.3
Ever used illicit drugs	87.4	97.5	92.9	84.7^	88.6
Ever used cannabis	85.9	95.0	92.9	81.6^	87.1
Ever used ecstasy	39.7	50.0	34.4	47.2^	41.0
Ever used amphetamines	26.7	47.5#	29.2	29.5	29.3
Used illicit drugs at least weekly in year prior to custody	65.0	65.0	72.1	58.3^	65.0
Illicit drug use caused problems in the past year	43.7	50.0	50.0	39.3	44.5
Ever committed crime to obtain drugs or alcohol	66.1	60.0	73.2	57.7^	65.3
Intoxicated at time of offence	68.1	73.7	73.4	64.4	68.9
Ever inject drugs	5.5	17.5#	7.5	6.7	7.0
Ever receive treatment for alcohol or other drug use	20.5	37.5#	24.8	20.6	22.7
Mental health					
Any psychological disorder	85.8	92.3	92.1	81.7	86.7
Any attention or behavioural disorder	67.7	82.1#	75.0	64.7^	69.6
Any alcohol or substance disorder	63.4	64.1	69.3	58.2^	63.5
Any anxiety disorder	28.3	53.8#	34.3	29.4	31.7
Any mood disorder	18.5	56.4#	22.1	24.8	23.5
Any schizophrenia or psychotic disorder	4.7	10.3	7.9	3.3	5.5
Two or more psychological disorders	69.7	92.3#	79.3	66.7	72.7
High psychological distress	23.8	55.0#	25.7	29.8	27.8
Ever attempt suicide	7.6	22.5#	10.5	8.6	9.5
Ever self-harm	13.5	35.0#	17.6	14.8	16.2
Ever admitted to a psychiatric unit	6.2	27.5#	11.1	6.8	8.9
Any childhood abuse or neglect	56.8	80.5#	58.9	60.9	59.9
Physical abuse as a child	30.8	61.0#	33.1	36.5	34.9
Sexual abuse as a child	5.3	39.0#	10.6	9.0	9.9
Extremely low IQ (<70)	14.8	5.1	20.3	6.8^	13.6
Borderline IQ (70-79)	33.2	25.6	38.5	25.9^	32.2

* All figures are percentages unless otherwise noted.
# Statistically significant difference (p<0.05) between young men and young women.
^ Statistically significant difference (p<0.05) between Aboriginal and non-Aboriginal young people.

Table ii Comparing 2003 YPICHS and 2009 YPICHS key indicators

Indicator	2003 YPICHS	2009 YPICHS
Social determinants		
Aboriginal origin	41.7	47.8
Born in Australia	85.1	88.5
English spoken when growing up	80.2	85.6
Placed in care aged <16 years	28.4	27.2
Attending school prior to custody	18.5	37.9
Attending school in custody	78.8	81.8
Attending TAFE in six months prior to custody	29.5	23.8
Working in six months prior to custody	38.7	25.7
Allowances or benefits received in six months prior to custody	46.7	45.0
Unsettled or 'no fixed abode' accommodation prior to custody	8.0	6.1
Have children	10.1	8.2
Parent ever in prison	42.9	44.6
Live with someone with physical, mental or emotional problem that affects daily life	18.6	26.0
Have no close friends	22.0	3.5
Ever been bullied	19.6	27.4
Ever bullied others	50.9	52.4
Offending behaviour		
Previous juvenile detention custody	72.3	78.7
Physical health		
Physical Component Score (SF-12)	53.9	56.7
Mental Component Score (SF-12)	49.0	43.5
Disability or illness that bothered them for more than six months	20.4	22.1
Currently taking medication	40.0	36.8
Ever have asthma	30.4	23.3
Ever have injury requiring medical attention	83.6	74.8
Ever have head injury with loss of consciousness	36.3	32.2
Ever examine testicles for lumps	34.3	48.3
Overweight or obese (BMI 25.0+)	25.8	42.4
High systolic blood pressure (>130 mm/HG)	9.4	3.3
High diastolic blood pressure (>80 mm/HG)	5.2	5.4
HIV positive	0.0	0.0
Hepatitis C antibody positive	9.1	1.9
Hepatitis B core antibody positive	11.2	2.2
Hepatitis B surface antigen positive	4.0	0.4
Moderate to abundant plaque	19.0	49.2
Never played sport/other exercise prior to custody	2.7	15.8
Have at least one tattoo	37.4	32.2
Have at least one body piercing	34.2	44.8
Ever have sex	92.9	94.6
Smoking, alcohol and illicit drugs		
Ever smoked cigarettes	94.2	94.0
Age first smoked cigarettes (mean)	12.0	12.2
Ever been drunk	85.4	92.9
No alcohol in year prior to custody	12.8	2.3
Ever used illicit drugs	90.6	88.6
Used illicit drugs at least weekly in year prior to custody	78.6	65.0
Illicit drug use caused problems in the past year	47.3	44.5
Ever inject drugs	19.4	7.0
Ever receive treatment for alcohol or other drug use	23.0	22.7
Mental health		
Current mental health problems for which treatment not being received	13.7	15.6
High psychological distress	29.8	27.8
Ever thought about suicide	19.2	15.9
Ever attempt suicide	8.4	9.5
Ever thought about self-harm	18.2	20.7
Extremely low full scale IQ (<70)	17.4	13.6
Any childhood abuse or neglect	68.1	59.9
Any severe childhood abuse or neglect	25.0	22.8

