

Prisoner health in Australia
Contemporary information collection
and a way forward

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2007

Australian Institute of Health and Welfare
Canberra

Cat. no. PHE 94

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ISBN 978 1 74024 738 2

Suggested citation

AIHW: Belcher J and Al-Yaman F 2007. Prisoner health in Australia: contemporary information collection and a way forward. Cat. no. PHE 94. Canberra: AIHW.

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Published by the Australian Institute of Health and Welfare

Printed by

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Foreword

An estimated 40,000 people pass through the correctional system in Australia each year, and this number is growing. Most prisoners are from highly disadvantaged backgrounds, characterised by poor education, unemployment, social exclusion and poor physical and mental health.

It is a tragedy that Aboriginal and Torres Strait Islander people are so over-represented in the correctional system. Australia has the highest incarceration rate of Indigenous people in the Organisation for Economic Co-operation and Development (OECD). The age-standardised imprisonment rate for Aboriginal and Torres Strait Islander people (1,668 per 100,000) is currently 13 times the rate for non-Aboriginal and Torres Strait Islander people. To this end, the collection of health information on prisoners has particular relevance.

The majority of prisoners suffer from psychiatric and substance use disorders. Prisons have become de-facto institutions for people with mental health problems. Despite the major health issues affecting prisoners, and the impact these issues may have on the health of the general community when prisoners are released, there is little national information available about prisoners' health.

Prisoner health in Australia: contemporary information collection and a way forward contains an audit of the information currently collected by the states and territories. The report reviews what information, if any, is currently available about the health of prisoners while in custody, upon release and post-release. It highlights some of the current gaps in information, and proposes potential areas for indicator development, laying the groundwork for the development of a national data collection.

The collection of health indicators for prisoners is a necessary step towards developing comprehensive health standards for this population. I am very pleased to write the introduction to this publication, which is a major step in addressing this significant public health issue. It is hoped that its release, together with the ongoing cooperative work by health, policy and information experts nationally, will result in the availability of consistent national information on prisoner health and, ultimately, improved health for all Australians.

Ted Wilkes

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Acknowledgments

Many people contributed to this report. Their time and commitment are greatly appreciated.

The authors would like to thank the members of the Prisoner Health Information Group and members of the Technical Expert Group (see Appendix 1) for their valuable advice and comments, and for their assistance and cooperation in setting up the various field visits.

Special thanks go to all the service providers around the country who gave up their time to meet with the authors during the consultation phase of this project (see Appendix 1). The project has benefited greatly from their feedback and expertise.

The authors would like to thank Mark Cooper-Stanbury, Samantha Bricknell, Michelle Wallis and Mieke van Doeland from the AIHW for their assistance.

The authors would like to acknowledge the financial support of the Centre for Health Research in Criminal Justice, the National Health and Medical Research Council and the former Standing Committee on Aboriginal and Torres Strait Islander Health.

Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIC	Australian Institute of Criminology
AIDS	acquired immune deficiency syndrome
AIHW	Australian Institute of Health and Welfare
ASSIST	Alcohol, Smoking and Substance Involvement Screening Test
BEACH	Bettering the Evaluation and Care of Health
CHRCJ	Centre for Health Research in Criminal Justice
COAG	Council of Australian Governments
GP	general practitioner
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
ICD	International Classification of Diseases
K10	Kessler Psychological Distress Scale
MH-OAT	Mental Health Outcomes Assessment Tool
NHPF	National Health Performance Framework
NPEBBV&RBS	National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey
NSP	needle and syringe program
NSW	New South Wales
NT	Northern Territory
PHIG	Prisoner Health Information Group
QLD	Queensland
SA	South Australia
TAS	Tasmania
TEG	Technical Expert Group
VIC	Victoria
WA	Western Australia

Symbols

.. not applicable

n.a. not available

Summary

With over 25,000 inmates held in custody at any one time in Australia, and about twice this number passing through Australian prisons each year, the need to plan health services to address the health needs of this disadvantaged group is paramount. The poor physical and mental health of this group is well established. With most returning to the community in a relatively short time, it is important to the overall health of the community that their health needs be addressed while in prison, and if possible improved.

The Australian Institute of Health and Welfare (AIHW) published a companion document to the current report in 2006 entitled *Towards a national prisoner health information system*. This report concluded that while their health needs are considerable, prisoners have been overlooked as a 'special group' within the community and nationally consistent information on prisoner health is required.

The value of prisoner health information

Planning effective health services requires reliable information on the health needs of the target group. Improving the availability of prisoner health information by implementing strategies like a national data collection or by introducing electronic health records brings benefits to patients, health care providers, the custodial system, government and the broader community. These benefits include:

- patient/prisoner
 - time in custody will be used as an opportunity to maximise health potential upon release
 - ability to share health information with community or external providers in an accurate and timely manner
 - improved continuity of care upon entry and release from prison.
- health service provider
 - improved access to required medical information
 - improved access to statistical information for improved resource, health policy and treatment program planning
 - ability to map and project demand for health services and identify emerging health or system issues
 - improved efficiency (cost and time for file retrieval, auditing and complaints)
 - ability to benchmark against other correctional health providers and other community providers.
- custodial provider
 - better management of health conditions that affect custodial management.
- community
 - identification and treatment of prisoner health problems that can impact upon the health of the general community (such as infectious diseases or unresolved mental illness)
 - improved continuity of care upon release from prison.

- government
 - access to statistical information for improved resource and health policy planning
 - timely assessment of health services, health interventions and health policy.

Findings of the current report

In 2005, a Prisoner Health Information Group (PHIG) was established to progress the development of a national data collection for prisoners' health. This report details the findings of the first stage of this process; a national audit of current health information collected by each jurisdiction.

Despite the needs of this group, there is remarkably little national information available on prisoners. Most health information is either collected through *ad hoc* surveys undertaken by a jurisdiction or is paper based and remains in medical records.

The major conclusion of the current report is that, while information is collected on prisoners – mostly at the point of reception – it generally remains paper based and is not collated either locally or nationally. Electronic information could be made available through the introduction of a 'prisoner flag' in some national data collections. Scant information is collected pre or post-release.

Where to from here?

Any national report on the health of Australian prisoners will require the implementation of new data collection processes and practices to garner this information. It is desirable that all jurisdictions move towards collecting comparable information at each stage of the incarceration process (reception, custody, release and pre-release) using national standards where available. Ideally this information would be made available electronically.

Greater standardisation could be achieved through the implementation of electronic health records using nationally agreed data standards. Data collections such as the National Prisoner Entrants' Bloodborne Virus & Risk Behaviour Survey provide useful information on key areas affecting prisoners' health and have the potential to be expanded to other areas such as mental health. Access to information during incarceration could be improved using models such as the Bettering the Evaluation And Care of Health (BEACH) survey which is used in monitoring general practice consultations.

This report lays the foundation for the next stage in the development of a national data collection for prisoners; the development of the actual health indicators. This will involve further consultation with state and territory prison health providers, policy makers and other stakeholders. Issues as to how best to collect this information will also be addressed as part of the next stage.

1 Introduction

1.1 Origins of the National Prisoner Health Indicator Project

In 2003, the Standing Committee on Aboriginal and Torres Strait Islander Health (SCATSIH) commissioned work on the development of policy guidelines and operational standards for the provision of health care services to Aboriginal and Torres Strait Islander people who are held within Australia's prisons and juvenile detention centres.

At the same time, the Centre for Health Research in Criminal Justice (New South Wales Health) began working towards establishing national collections on the health of Australian prisoners. The Centre for Health Research in Criminal Justice aimed to collect information on the health of both Aboriginal and Torres Strait Islander prisoners and non-Indigenous prisoners.