* All figures are percentages unless otherwise noted.

Introduction

In 2003, the (then) NSW Department of Juvenile Justice conducted the 2003 Young People in Custody Health Survey (YPICHS). This was the first comprehensive survey assessing the health of juvenile detainees in NSW and was used to inform policy development and service enhancements. Key findings of the survey included: high levels of mental illness, drug and alcohol abuse and poor physical health. Multiple areas of social disadvantage were found, including a large proportion of young people with parents who had been incarcerated or were currently incarcerated, and a high proportion of young people who had been placed in care as a child.

The 2003 YPICHS identified high rates of mental illness among young people. These findings were used to successfully gain funding to extend the adult Court Liaison Scheme (which diverts offenders with a mental illness into mental health treatment under the Mental Health Forensic Provisions Act rather than custody) into a number of NSW Children's Courts. It also supported enhanced mental health services in juvenile custodial settings and the development of the Community Integration Team which assists young people leaving custody to engage with health, drug and alcohol and social services in the community.

In February 2003, during the data collection phase of the 2003 YPICHS, the NSW State Government transferred the care and management of the health services provided to the detainees in Juvenile Justice Centres from the Department of Juvenile Justice to NSW Health. Justice Health (previously known as Corrections Health Service), a division of NSW Health, commenced the provision of services on 10 February 2003. A strong partnership formed between Justice Health and Juvenile Justice to ensure the best possible health care was provided to young people while they were in custody. This partnership provided the solid foundation for implementing the 2009 YPICHS, which included investigators and staff involved in the original 2003 YPICHS. The 2009 YPICHS used a similar baseline instrument to the 2003 YPICHS, with the notable change of a diagnostic instrument for mental illness. The 2009 YPICHS also extended the methodology of the 2003 YPICHS to include a 3, 6 and 12 month follow-up of the young people and a five year data linkage of participants to key health and criminal justice databases to investigate long-term impacts of incarceration.

This report presents main findings of the baseline survey, including comparisons with the 2003 YPICHS where possible. It provides the data broken down by gender and Aboriginality and assesses the statistical significance of differences between these groups. In recognition of Aboriginal people being the original inhabitants of NSW this report refers to Aboriginal people throughout; reference to Aboriginal people in the report is inclusive of Torres Strait Islander people. The term Indigenous is used only when referring to national data.

This report presents main findings of the baseline survey, including comparisons with the 2003 YPICHS where possible. This snapshot of young people in custody provides evidence to guide policies and programs designed to improve the health of this particularly vulnerable sub-population. It provides the information broken down by gender and Aboriginality and assesses the statistical significance of differences between these groups.

Methods

Background

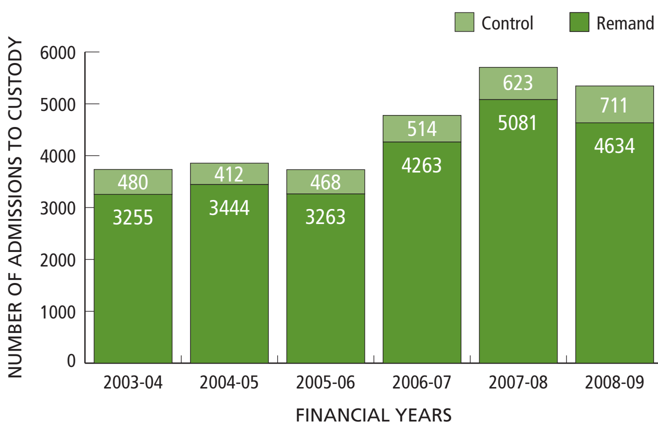
A small proportion of the state's adolescent population have the experience of being incarcerated. The 2008/09 Juvenile Justice Annual Report states that for every 1000 people aged 10-17 who resided in NSW:

- 13.5 young people had a criminal matter finalised in the Children's Court;
- 11 young people were convicted and/or sentenced in these finalised matters;
- 3.3 young people were given sentences requiring Juvenile Justice to supervise them in their community; and
- One young person was sentenced to detention.