In 2004, the AIHW put a proposal to SCATSIH recommending the development of a national data collection on prisoner health. Given the common interest in this area by a number of organisations/groups, a workshop involving SCATSIH, the Centre for Health Research in Criminal Justice and the AIHW was held in September 2004 and its participants recommended the formation of a group to oversee the development of a national data collection to be chaired by Dr Ralph Chapman (Director, Health Services, Department of Corrective Services, Western Australia).

In March 2005, this group, known as the Prisoner Health Information Group, had its first meeting where the terms of reference of the group, work program and membership were discussed. Members included representatives from the Department of Corrective Services (WA), the AIHW, the Centre for Health Research in Criminal Justice, Australian Bureau of Statistics (ABS), the Australian Council of Prisoner Health Services, SCATSIH and Corrections Service Advisory Committee. Membership of the Prisoner Health Information Group is shown in Appendix 1. The role of the group is to help improve the health and wellbeing of prisoners throughout Australia by informing government and community discussion and decision-making. It aims to do this by advising and assisting in the development and provision of statistics and information on prisoner health.

At the inaugural Prisoner Health Information Group meeting of 8 March 2005, members agreed to establish a Technical Expert Group (TEG), chaired by Dr Tony Butler (at that time from the Centre for Health Research in Criminal Justice) and comprising members of relevant stakeholder organisations, to provide technical advice and assistance for the project. TEG reports directly to the Prisoner Health Information Group and comprises representatives with experience in the area of prisoner health from New South Wales, Queensland, South Australia and Victoria as well as representatives from the AIHW and the ABS. Membership of TEG is shown in Appendix 1. The AIHW has recently released a discussion paper on prisoner health information, *Towards a national prisoner health information system* (AIHW 2006). The discussion paper highlights the lack of national information on prisoner health. It suggests that an audit of information collected on prisoner health be conducted as a first step towards implementing a national data collection for prisoners' health.

1.2 Project workplan

The creation of a national prisoner health data collection is complex and involves research, extensive discussion and consultation with stakeholders, data specifications, and involvement by the various relevant national data standards committees that oversee data standards. The process is likely to take several years to come to fruition. The steps involved in the creation of a national data collection are listed below.

Stage 1: An audit of relevant current data collections mapped to the National Health Performance Framework

This involves an audit of current data collections that could be used to support prisoner health indicators. The audit will indicate the likely extra work required by jurisdictions that may be needed to meet the requirements of the national prisoner health data collection. A summary report of stage 1 will be developed.

Stage 2: Development of indicators that are policy relevant and important to measure, mapped to the National Health Performance Framework

This involves consultation with experts in the field, discussions with state and territory prison health planners and other stakeholders including some Aboriginal and Torres Strait Islander experts.

Stage 3: Define data standards

Once the indicators have been defined and the available data audit has been completed, the data items selected for inclusion in the national prisoner health data collection need to be considered. Existing data items will be examined to determine whether they are appropriate to use and discussion will be required to determine whether any changes need to be made. New data specifications will need to be developed and field-tested.

Stage 4: Pilot testing or trial data collection

A pilot test or trial data collection will need to take place which will further help to refine the data specifications and result in a final data dictionary.

Stage 5: Endorsement of the national prisoner health data collection and implementation

This process involves the AIHW presenting the metadata for the proposed national prisoner health data collection to various public health information groups and data standards committees for endorsement. These include the Population Health Information Development Group, the Australian Population Health Development Principal Committee, the National Aboriginal and Torres Strait Islander Health Officials Network and the National Correctional Services Advisory Committee.

1.3 The National Health Performance Framework

The National Health Performance Committee has developed a conceptual framework used to report on the health of Australians and the performance of the health system, the National Health Performance Framework (NHPF). This framework has been endorsed by the Australia Health Ministers' Advisory Council. The framework consists of three tiers: health status and outcomes, determinants of health and health system performance (Table 1.1).

These tiers reflect the fact that health status and health outcomes are influenced by determinants of health and the performance of the health system.

To ensure consistency with other national data collections the National Framework has been used as the underlying construct for this report. The data collected have been mapped to the Framework.

Table 1.1: The National Health Performance Framework

Health status and outcomes (Tier 1) How healthy are Australians? Is it the same for everyone? Where is the most opportunity for improvement?				
Health conditions	Human function	Life expectancy and wellbeing	Deaths	
Prevalence of disease, disorder, injury or trauma or other health related states.	Alterations to body, structure or function (impairment), activities (activity limitation) and participation (restrictions in participation).	Broad measures of physical, mental and social wellbeing of individuals and other derived indicators such as Disability Adjusted Life Expectancy.	Age and/or condition specific mortality rates.	
Determinants of health (Tier 2) Are the factors determining good health changing for the better? Is it the same for everyone? Where and for whom are these factors changing?				
Environmental factors	Socioeconomic factors	Community capacity	Health behaviours	Person-related factors
Physical, chemical and biological factors such as air, water, food and soil quality resulting from chemical pollution and waste disposal.	Socioeconomic factors such as education, employment, per capita expenditure on health and average weekly earnings.	Characteristics of communities and families such as population density, age distribution, health literacy, housing, community support services and transport.	Attitudes, beliefs knowledge and behaviours e.g. patterns of eating, physical activity, excess alcohol consumption and smoking.	Genetic-related susceptibility to disease and other factors such as blood pressure, cholesterol levels and body weight.
Health system performance (Tier 3) How well is the health system performing in delivering quality health actions to improve the health of all Australians? Is it the same for everyone?				
Effective		Responsive		Continuous
Care, intervention or action achieves desired outcome.		Service provides respect for persons and is client orientated. It includes respect for dignity, confidentiality, participation in choices, promptness, quality of amenities, access to social support networks, and choice of provider.		Ability to provide uninterrupted, coordinated care or service across programs, practitioners, organisations and levels over time.
Appropriate		Accessible		Capable
Care/intervention/action provided is relevant to the client's needs and based on established standards.		Ability of people to obtain health care at the right place and right time irrespective of income, physical location and cultural background.		An individual's or service's capacity to provide a health service based on skills and knowledge.
Efficient		Safe		Sustainable
Achieving desired results with most cost effective use of resources.		The avoidance or reduction to acceptable limits of actual or potential harm from health care management or the environment in which health care is delivered.		System or organisation's capacity to provide infrastructure such as workforce, facilities and equipment, and to be innovative and respond to emerging needs (research, monitoring).

Source: National Health Performance Committee (2001).

1.4 This report

This report lays the foundation for the next stage in the development of a national data collection for prisoners – the development of the actual health indicators. As such it aims:

- to report on current data collection and reporting requirements in the area of prisoner health
- to map existing data collections to the National Health Performance Framework
- to suggest potential measures that could be used to monitor prisoner health.

The publication of this report completes Stage 1 of this project. Chapter 2 presents an overview of the prison system across Australia and describes a conceptual model of the information collection points. Chapter 3 describes the information currently collected at reception while Chapter 4 presents information collected while in custody. Chapter 5 and 6 describe the information collected at release and post release respectively. Chapter 7 provides an overview of the current information sources and problems, methods to overcome the data constraints and proposes a way forward.

This document is not intended to be prescriptive. It provides an overview of information that could be incorporated into a national prisoner health report or national prisoner health data collection. It does not dictate what is to be reported. These decisions can only be made after further consultation with the jurisdictions and the Commonwealth.

2 Background

2.1 Prisoners

For the purpose of this report, prisoners are defined as adult persons (normally over the age of 18 years) held in custody whose confinement is the responsibility of a corrective services agency. This definition includes sentenced prisoners and prisoners held in custody awaiting trial or sentencing – that is, remandees. Juvenile offenders, persons in psychiatric custody, police cell detainees, asylum seekers or Australians held in overseas prisons are not included.

On 30 June 2005 there were 25,353 persons imprisoned in Australia – about 1 in 600 adults – in some 120 different facilities (ABS 2005). It is estimated that about twice this figure pass through the correctional system every year (National Centre in HIV Epidemiology and Clinical Research 2005).

The prisoner population continues to grow. In the 10 years since 1995, the prisoner population has increased by 45% and the rate of incarceration per 100,000 people has increased by 26%. Between 2004 and 2005 the number of prisoners increased by 4.9%, exceeding the growth rate of the general population which was 1.2% during the same year (ABS 2005).

Prisons house a largely male (93%) population with backgrounds characterised by social, health and psychological disadvantage. Prisoners are often poorly educated and unemployed prior to entering prison. Almost two-thirds of prisoners will have suffered from a psychiatric disorder in the previous 12 months and over half have some kind of substance use disorder (Butler & Allnut 2003).

Aboriginal and Torres Strait Islander people are grossly over-represented in the correctional system. There were 5,656 Aboriginal and Torres Strait Islander prisoners comprising 22.3% of the prisoner population in Australia at 30 June 2005. The proportion of Aboriginal and Torres Strait Islander prisoners has risen since 1995, when they comprised 17.1% of the prison population. Aboriginal and Torres Strait Islander people are imprisoned at a rate of 2,021 per 100,000 adult population, an age-standardised rate 12 times that of the non-Indigenous population (ABS 2005).

2.2 An overview of the prison system

Prisons are the responsibility of the state and territory governments. As of June 2005, there were a total of 120 custodial facilities throughout Australia (SCRGSP 2006). These comprised 81 government-operated prisons and seven privately operated prisons; five government operated community custodial facilities (transitional centres and work camps) and one privately operated community custodial facility; 11 periodic detention centres; and 15 court complexes (SCRGSP 2006).

When prisoners enter a prison they are 'received' into custody. Individuals may enter the prison system from police cells, the courts or the community. Although jurisdictions may have a substantial number of prisons, the number of reception or remand prisons is much

lower. For example, while New South Wales has 30 correctional centres only, seven of these receive new prisoners.

During the reception process a range of health and welfare assessments are conducted, personal property is taken for storage, and a cell is assigned according to the inmate's security classification level. Unsentenced prisoners (remandees) are automatically classified as maximum security and they usually remain in the reception prison until sentenced. This process takes on average between two and three months (ABS 2005). Sentenced prisoners may be classified as maximum, medium or minimum security and are usually moved to an appropriate cell in another prison.

When an individual enters prison, responsibility for the provision of his or her health care rests with the state or territory in which he or she is incarcerated. These health services may be delivered by government (through the departments of health and/or corrective services), purchased through contractual arrangements or provided by a combination of the two. The cost of providing these services is not met through Medicare because of the operation of section 19(2) of the Health Insurance Act 1973 (Commonwealth).

Health departments provide prisoner health care services within New South Wales, South Australia and Tasmania (Table 2.1). Corrective services provide prisoner health care services in Queensland and Western Australia while corrective services in Victoria and the Northern Territory have contracts with independent health care providers. In the Australian Capital Territory, the health department provides health services for remand centres. Within private prisons, independent health care providers are responsible for health care services.

Table 2.1: Governance arrangements for prisoner health in the states and territories

State/Territory	Health/justice	Name of department	Name of section
NSW	Health	NSW Health	Justice Health
Vic	Justice	Victorian Department of Justice	Justice Health
Qld	Justice (may move to health)	Queensland Corrective Services	Health and Medical Services
WA	Justice (may move to health)	Western Australian Department of Corrective Services	Health Services
SA	Health	South Australian Department of Health	SA Prison Health Service
Tas	Health	Tasmanian Department of Health and Human Services	Correctional Health Service
ACT	Health	ACT Health	Corrections Health Program
NT	Justice (moving to health)	Northern Territory Department of Justice	Corrections Health Northern Territory Correctional Services

In prison, nurses are responsible for providing most of an individual's primary health care through the prison clinic. In some prisons, inmates are able to walk up to the clinic while in others inmates must make an appointment to see a nurse. All medications (including over-the-counter medications) are strictly controlled in the prison environment and most prisoners receive their medications from the clinic or prison nurses on a daily basis. In some low security prisons, inmates are provided with weekly blister packs.

If nursing staff are unable to assist an inmate they can refer that inmate to a prison doctor or allied health worker. Most prisons have general practitioners, drug and alcohol workers, dentists, psychologists and psychiatrists who either work at the prison or visit on a regular basis.

In some jurisdictions inmates who are hospitalised or who require highly specialised health care can be managed within the prison system, as larger prisons may contain a number of in-patient beds for inmates who require care. Alternatively, prisoners are transferred to community facilities and secure wards in community hospitals for specialised treatment. The cost of treating an inmate in a community facility remains the responsibility of the state or territory responsible for incarcerating that individual.

Table 2.2 provides an overview of each jurisdiction. The table also includes information on who is responsible for health service provision and lists the various custodial and health databases within each jurisdiction.

It should be noted that while some jurisdictions use the same unique identifier for both custodial and health information for a particular inmate, this health information is not available to custodial officers. The same privacy and confidentiality laws that exist within the general community apply within a prison setting. Information on important health conditions such as allergies, threats of suicide or self harm and behaviours related to mental illness are shared with custodial authorities to ensure appropriate placement and checks within the system but only after an inmate has signed a release form. Information about specific medical conditions (including bloodborne virus status) is not accessible by custodial staff.

2.3 Data collection points

Four time points can be identified at which to gather information on prisoners' health: (1) reception, (2) in custody, (3) at release, and (4) post-release (Figure 2.1). At each of these critical time points, health status, factors influencing health and health needs are likely to differ significantly. Collection of information at each of these time points would allow the positive and negative effects of incarceration to be assessed.

Reception – Information collected at reception enables prison health care providers to plan health services for individual inmates and provides an opportunity to collect information on the health status of some of the most disadvantaged members of our society immediately prior to incarceration.

Custody – Information collected within the prison walls falls into two broad categories – the description of the health conditions and problems of the prisoners and information on health services provision to this group.

Release – Poor health at release can affect the health of the community. Examples include communicable diseases which may spread from prisons into the general population, untreated mental illness may make life difficult for ex-inmates and those around them, and unaddressed drug and alcohol dependencies are likely to result in a return to drug-related crime. Information on the health of prisoners on release will help to identify areas of service provision within prisons that can be improved, will identify health problems that may affect the community will enable suitable post-release health planning to occur, and will inform the development of post-release health services to meet needs.

Post-release – The immediate post-release period is a time of marked vulnerability for ex-prisoners. They are at a greater risk of dying due to substance abuse or suicide (Coffey et al. 2003; Stewart et al. 2004; Pratt et al. 2006; Kariminia 2006; Kariminia 2007). Other threats to health include returning to a violent relationship, homelessness, unemployment and stigmatisation. Given that some prisoners return to regional or remote areas of Australia and that prisoners in general do not access community health services, they may simply stop accessing health services after release with consequent ramifications upon health (Butler & Milner 2003; Hockings et al. 2002). For these reasons, and because post-release health and psychosocial adjustment is likely to impact upon re-offending, it would be useful to collect information on the health of prisoners in the six to twelve months post-release. Such information could assist in identifying the main issues facing ex-prisoners during the post-release period and support the planning of health and other services following release.