Juvenile Justice is responsible for the supervision of young offenders who receive community-based orders or custodial sentences from the courts. These young offenders are primarily young men aged 16 to 17 years, but include all young offenders who committed their offence between the ages of 10 and 17 years. Some young offenders stay in Juvenile Justice supervision up until the age of 21 years, while others are transferred to adult prison at 18 years of age.

In the financial year 2008/09 in NSW, a total of 711 young people were sentenced to custody and 4,634 were admitted on remand (i.e. were held in custody because they were refused bail or unable to meet conditions of their bail).

Figure i Annual admissions to Juvenile Justice Centres 2003/04-2008/09



Note:

1. Source: Juvenile Justice Strategic Information System (SIS), as at 30 October 2010.
2. Remand to control are admissions on remand which become control orders during a continuous period of custody.

Since the publication of the 2003 YPICHS, admissions to custody have been steadily increasing in NSW, with the exception of a small decrease in 2008/09. In particular, there was a significant increase in the remand population over 2006/07 to 2007/08. In 2008/09, the average length of stay for juveniles sentenced to a custodial order was 177 days (median 124 days) and the average length of stay on remand was 13.2 days (median 1 day) (Juvenile Justice, 2009)

The average daily number of young people in custody in 2008/09 was 427; substantially higher than the average daily number of 272 in 2003 (Juvenile Justice, 2009). Approximately 31 (7.3%) of these 427 young people were young women; 205 (48%) were Aboriginal, and 200 (46.8%) were serving a sentence, or control order.

There are nine dedicated Juvenile Justice Centres (JJC) across NSW operated by Juvenile Justice (JJ) and one maximum security Juvenile Correctional Centre (JCC) run by Corrective Services NSW (CSNSW), as outlined in the table below.

Centre	Operated by	Location	Gender	Remand/control	Bed capacity
Acmena	JJ	Grafton	Male	Both remand/control	30
Broken Hill	JJ	Broken Hill	Both male/female	Short term remand	8
Cobham	JJ	St Mary's	Male	Primarily remand	85
Emu Plains	JJ	Emu Plains	Male	Short-term remand	40
Frank Baxter	JJ	Kariong	Male, 16+ years	Primarily control	120
Juniperina	JJ	Lidcombe	Female	Both remand/control	46
Orana	JJ	Dubbo	Male	Both remand/control	45
Reiby	JJ	Airds	Male, <16 years	Both remand/control	45
Riverina	JJ	Wagga Wagga	Male	Both remand/control	45
Kariong	CSNSW	Kariong	Male, 16+ years	Both remand/control	36

Sampling and recruitment

The 2009 YPICHS was conducted between August and October 2009 in eight Juvenile Justice Centres and one Juvenile Correctional Centre (eight male and one female). Broken Hill JJC was not included as it was not logistically possible to complete the survey at this Centre.

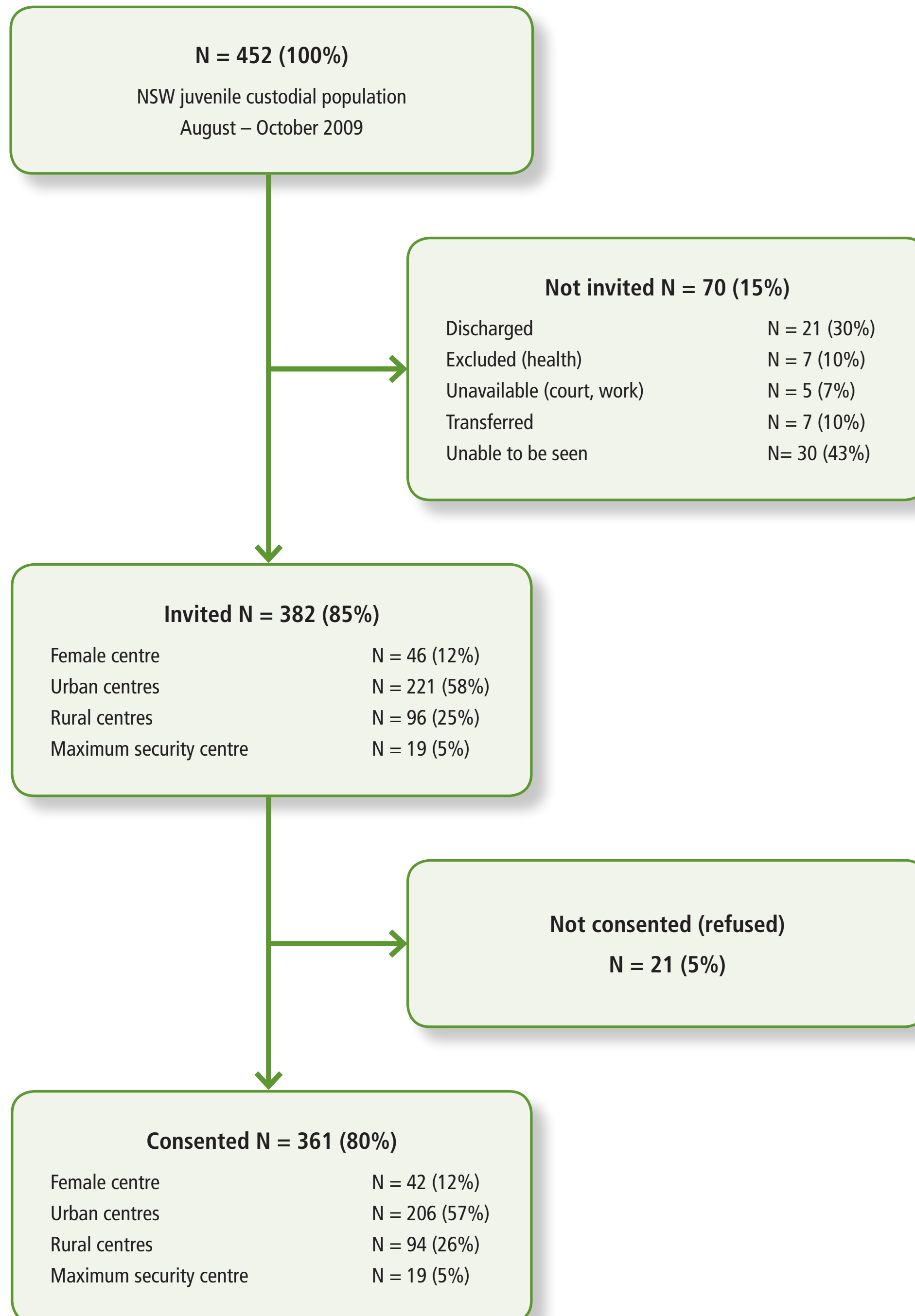
The sampling framework for the 2009 YPICHS was consistent with that used in 2003. A cross-sectional design was used. In order to maximise the number of overall participants in the 2009 survey, in particular female participants, the data collection phase was four weeks longer. A frequent and valid criticism of the 2003 YPICHS was the small number of female participants (n=19), which limited the analyses and comparisons that could be performed for this sub-population. In 2009, over-sampling techniques were used at the young women's Centre in order to address this issue.

Response rates

A schedule of testing was agreed by Juvenile Justice and Justice Health, and time for each Centre allocated based on the daily average number of young people in custody at each Centre. All young people in the Centre at the beginning of each test week were considered eligible for participation. Two interview teams were available at any one time, allowing for testing to be completed in Centres concurrently. Testing at the young women's centre was completed at the beginning, middle and end point of the data collection phase, to fulfil the over-sampling criteria.

The exclusion criteria for participation were: those who did not speak sufficient English; those who had an intellectual disability or mental illness that prevented them from consenting to participate in the research; and those who were unable to be seen due to operational restrictions imposed by the Centre. Some young people were unable to participate because they were attending court, work, or were otherwise unavailable at the time the survey was implemented.

Figure ii Flowchart for 2009 NSW YPICHS Sample



During the data collection phase, a total of 452 young people were estimated to be available for potential participation in the 2009 YPICHS. Of these, 361 took part, representing 80% of all young people in custody during this time period, and 95% of those approached to participate in the survey.

Participants were asked during the YPICHS whether they identified as being of Aboriginal and/or Torres Strait Islander origin. This information was then compared with data in the Juvenile Justice Client Information Management System (CIMS), which is the internal operational database. There was very little disagreement between CIMS information and the participants' self-report, with slightly more identification by self-report. Therefore, the participant's self-identified Aboriginality has been used in this report. For the 48 participants who only took part in the dental examination (and therefore were not asked whether they identified as being of Aboriginal and/or Torres Strait Islander origin), this was determined using CIMS data.