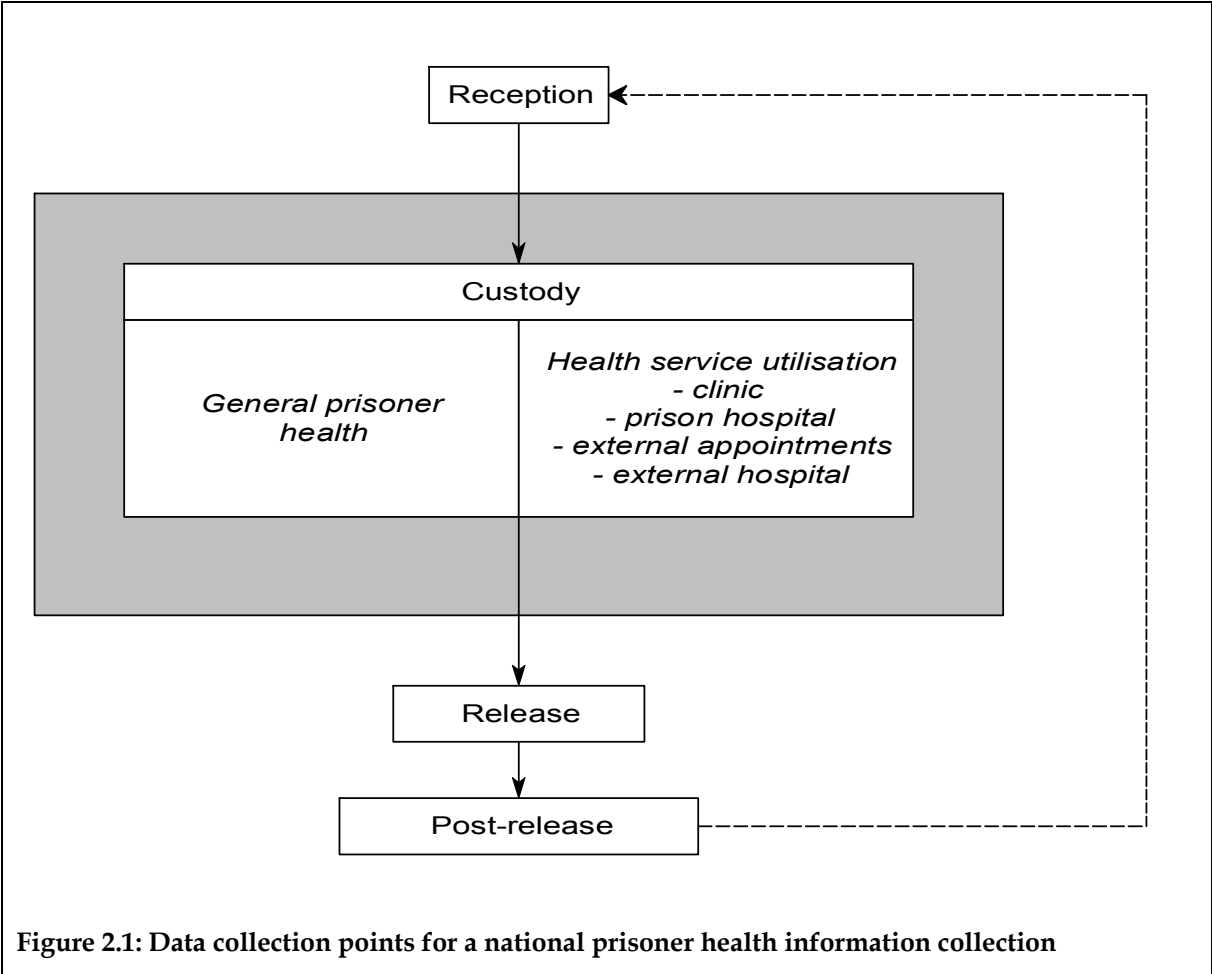


Figure 2.1: Data collection points for a national prisoner health information collection

Table 2.2: Overview of the prisons in each jurisdiction, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Prisons ^(a)	30 prisons 10 PDCs 2 CCFs 15 court complexes	12 prisons	13 prisons 4 CCFs	13 prisons	9 prisons	5 prisons	None ^(b) 2 remand centres 1 PDC	4 prisons
Private	One (Junee)	Two (Port Phillip and Fulham)	Two (Arthur Gorrie & Borallon)	One (Acacia)	One (Mount Gambier)	None	None	None
Average daily inmate number ^(a)	8,926 791 periodic detainees	3,596	5,329	3,372	1,510	521	68 remandees 100 periodic detainees	770
Health provider	Justice Health (NSW Health) Junee – GEO Group Pty Ltd	St Vincent's Correctional Health, PSH Pty Ltd, GEO Group Pty Ltd and Forensicare	DCS Arthur Gorrie—GEO Group Pty Ltd Borallon—CCA Pty Ltd	DCS Acacia—AIMS	SA Prisoner Health Service (Department of Health) Mt Gambier—GSL Pty Ltd	Correctional Health Service (DHHS)	ACT Health Prisoners in NSW gaols—Justice Health	International SOS Pty Ltd
Custodial database	Offender Information Management System (OIMS)	Prisoner Information Management System (PIMS)	Integrated Offender Management System (IOMS)	Total Offender Management System (TOMS)		Custodial information System		Integrated Justice Information System (IJIS)
Health database	Patient Administration System (PAS)	None	None	Electronic Health Online (ECHO)	None	None		Prison Health Pro
Custodial identifier	Master Index Number (MIN)	Prisoner identifier number (PIN)	Custodial information system (CIS) number	TOMS	Dossier number	CIS	CCIS	IJIS number
Health identifier	Currently MIN—eventually Unique Patient Identifier (UPI) as part of PAS		As above	TOMS	Prison health services number (identical to dossier number)		CCIS	Medical record number

(a) Information is from the Report on Government Services (SCRGSP 2006).

(b) Sentenced Australian Capital Territory prisoners are currently held in New South Wales prisons. The Australian Capital Territory is constructing its own prison which will house up to 175 sentenced inmates, 139 remandees and 60 inmates in a low security Transitional Release Centre. It will open in 2007–08 and will house both male and female inmates.

CCF community custodial facility (including transitional centres).

PDC periodic detention centre.

DCS Department of Corrective Services.

3 Reception

3.1 Reception assessment

It is a requirement of all jurisdictions that every individual received into custody be examined by a qualified health professional upon entering prison from the community.

This health care assessment is variously known as a reception, intake or induction assessment. A qualified health professional (a medical officer or nurse) conducts the reception assessment and refers individual inmates to prison health services or specialists as required.

The reception assessment is a crucial point of contact between prisoners and the health system. It serves to identify any immediate health needs and creates the potential for a continuation of treatment commenced in the community.

The reception assessment typically includes questions on previous and current conditions and illnesses, current medications, drug and alcohol use, a brief mental health screen and a risk assessment screen. A physical examination, which may include blood and urine tests, is also conducted. Basic demographic information is recorded and may be collected during the reception assessment or copied from custodial databases.

Given the amount of information collected at reception, and the fact that this information is routinely collected on all prison entrants, the reception assessment has the potential to offer a great deal of useful information on the health of people who enter prisons. Bearing in mind that many individuals enter the prison system on numerous occasions, it also offers the potential to monitor longitudinal changes in health.

However, in most jurisdictions this data is collected manually and is not stored in an electronic format (the Northern Territory is the only jurisdiction that uses an electronic reception form, although Western Australia plans to implement an electronic form in 2007). Therefore, while reception assessments collect a great deal of valuable information at the individual clinical level, the information remains relatively inaccessible. An additional hurdle is the lack of uniformity and consistency in the way data are gathered.

Despite this, reception assessment forms offer perhaps the simplest opportunity to collect national health data on prisoners. For this reason information on what each jurisdiction collects at reception has been mapped to the NHPF in each of the areas of interest.

3.2 Other reception collections

There are a number of other reception data collections. These are briefly described in this section.