Response rates were calculated based on the number of participants divided by the number of participants plus the individuals who refused to participate. Response rates ranged from 89% at Reiby JJC (which houses young men under the age of 16 years, and had a number of refusals related to the testing phase coinciding with the religious celebration of Ramadan) to 100% at Acmena JJC, Emu Plains JJC, Orana JJC, and Kariong JCC. The overall response rate of 95% for this survey is higher than that of the 2003 YPICHS, which was 76%.

Table iii Participants and response rate by Juvenile Justice Centre

	Participants (N=)	Refusals (N=)	Response rate (%)
Acmena	29	0	100.0
Baxter	86	6	93.5
Cobham	49	4	92.5
Emu Plains	30	0	100.0
Juniperina	42	4	91.3
Kariong	19	0	100.0
Orana	36	0	100.0
Reiby	41	5	89.1
Riverina	29	2	93.5
Total	**361**	**21**	**94.0**

Not all young people participated in each component of the 2009 YPICHS. Among the 361 participants, the table below outlines the number who took part in the different survey components, broken down by gender and Aboriginality:

Table iv Participants by survey component

	Male (N=)	Female (N=)	Aboriginal (N=)	Non-Aboriginal (N=)	Total (N=)
Health questionnaire	278	40	154	164	318
Urine testing	258	21	136	143	279
Blood testing	258	21	136	143	279
Dental exam	298	26	150	174	324
Psychological testing	254	39	140	153	293
Antisocial process screening device	267	41	151	157	308
IQ testing	256	39	148	147	295
Childhood trauma questionnaire	266	41	151	156	307
Criminal history questionnaire	267	41	151	157	308
Total	**319**	**42**	**187**	**174**	**361**

Note: The majority of the blood tests (71%) were from a fasting sample.

Juvenile Justice provided some basic administrative data about non-participants, to help determine whether the sample was representative of all young people in custody at the time the survey was implemented. The table below illustrates that the participant sample was representative for young people by gender and age. However, participants in the survey were more likely than non-participants to be of Aboriginal origin or to come from a rural juvenile detention centre. This over-representation of Aboriginal young people in custody is not expected to bias the results presented in this report.

Table v Participants vs non-participants

		Participants		Non-participants		
		N	%	N	%	P-value
Gender	Male	319	88.4	76	83.5	p<0.213
	Female	42	11.6	15	16.5	
Aboriginal origin	Aboriginal	174	48.2	31	34.1	p<0.016
	Non-Aboriginal	187	51.8	60	65.9	
Age (years)	<16.5	129	35.7	30	33.0	
	16.5-17.9	143	39.6	30	33.0	p<0.181
	≥18.0	89	24.7	31	34.0	
	Mean age (SD)	361	17.0 (1.5)	91	16.9 (1.5)	p<0.366
Custodial centre	Rural	94	26.0	10	11.0	p<0.002
	Urban	267	74.0	81	89.0	

*SD - standard deviation

Procedures

The survey consisted of the following procedures:

1. Recruitment and provision of informed consent, which was completed by both Juvenile Justice and Justice Health interviewers.
2. Conduct of a physical health examination by a trained Justice Health registered nurse.
3. Collection of blood and urine samples for serological testing for blood borne viruses (BBVs) and sexually transmitted infections (STIs), including pre-test counselling. These were also conducted by a trained Justice Health registered nurse.
4. Administration of a detailed physical health questionnaire by a trained Justice Health registered nurse (see *Measures*, below for an explanation of the areas included).
5. Administration of a full psychiatric interview by trained Juvenile Justice psychologists, in order to diagnose current and past mental health disorders.
6. Administration of a full scale IQ test by a trained Juvenile Justice psychologist, in order to accurately assess levels of cognitive functioning.
7. Administration of other inventories, including a Childhood Trauma Questionnaire, a Criminal History Questionnaire and a screen for Antisocial Processes, administered by a trained Juvenile Justice psychologist or counsellor.
8. A full dental examination which was administered by a registered dental therapist.
9. Provision of health and psychological referrals and post-test counselling.

The order in which the survey components were administered depended on the location within the Centre where testing took place, availability of Juvenile Justice youth officers to escort and supervise detainees, the space available to the research team along with the number of interviewers present on each day, time limitations on the use of this space and other extraneous factors.

The research team included Justice Health registered nurses and Juvenile Justice psychologists and counsellors who visited each Centre to conduct the physical and mental health assessments. All members of the research team were extensively trained in the respective protocols they were responsible for administering. Clinical coordinators from both Justice Health and Juvenile Justice were at each Centre to coordinate the recruitment, data collection and provide support to the interviewers. They also conducted interviews and assessments. Opportunities to debrief were provided as necessary. The full physical, mental health and dental assessment regime took approximately four hours in total for each young person who participated.

The recruitment process was tailored to fit each Juvenile Justice Centre, depending on the advice of the Centre management who assisted the YPICHS clinical coordinators to implement the survey. Young people were informed of the survey taking place by flyers and unit based information sessions conducted by Juvenile Justice staff including the Juvenile Justice Centre support team prior to implementation. Information was also provided to detainees by the Justice Health clinic staff.

Young people self selected to participate in the research after being fully briefed on the survey process, purpose and content by one or more of the research team. Written informed consent to participate was obtained only after this explanation had taken place. The following features of the YPICHS research were explained prior to the provision of informed consent:

- Participation was voluntary
- There was no obligation to answer any questions deemed intrusive
- Participants could withdraw their consent at any time during the interview
- Information would be treated with the utmost confidentiality except in situations where clinical referrals were required
- Participants' names would not be recorded on any of the survey materials
- $10 would be paid into participants' property to compensate them for their time undertaking the survey
- All participants would receive a goodies bag at the end of the test day (containing chocolates, drinks, muesli bars etc.)
- All participants would receive a snack bag at the end of the test day (containing sweets and drinks)
- Written consent to participate would be required

The consent form included a space for participants to indicate that they declined to have their blood samples tested for Human Immunodeficiency Virus (HIV) antibodies. Participants could also withdraw from parts of the survey if they were uncomfortable with the test or assessment being undertaken.

In most Centres, participants were taken out of the Centre program for the day of testing, due to the length of the assessment procedures. This allowed more adequate supervision of the participants, research team and equipment. It also ensured security and safety standards were maintained and disruption of the Centre program was kept to a minimum and to the allocated test location(s) within the Centre.

If any participant was distressed as a result of any of the research interview process, debriefing was provided by one of the research team and a referral was made to Juvenile Justice psychologists or Justice Health clinical staff for follow up. This was an extremely rare event during the data collection process. All referrals were made with the knowledge of either clinical coordinator to ensure that identified issues were addressed by the relevant agency as soon as possible.

Measures

Baseline Health Questionnaire

The questionnaire used in the 2009 YPICHS was based on that used in the 2003 YPICHS, with updates and improvements where necessary. The structure and some content was also remodelled to bring it into line with the format of the Justice Health Inmate Health Survey, in order to increase the comparability of the data (see Appendix for a copy of the YPICHS baseline health questionnaire).

The questionnaire covered a broad range of areas, including socio-demographics, physical and mental health issues, medications, risk behaviours, sexual health, diet and nutrition, head injury, and access to and satisfaction with health services. Sections of the questionnaire targeted health issues that were gender specific: i.e. young women's and young men's health issues. The questionnaire also included validated standardised screening instruments, such as:

- The Severity of Dependence Scale (SDS; Gossop et al., 1995)
- The Short Form 12 (SF-12; Ware et al., 1996)
- The Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993)
- The Kessler 10 scale for psychological distress (K-10; Kessler et al., 2002)

The 2009 YPICHS physical health questionnaire was shorter than the 2003 version. The number of questions was reduced and the following sections were removed: symptom checklist, gambling, and self-reported mental health.

Criminal History Questionnaire

A new section was included in the survey, as self-reported criminal history was not asked in the 2003 YPICHS. Young people were asked if they had ever committed eleven types of offences, the frequency of offending, and how recently they committed each type of offence. They were also asked the age at which they first committed an offence and the reasons they started to offend. No time frames were recorded and no details of crimes were elicited. The questionnaire was adapted from the questionnaire used in the Drug use Careers of Offenders (DUCO) survey by the Australian Institute of Criminology (AIC), with acknowledgements to Ms Judy Putt, previous Director of the AIC for the use of the questionnaire (Pritchard & Payne, 2005a).

Cognitive functioning assessment – IQ testing

Young people aged 17 years or over were administered the Wechsler Adult Intelligence Scale – Fourth Edition (WAIS-IV) Australian and New Zealand Language Adaptation (Wechsler, 2008). All young people under the age of 16 years received the Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV) Australian Standardised Edition (Wechsler, 2003). Participants who were 16 years old were able to complete either test, due to the overlap allowed in the age brackets for the tests. The decision regarding which scale to administer was determined by psychologists based on the characteristics of each individual young person (reasons included: age, how long they had been out of school, and whether English was a first language). The administration of a full scale intellectual quotient (IQ) assessment is a significant improvement on the abbreviated test utilised in the 2003 YPICHS, which was the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999).