The National Centre in HIV Epidemiology and Clinical Research (NCHECR) monitors the prevalence of HIV/AIDS within all Australian prisons. It does this by reporting on the number of HIV/AIDS tests conducted upon entry into prison and the number of positive results (National Centre in HIV Epidemiology and Clinical Research 2005).

The Centre for Health Research in Criminal Justice and the NCHECR recently co-ordinated a four state survey on the prevalence of bloodborne viruses and risky health behaviours among newly received prisoners in four states (Butler et al. 2005). The National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey (NPEBBV&RBS) was modelled on the community Needle and Syringe Program (NSP) survey. It is anticipated that this will be conducted biennially across all states and territories and form part of the national approach to bloodborne virus surveillance for this population.

In South Australia and Western Australia the ASSIST (Alcohol, Smoking & Substance Involvement Screening Test) is used to screen inmates entering prisons within seven days of reception (WHO ASSIST Working Group 2002). In South Australia these data are entered directly into a Microsoft Access database while in Western Australia the ASSIST will be incorporated into Electronic Health Online. This screening tool was developed by the World Health Organization to screen for hazardous, harmful and dependent use of alcohol, tobacco and other psychoactive drugs. Eventually, all prisoners entering South Australian and Western Australian prisons will be screened with the ASSIST. In addition to the ASSIST screen, every South Australian prisoner is asked questions about mental illness, homelessness and drug and alcohol services they have accessed before admission, either externally or during previous periods of incarceration.

3.3 Current reception data collections

Demographic information

Many prison health providers rely on demographic information collected by custodial reception staff rather than collecting this information themselves. All jurisdictions have an electronic custodial database which stores information on all inmates entering a prison. Health staff can access some of this information either through direct access to the custodial database, through data transfers between custodial and health electronic databases or through print-outs of custodial data physically attached to health records. For this reason the demographic information collected on health reception forms is often limited.

For example, in New South Wales demographic data from the custodial database (the Offender Integrated Management System or OIMS) is uploaded continuously to the Patient Administration System (PAS). This includes name, date of birth, country of birth, sex, aliases, next of kin as well as custodial information such as what prison an inmate is housed in, future court dates and an inmate's earliest possible release date. In contrast, in Tasmania a hard copy of custodial demographic information is printed and attached to the front of an inmate's medical record.

Table 3.1 summarises the demographic data collected on reception health assessment forms.

Table 3.1: Summary of demographic data collected at reception

	NSW	Vic (Men)	Vic (Women)	Qld	WA	SA	Tas	ACT	NT
Name	✓	✓	✓	✓	✓	✓	✓	✓	✓
DOB	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sex	x	n.a.	n.a.	✓	x	x	✓	✓	✓
Indigenous status	✓	✓	✓	x	x	✓	x	✓	✓
Unique ID	✓	✓	✓	✓	✓	✓	✓	✓	✓

As can be seen above, Aboriginal and Torres Strait Islander status is only recorded on health reception forms by six of the jurisdictions. Four of these jurisdictions (Australian Capital Territory, Victoria, New South Wales and South Australia) record Indigenous status according to the ABS standard on the reception assessment form. While information about sex and Aboriginal and Torres Strait Islander status can be gathered through reference to custodial databases, it would be of benefit for all jurisdictions to ensure this is collected or recorded in a consistent manner on the reception assessment form.

Health status and outcomes (Tier 1)

There are a number of conditions that are collected from self reports at reception. These include infectious diseases, mental health, chronic diseases, oral health and injury.

Infectious disease

National: NCHECR monitors the prevalence of HIV/AIDS within all Australian prisons. As part of its annual surveillance series it reports on the number of HIV tests conducted at reception each year and the number of new diagnoses of HIV infection (National Centre in HIV Epidemiology and Clinical Research 2005). Data are collected for males and females, but Aboriginal and Torres Strait Islander status is not recorded.

National information on the prevalence of HIV, hepatitis B (HBV) and hepatitis C (HCV) will be collected this year as part of the NPEBBV&RBS. Blood samples are used to test for HIV, HBV (core-antibody, surface-antibody and surface-antigen) and HCV antibody. The data will be categorised by age, sex, Aboriginal and Torres Strait Islander status, and injecting drug use.

Reception assessment data: All jurisdictions ask questions about infectious diseases as part of the reception process (Table 3.2). All of these data are collected via self-report but the physical assessment conducted by medical staff during the reception process may diagnose or identify additional health problems.

In the Northern Territory all prisoners are tested for HBV, HCV, HIV, sexually transmitted infections (STIs) and tuberculosis upon entry.

Table 3.2: Self-reported infectious disease data collected at reception

	NSW	Vic (Men)	Vic (Women)	Qld	WA	SA	Tas	ACT	NT ^(a)
HBV	✓	✓	✓	✓	✓	✓	✓	✓	✓
HCV	✓	✓	✓	✓	✓	✓	✓	✓	✓
HIV	✓	✓	✓	✓	✓	✓	✓	✓	✓
Malaria	x	x	x	x	x	x	x	x	✓
STIs	✓	x	x	x	✓	x	✓	x	x
Cough/TB	✓	x	x	x	x	✓	x	x	✓

(a) All NT prisoners are tested for all of the listed infectious diseases as part of the compulsory screening program. Therefore, the infectious disease status of every NT prisoner is known.

Mental illness

National: There are no national collections on the mental health of individuals entering the prison system.

Reception assessment data: All jurisdictions collect some information on the self-reported mental health history of individuals entering prison as part of their reception assessment (Table 3.3). Only New South Wales uses a standardised instrument, the Kessler Psychological Distress Scale (K-10), to identify mental health problems (Kessler et al. 2002).

Table 3.3: Self-reported mental health data collected at reception

	NSW	Vic (Men)	Vic (Women)	Qld	WA	SA	Tas	ACT	NT
Past history of diagnosis and/or treatment for a psychiatric illness	✓	✓	✓	✓	✓	✓	✓	✓	x ^(a)
Current psychiatric illness	✓	✓	✓	✓	x	x	✓	✓	x ^(a)
Current treatment for a psychiatric illness	✓	✓	✓	x	✓	✓	x	✓	x ^(a)
Past history of suicide or self-harm	✓	✓	✓	✓	✓	✓	✓	✓	✓
Current thoughts of suicide or self-harm	x	✓	✓	✓	✓	✓	✓	✓	✓
Referred to mental health services	✓	✓	✓	✓	✓	x	✓	✓	✓

(a) Although the NT reception health assessment does not specifically ask about a past history of diagnosis or treatment for a psychiatric illness it does include a question relating to contact with psychiatric services and a question about current medications.

Additional reception data: Information on self-reported mental health problems among South Australian prisoners at reception is collected through the supplementary questions asked during the ASSIST screening process. It is possible to separate these data by age and sex.

Chronic diseases

National: There are no national collections on the prevalence of chronic disease among individuals entering the prison system.

Reception assessment data: As part of the reception process, jurisdictions ask new prisoners whether they suffer from certain chronic illnesses. All of these data are collected via self-report but the physical assessment (which often includes blood tests) conducted by medical staff during the reception process may diagnose or identify additional health problems.

Table 3.4: Chronic disease data collected at reception

	NSW	Vic (Men)	Vic (Women)	Qld	WA	SA	Tas	ACT	NT
Respiratory									
Asthma	✓	✓	✓	✓	✓	✓	✓	✓	✓
Other (unspecified)	x	x	x	✓	✓	x	✓	✓	x
Neurological									
Epilepsy/seizures	✓	✓	✓	✓	✓	✓	✓	✓	✓
Other (unspecified)	x	x	x	✓	x	x	✓	✓	x
Cardiovascular									
High blood pressure	✓	x	x	x	x	x	x	✓	✓
Heart problems/cardiac condition	✓	✓	✓	✓	x	✓	✓	x	✓
Other (unspecified)	x	x	x	x	✓	x	x	✓	x
Endocrine									
Diabetes	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gastrointestinal									
Other (unspecified)	x	x	x	x	✓	x	✓	✓	x
Other									
Other health condition (unspecified)	✓	x	✓	✓	✓	✓	✓	x	✓

Injury

National: There are no national collections on the prevalence of recent injury and assault among individuals entering the prison system.

Reception assessment data: Most jurisdictions collect information on injury and assault as part of their reception assessment (Table 3.5).

Table 3.5: Injury data collected at reception

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Recent/current injuries (type unspecified)	✓	✓	✓	✓	✓	✓	x ^(a)	x ^(a)
Recent assault	✓	x	x	✓	x	x	x	x
Head injury	x	x	x	x	✓	x	✓	x

(a) The ACT and the NT do not specifically record information about recent or current injuries on their reception health assessments. However, this information is collected and recorded during the custodial intake process and passed on to the health services.

Oral/dental health

National: There are no national collections on oral and dental health among individuals entering the prison system.

Reception assessment data: Most jurisdictions include a specific question or questions on dental health in their reception form (Table 3.6). In New South Wales and Tasmania no specific reference is made to dental problems at reception. In these states information about dental health is only likely to be included on the reception form if a nurse identifies problems with teeth or an inmate discloses that his or her teeth are causing problems at the time the assessment is conducted.

Table 3.6: Oral and dental health data collected at reception

	Dental information collected	Type of information collected
NSW	x	..
Vic	✓	Missing, poor condition, reasonable or good
Qld	✓	Normal or abnormal
WA	✓	Normal or abnormal
SA	✓	Presence of teeth problems (yes or no)
Tas	x	..
ACT	✓	Treatment required (yes or no)
NT	✓	Was the inmate referred to a dentist

Women's health

National: There are no national collections on health issues specific to women entering the prison system.

Reception assessment data: All jurisdictions ask questions about women's health issues. All of these data are collected via self-report but the physical assessment (which may include a pregnancy test) conducted by medical staff during the reception process may diagnose or identify additional health problems.

Table 3.7: Women’s health data collected at reception

	NSW	Vic (Women)	Qld	WA	SA	Tas	ACT	NT
Pregnant	✓	✓	✓	✓	x	✓	✓	✓
Last period	x	✓	x	x	✓	x	✓	✓
Need for a pregnancy test	(a)	x	x	x	✓	x	x	x
Use of contraception	x	x	✓	✓	✓	✓	x	x
Date of last Pap smear	x	x	x	✓	✓	x	x	x
Result of last Pap smear	x	x	x	x	✓	x	x	x
Recent vaginal discharge	x	x	x	x	✓	x	x	x
Recent pelvic pain	x	x	x	x	✓	x	x	x
Obstetric history	x	x	✓	x	✓	✓	x	x
Painful periods (dysmenorrhoea)	x	x	✓	x	✓	✓	x	x
Referral to women’s health	✓	x	x	x	x	x	x	x
Previously sterilised	x	x	✓	x	x	✓	x	x

(a) All women of child-bearing age entering prison in New South Wales receive a pregnancy test.

Determinants of health (Tier 2)

Tobacco use

National: There are no national collections on tobacco use among individuals entering the prison system.

Reception assessment data: Most jurisdictions include a specific question or questions on tobacco use in their reception form (Table 3.8). No jurisdiction asks whether prisoners intend or want to quit smoking.

Table 3.8: Smoking data collected at reception

	Smoking frequency	Quantity
NSW	Daily/weekly/monthly/occasionally	Amount smoked
Vic	Yes or no	Cigarettes per day
Qld	Daily or weekly	Amount smoked
WA	Not asked	Not asked
SA	Not asked	Cigarettes per day
Tas	Do you use?	Nurse’s discretion
ACT	Frequency	Quantity
NT	Do you use and how often?	Amount smoked

Additional reception data: In South Australia and Western Australia the ASSIST is used to screen for hazardous, harmful and dependent use of tobacco. Eventually, all prisoners entering South Australian and Western Australian prisons will be screened with the ASSIST, providing detailed information on the prevalence of smoking within these prisoners.

Illicit drug use

National collections: National information on illicit drug injection will be collected this year as part of the NPEBBV&RBS. This survey allows information on injecting drug use to be presented by age, sex and Aboriginal and Torres Strait Islander status. New prison entrants are asked whether they have injected the following drugs:

- heroin
- cocaine
- heroin and cocaine (speed ball)
- speed
- methadone
- morphine
- anabolic steroids
- any other drug.

The NPEBBV&RBS does not collect information on drug use that does not involve injecting. There are no national collections on non-injecting drug use among Australian prison entrants.

Reception assessment data: Reception assessments also provide a useful source of information on illicit drug use. Most jurisdictions ask similar questions about illicit drug use although each reception form reflects the pattern of drug use within that state or territory.

Table 3.9: Illicit drug use data collected at reception

	Substance	Frequency	Quantity	Route of administration	Of most concern	Last use
NSW	Depressants (cannabis, benzodiazepines, heroin or other opioids) Hallucinogens (LSD, trips, mushrooms or solvents) Stimulants (amphetamines, cocaine or other stimulants) Prescribed opioid substitution therapy Other including steroids, anaesthetics and prescribed medications	Daily/weekly /monthly/ occasionally	Average amount used on each occasion	✓	✓	✓
Vic (Men)	Depressants (cannabis, benzodiazepines or heroin) Stimulants (amphetamines) Other designer drugs	Daily/ weekly/ occasionally	Quantity	x	x	✓
Vic (Women)	Depressants (cannabis, benzodiazepines or heroin) Stimulants (ice, cocaine, ecstasy or amphetamines)	Frequency	Amount used	✓	x	✓
Qld	Stimulants (amphetamines or cocaine) Depressants (cannabis, benzodiazepines or heroin)	Daily/ weekly/ occasionally	Quantity	✓	x	✓
WA	Misused illicit/prescribed drugs in the last 3 months? If yes, what?	Times used over last 7 days	Daily quantity used over last 7 days	✓	x	✓
SA	Depressants (cannabis, benzodiazepines or heroin) Hallucinogens (petrol or glue) Stimulants (amphetamines or cocaine) Other	Ever	Quantity used in grams/day or \$/day	✓	x	✓
Tas	Do you use drugs? If yes, list.	Nurse's discretion	Nurse's discretion	Nurse's discretion	x	x
ACT	Depressants (cannabis, benzodiazepines, heroin or other opioids) Hallucinogens (LSD, trips, mushrooms or solvents) Stimulants (amphetamines, cocaine, ecstasy) Other including prescribed medications	Frequency	Amount	Inhale, inject, ingest, smoke, sniff or other	✓	✓
NT	Depressants (cannabis, opioids or benzodiazepines) Hallucinogens (petrol or solvents) Stimulants (amphetamines)	Do you use?	Quantity	x	x	x

Additional reception data: Information on illicit drug use among South Australian and Western Australian prisoners at reception is collected through the ASSIST. The screening tool covers cannabis, cocaine, amphetamines, sedatives, hallucinogens, inhalants, opiates and other drugs.

Unsafe injecting in the community

Needle and syringe programs (NSPs) within the community aim to prevent the transmission of bloodborne viruses by providing sterile injecting equipment to injecting drug users. Information on the proportion of users who have shared a needle is collected through the annual NSP survey. Information on the proportion of prison entrants who have shared a

needle while in the community will be collected by the biennial NPEBBV&RBS. It will be possible to present data according to sex and Aboriginal and Torres Strait Islander status.

Alcohol use

National: There are no national collections on alcohol use and misuse among individuals entering the prison system.