The potential impact of cultural factors on the test performance of young people was considered in the choice of tests to be administered. There is widespread recognition of the complex issues in assessing abilities and adapting skills across different cultural groups, and of the lack of culturally appropriate instruments (Lewis et al., 2010; Kamieniecki & Lynd-Stevenson, 2002). As a consequence, it is necessary to examine individual profiles of scores obtained with the Wechsler scales, and to carefully interpret results, especially scores on verbally based scales.

Ten core subtests for each instrument were administered. No supplemental subtests were used during the survey. The tests were administered by experienced Juvenile Justice psychologists who received specialised training in the administration and scoring of these instruments prior to the survey. Completed protocols were scored within one to two weeks of testing, and then reviewed post survey completion by the psychologist interview team. The completed protocols were thoroughly reviewed for arithmetic errors, conversion and general scoring errors.

During testing, seven young people reported that they had undertaken IQ tests in the previous 12 months. These young people were not retested, however attempts were unsuccessful in locating the previously completed IQ tests. Four young people refused to complete the tests. Based on the review and checking process, protocols for three young people were determined to be invalid. Two young people were not able to be tested due to the time constraints of the project. Therefore the results are based on the protocols for 295 young people (representing 95% of 311 young people approached).

Cognitive functioning assessment – Adaptive behaviours

Another enhancement in the 2009 YPICHS was the inclusion of an adaptive functioning assessment for those young people scoring 70 or below on their full scale IQ score. The measure used was the Adaptive Behaviour Assessment System –Second Edition (ABAS-II; Harrison & Oakland, 2003). This instrument contains questions on nine areas of functioning, namely: communication, self-care, home living, community use, functional academics, leisure, self-direction, social, health and safety. Permission was granted by the NSW Department of Education and Training for the survey team to request the assistance of teaching staff employed in the Education and Training Units co-located in seven of the Juvenile Justice Centres and one Juvenile Correctional Centre. ABAS-II forms were provided to each of the schools for young people falling in the Extremely Low range. Teachers were asked to complete the forms for the young people they taught. The findings from the follow-up ABAS assessments are not included in this report.

Psychological Disorders (K-SADS-PL)

The Kiddie Schedule for Affective Disorders for Children – Present and Lifetime Version (K-SADS-PL) 2009 Draft was used to diagnose psychological disorders (Axelson et al., 2009). The instrument is based on the original 1996 version, but with modifications reflecting the revised diagnostic criteria as specified in the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV) (APA, 2000).

The K-SADS-PL utilises a semi-structured diagnostic interview to assess current and past psychopathology in children and adolescents according to DSM-IV criteria. Probes and objective criteria are provided to rate individual symptoms. The primary diagnoses assessed with the K-SADS-PL include: major depression, bipolar disorders, PTSD, generalised anxiety disorder, social phobia, obsessive compulsive disorder, simple phobia, substance abuse, alcohol abuse, substance dependence, alcohol dependence, schizophrenia, brief psychotic disorder, conduct disorder, ADHD, and oppositional defiant disorder. Additional diagnoses are available from the K-SADS-PL, but are not included in this report due to small numbers of diagnoses.

Diagnoses were made using the screen interview and diagnostic supplements provided within the instrument. The K-SADS-PL was administered to participants by Juvenile Justice psychologists experienced in the area of assessment of mental health problems within the custodial population. Due to time and access limitations, the parent and teacher sections of the K-SADS-PL were not administered.

Antisocial Process Screening Device (APSD)

The APSD is a 20-item parent (caregiver), teacher and self-report rating scale for young people up to the age of 12 years designed to screen for potential child and adolescent psychopathy (Frick & Hare, 2001). A self-report version of the APSD has been devised for use with older youths (age 12 to 18) and has been used as a research tool with this population (Douglas et al., 2008). The self-report youth version was used in the 2009 YPICHS. It should be noted that norms for the self-report youth version have not yet been developed.

Childhood Trauma Questionnaire (CTQ)

The CTQ is a 28-item self report inventory that provides brief and reliable screening for histories of abuse, trauma and neglect (Bernstein & Fink, 1998). The instrument identifies five types of maltreatment: emotional, physical and sexual abuse, and emotional and physical neglect. A minimisation and denial scale is incorporated in the inventory. The raw item scores are summed and converted to a scaled score based on the normative sample, and the severity of maltreatment for each scale is also calculated. There are four levels of severity: none to low; low to moderate; moderate to severe; severe to extreme.