Reception assessment data: Most jurisdictions include a specific question or questions on alcohol use in their reception form (Table 3.10).

Table 3.10: Alcohol data collected at reception

	Frequency	Quantity	Of most concern	Last use
NSW	Daily/weekly/monthly/occasionally	Average amount on each occasion	✓	✓
Vic (Men)	Heavy/moderate/social or binge	Amount per day	x	x
Vic (Women)	Frequency	Amount used	x	✓
Qld	Daily/weekly/monthly/occasionally	Amount	x	✓
WA	Times used over last 7 days	Daily quantity used over last 7 days	x	✓
SA	Number of standard drinks per day	Number of standard drinks per day	x	✓
Tas	Do you use drink? If yes, detail	Nurse's discretion	x	x
ACT	Frequency	Quantity	✓	✓
NT	Do you use?	Amount	x	x

Additional reception data: Information on alcohol use among South Australian and Western Australian prisoners at reception is collected through the ASSIST. It is possible to separate these data by age and sex.

Risky sexual behaviour

National collections: National information on unsafe sex is collected as part of the NPEBBV&RBS. It will be possible to present data according to sex and Indigenous status. New prison entrants will be asked to describe their sexual activity in the last month, whether or not they used condoms, whether or not they have been paid for sex and the number of new sexual partners in the last month.

Reception assessment data: Most jurisdictions do not enquire about risky sexual behaviour at reception. The Victorian male reception form asks whether an inmate practices any unsafe sexual activity while Western Australia asks about unprotected sex in the previous year.

Biomedical and physical health measures

National: There are no national collections of biomedical and physical health measures for individuals entering the prison system.

Reception assessment data: Every jurisdiction collects a number of physical health measures for individual inmates as part of their intake screening (Table 3.11).

Table 3.11: Physical health measures collected at reception

	NSW	Vic (Men)	Vic (Women)	Qld	WA	SA	Tas	ACT	NT
Blood pressure	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature	✓	x	✓	x	✓	✓	✓	✓	x
Pulse	✓	x	✓	✓	✓	✓	✓	✓	✓
Height	x	x	x	✓	✓	✓	✓	✓	✓
Weight	x	✓	✓	✓	✓	✓	✓	✓	✓
Blood sugar level	✓	x	x	✓ ^(a)	✓	✓	x	✓	✓
Respiratory function	✓	x	✓	x	✓	x	✓	x	✓
Urinalysis (various tests)	x	x	x	✓	✓	x	✓	x	✓

(a) If indicated.

3.4 Summary of current health reception data

While there are variations in how questions are framed, all jurisdictions tend to collect the same kind of information on individuals who are entering the prison system.

Currently available information could be used as potential indicators in a national prisoner health report. This information has been mapped to the NHPF (Table 3.12).

Table 3.12: Potential reception indicators mapped to the National Health Performance Framework

Health status and outcomes (Tier 1)				
Health conditions	Human function	Life expectancy and wellbeing	Deaths	
Reception prevalence of: <ul style="list-style-type: none"> • mental illness • infectious disease • chronic disease • injury 	n.a.	n.a.	..	
Determinants of health (Tier 2)				
Environmental factors	Socioeconomic factors	Community capacity	Health behaviours	Person-related factors
..	Age Sex Aboriginal and Torres Strait Islander status	..	Tobacco use Alcohol Use Illicit drug use Unsafe injecting in the community Risky sexual behaviour	Blood pressure Cholesterol levels Body weight
Health system performance (Tier 3)				
..				

.. Not applicable.

n.a. Not available.

4 Custody

National information on the age, sex and Aboriginal or Torres Strait Islander status of all inmates in custody on 30 June is collected through the annual ABS census. This information is gathered from electronic custodial databases, but is not linked to any health information.

The custodial databases of all correctional systems contain demographic information on inmates (name, date of birth, sex, Aboriginal and Torres Strait Islander status). Some jurisdictions also collect information on country of birth and postcode of previous address.

The electronic health record systems of the Northern Territory and Western Australia and the electronic patient administration system of New South Wales also contain demographic data on all inmates.

While there are some readily available data on prisoner health and service provision within prison, much of the currently available information on the health of inmates while they are in prison, and their utilisation of prison health services, relies on ad hoc prisoner health surveys. To date Queensland (women only), Victoria and New South Wales have conducted surveys of the health of their inmates.

The following section details the availability of routinely collected data on prisoner health and prisoner health service utilisation. As the Queensland, Victorian and New South Wales surveys are not routine data collections, they have not been included in this section of the report. However, information on the scope of these surveys can be found in Appendix 2.

4.1 Health status and outcomes (Tier 1)

Infectious diseases

Incidence of infectious disease: It is compulsory under the public health acts of each state and territory for all jurisdictions to collect data on new notifications of a number of infectious diseases. Health providers forward records of all incident cases of notifiable diseases through to their relevant health department. While these data are forwarded to the Commonwealth, and entered into the National Notifiable Diseases Surveillance System, it is de-identified so that it is not currently possible at the Commonwealth level to establish whether the notification originated from a prison. However, at the state or territory level it is usually possible to identify whether a notification originated from a prison. The ability to place a flag on new notifications of infectious diseases that originated from a prison would be worthwhile to pursue. New South Wales currently reports infectious disease notifications emanating from prisons in the NSW Public Health Bulletin.

Table 4.1: Ability to identify notifiable diseases originating from prison, by state and territory

	Prison flag	How
NSW	Yes	Justice Health is identified as the source of the notification
Vic	Maybe	Identification of prison notifications may be possible by collating information from doctors who are known to work within the prisons
Qld	Maybe	Identification of prison notifications may be possible by collating information from doctors who are known to work within the prisons or if the prison is given as an individual's address
WA	Yes	All prison notifications are reported to the Department using the Director of Health Services' provider number
SA	Yes	Prison Medical Services are identified as the source of notifications
Tas	No	..
ACT	Maybe	Pathology report will list the remand centre of the source of the report but would have to be collected manually from the pathology report form
NT	Yes	The address field for prison notifications is listed as Darwin or Alice Springs Correctional Centre
Commonwealth	No	..

Prevalence of infectious disease information: Currently, only the Northern Territory can report on the prevalence of infectious diseases at a single point in time using their electronic health records from 2003.

Mental illness

National collections: There are no national data collections on the prevalence or incidence of mental illness among prisoners.

Jurisdictional ability to provide mental health information: The Northern Territory can report on the prevalence of mental illness at a single point in time using their electronic health records. Western Australia will have this ability once its electronic health record system is operational.

New South Wales can provide information on the diagnoses of inmates presenting to Justice Health mental health staff through its Mental Health - Outcomes and Assessment Tool (MH-OAT) system. Information on the principal and additional diagnoses responsible for the occasion of care is collected at review and discharge. Diagnoses are coded using ICD10-AM codes and may be coded to a detailed diagnostic code or a broader mental health diagnosis group.

Chronic disease

National collections: There are no national data collections on the prevalence or incidence of chronic illness among prisoners.

Jurisdictional ability to provide chronic illness information: Currently, only the Northern Territory can report on the prevalence of chronic illness at a single point in time using their electronic health records.

Oral/dental health

National collections: There are no national data collections on oral and dental health among prisoners.

Jurisdictional ability to provide oral and dental health information: Currently, only the Northern Territory can report on the number of referrals to a dental provider since 2002 and limited information of the type of oral and dental conditions among treated prisoners using their electronic health records.

Deaths in custody

Information on the number and type of deaths in custody is collected annually by the Australian Institute of Criminology.

Death in prison custody is defined as deaths that occur within prisons or juvenile detention centres. This includes deaths during transfers between correctional facilities, deaths that occur in medical facilities following transfer from a correctional facility, deaths while trying to escape from custody, and deaths occurring while prison officers are attempting to detain an individual (Joudo & Veld 2005).