Each young person was read the introductory explanation of the CTQ, to ensure they understood its content and purpose. They were then given the option of completing the CTQ form themselves, or having the interviewer (a trained psychologist or counsellor) read out the questions and score the inventory for them. The majority of young people chose to complete the inventory themselves, asking for assistance on item wording when required.

Dental examination

A Justice Health dental therapist conducted a dental examination of all participants including assessment of oral mucosal conditions, an oral plaque score, an assessment of dental caries experience and periodontal disease. The examination also assessed if the participant had any decayed teeth, filled teeth, non-vital teeth, fractured teeth, missing teeth, unerupted teeth or teeth identified for extraction. This examination was superficial in nature and did not include a routine clean or any dental procedures, however referrals were provided when needed.

Physical health examination

The following physical measures were recorded for each participant by a trained Justice Health nurse:

- Height (centimetres)
- Weight (kilograms)
- Waist measurement (centimetres)
- Hip measurement (centimetres)
- Blood pressure (mmHG)
- Peak flow (L/min)
- Test of visual acuity (Snellen chart)
- Hearing test (Audiometry)
- Ear examination (drum and canal)
- Random (non-fasting) blood glucose level (mmol/L) – (finger-prick and serum)

Blood and urine testing

Blood was collected by nurses who were accredited in venepuncture by Justice Health. Pre-test counselling was conducted for all Blood Borne Viruses (BBV) and Sexually Transmissible Infections (STI) testing in accordance with Justice Health policy. If a participant reported engaging in behaviours that would increase risks of contracting a BBV or STI, referral was made to public/sexual health nurse for an assessment and follow-up. BBV results were given to participants by an accredited public/sexual health nurse. Post-test counselling was provided and if a participant was identified as being involved in risky activity within the window period, a further referral was made for assessment and retesting.

Participants were educated on harm minimisation strategies and informed of services and information available in custody and in the community. All test results were reviewed by medical officers and abnormal results were referred for appropriate follow-up and treatment. Urine samples were collected from 77% of participants (N=279) and were screened for:

- General health – dipstick
- Renal damage– microalbustix
- Chlamydia – Polymerase Chain Reaction (PCR)
- Gonorrhoea – PCR

Fasting blood samples were collected from 77% (N=279) of participants and were tested for:

- Iron and lipids
- Glycated haemoglobin (HbA1c)
- Blood Sugar Level (BSL)
- Liver Function Test (LFT)
- Renal function
- Full Blood Count (FBC)

Blood samples were also screened for indicators of exposure, and where appropriate, vaccination, to the following infections:

- Human Immunodeficiency Virus (HIV)
- Hepatitis B virus (HBV) – including hepatitis B core antibody and surface antigen
- Hepatitis C virus (HCV)
- Herpes Simplex Virus (HSV1 and HSV2)
- Syphilis

Ethics approval for the project

Ethics approval was sought from a number of committees for the entire project proposal, including the baseline survey, the 3, 6 and 12-month follow up questionnaires and the data linkage phases. Approvals were obtained from Justice Health Human Research and Ethics Committee, the Juvenile Justice Research Steering Committee, the Aboriginal Health and Medical Research Council Ethics Committee and the Corrective Services NSW Ethics Committee. Further ethics approvals for the data linkage components will be sought from the NSW Bureau of Crime Statistics and Research, and NSW Health in the near future.

Data entry, cleaning and analysis

The physical health questionnaire and physical health measurements were built into a Microsoft Infopath data collection form which Justice Health nurses administered electronically for each participant using a laptop. This data was extracted from all laptops and combined into a comma-separated file which was read into SAS v9.1.3 (SAS Institute, 2007) for data cleaning. The results from the blood and urine tests were entered onto an SPSS database which was merged into the physical health questionnaire using the Juvenile Justice CIMS number and date of birth.

Likewise, the results from the psychological testing were entered onto an SPSS database and the results merged into the other database. Extensive data cleaning was undertaken to ensure participant information was correct, including checking against the Juvenile Justice CIMS system where possible. Juvenile Justice administrative data such as the offences committed, current status in custody and number of previous admissions were also extracted. No identifying information (name, address) about the participants was retained for the main dataset. An extensive data cleaning process was undertaken to amend skip patterns, address any logical errors, and recode responses in the 'other specify' field. The data depicted in this report were analysed using SAS v9.1.3 (SAS Institute, 2007).