An individual who dies after release from an illness that began while they were in prison is counted as a death in custody although there is discretion to use coronial findings to remove such cases, particularly if the death due to the illness occurs some time after release.

Sudden death after release (due to overdose, suicide, etc) is a grey area with some jurisdictions counting such deaths as a death in custody and others not. For this reason the Australian Institute of Criminology is currently revising its definitions of deaths in custody to try to standardise reporting across the country.

Deaths in custody are broken down by age (<25, 25–39, 40–54 & 55+ years), Aboriginal or Torres Strait Islander status, legal status (sentenced or unsentenced) and sex.

Deaths in custody are classified as being from natural causes, hanging, gunshot, head injury, external trauma, drugs and alcohol or other. The manner of death is further classified as being 'self-inflicted', 'natural causes', 'unlawful homicide' and 'accidental'.

Injury

Injury morbidity and mortality tends to be highest amongst disadvantaged young men, who constitute the majority of the prisoner population. Further, the combination of a population with a high prevalence of violent and impulsive behaviour, large numbers of persons with a history of traumatic brain injury – 45% of male sentenced inmates (Butler & Milner 2003) – or a current mental illness – 39% of male sentenced inmates (Butler & Allnutt 2003) – and the stress and frustration of prison life further increase the likelihood of injury. New South Wales recently piloted a public health injury surveillance system in the prison system (Butler & Kariminia, 2004).

Despite this, there is no routine injury surveillance within Australian correctional systems. Jurisdictions report rates of 'prisoner on prisoner' and 'prisoner on staff' assaults as part of the annual Report on Government Services published by the Productivity Commission (SCRGSP 2006). However, this is simply a tally of the number of 'Governor's Reports', is administrative in nature, lacks detail, is likely to underreport injury, and does not aim to

serve any public health purpose. No information on inmate workplace injuries, sporting injuries or any other kind of injury is collected.

The lack of information on prisoner injuries may be rectified by the recent decision taken by the National Injury Surveillance Unit to include a field within its data collection for prisons or juvenile detention centres as the place of injury. While this will provide valuable information on prison injuries that require admission to a community hospital it is unlikely to capture the less serious injuries that do not require transfer to community hospitals and major injuries that are treated within the prison system. Nevertheless, the ability to identify and gather information on at least some of the injuries that occur within prisons is a step in the right direction.

Intellectual disability

Inmates who have been identified as having an intellectual disability (an IQ less than 70) are flagged on correctional offender management systems. However, most jurisdictions either rely upon other government agencies (the Disability Services Commission in Western Australia, Disability Services in South Australia, etc), or upon the provision of social security benefits, to identify intellectually disabled inmates. Information on individuals with borderline intellectual impairment (an IQ between 70 and 80) is not routinely collected. Therefore, estimates of the prevalence of intellectual disability using custodial databases are likely to underestimate the burden of disability among prisoners.

Hospitalisations

The AIHW collates and maintains a core set of variables on the characteristics and activity of Australia's hospitals, as supplied by state and territory health authorities. This National Hospital Morbidity Database includes information on demographics, principal and other diagnoses, external causes of injury, procedures, diagnosis related group and length of stay. It is possible to identify hospitalisations of prisoners in all jurisdictions, except South Australia and Tasmania.

4.2 Determinants of health (Tier 2)

Environmental factors

Environmental tobacco smoke

Policies regarding tobacco are changing in many jurisdictions. However, in many cases prisons remain one of the few institutions in which smoking has not been banned. Instead, it is restricted to designated smoking areas and cells.

There is currently no national information on the number of non-smokers with a smoker cell-mate and such data is not routinely collected in any jurisdiction. While most jurisdictions have a policy of placing non-smokers in cells with other non-smokers, this is not always possible. Non-smoking prisoners may be placed with a smoker for reasons of security or because it is the only bed available. However, it may be useful to monitor the number of non-smokers sharing with a smoker.

Occupancy

As the number of prisoners has been rising the ability of the correctional system to house inmates has become stretched. Overcrowding has health implications – it assists the spread of communicable diseases, places strain upon prison facilities, and increases stress due to diminished privacy and comfort.

The Report on Government Services published by the Productivity Commission provides annual figures on prison utilisation – that is, the average daily prisoner population as a percentage of the number of beds provided for in the design capacity of the prisons (SCRGSP 2006). This figure is the proportion of all prisoners and is not broken down by age, sex or Indigenous status.

Socioeconomic factors

There are no national or jurisdictional collections on the educational attainment, pre-incarceration employment status or socioeconomic status of prisoners.

Education within prisons

The Report on Government Services published by the Productivity Commission provides annual figures on the proportion of prisoners enrolled in education and training. This figure is the proportion of all prisoners and is not disaggregated. It is stand alone information that is not linked to any other data sources.

Employment within prisons

Every state and territory runs work programs that allow inmates to participate in paid work. The Report on Government Services published by the Productivity Commission provides annual figures on the proportion of prisoners employed in prison service industries. This figure is the proportion of all prisoners and is not disaggregated. It is stand alone information that is not linked to any other data sources.

Health behaviours

There are no national collections or jurisdictional collections on risk behaviours such as smoking, physical inactivity and unsafe sex among Australian prisoners while they are in custody.

The National Drug and Alcohol Research Centre is currently conducting a study that aims to produce evidence, other than self-report data, on the level of syringe sharing that occurs in prison, the level of syringe cleaning that occurs in prison and whether HIV positive and/or hepatitis C positive inmates engage in syringe sharing in prison. Genetic material from needles that have been confiscated from prisoners in the participating jurisdictions will be analysed to determine how many different prisoners have used each needle. Results should be available in 2007.

Person-related factors

There are no national collections on the physical health measures of Australian prisoners.

The Northern Territory is able to report on the physical health measures of inmates at a single point in time from 2003 using their electronic health records. Western Australia will have this capacity in the near future.

4.3 Health system performance (Tier 3)

Health service utilisation

While all jurisdictions record information on the number of services they provide to prisoners, these are often collected and reported in an aggregated format. Furthermore, these reports give no indication of the extent to which these services are proportional to need.

Budget constraints, the availability of health staff, and limitations imposed upon clinic opening times by custodial security issues are just some of the factors that can impact upon the ability of prisoner health providers to offer services.

The New South Wales' PAS system records information on medical appointments, in-patient activities and walk-in clinic presentations. The clinic, clinician (nurse, medical practitioner or dentist) and speciality of the clinician are recorded.

The Northern Territory is able to record information on health service utilisation through its electronic health record. Information on medical appointments, type of clinician, test results, details of treatment and information on chronic disease management plans are all recorded.

Access to culturally appropriate services

Culturally appropriate health care necessitates an awareness of the cultural and religious factors that can influence the way individuals respond to illness, ageing and health care. Culturally appropriate health services aim to ensure that patients receive effective and respectful care that is provided in a manner compatible with their cultural and religious health beliefs and practices and preferred language.

Given the large numbers of Aboriginal and Torres Strait Islander people within Australia's prisons, it is important to establish whether inmates have access to culturally appropriate services. This information is not currently collected. Information on access to Aboriginal and Torres Strait Islander health services could be collected in a number of ways:

- Are Aboriginal and Torres Strait Islander health services available in prison? Are they available in all prisons?
- What services do Aboriginal and Torres Strait Islander health services provide in prisons?
- Do Aboriginal and Torres Strait Islander inmates access these services?

Mental health service performance

The Commonwealth and the states and territories are currently developing the National Mental Health Benchmarking Project. This project has defined 13 different Key Performance Indicators (KPIs) for mental health services working in the fields of general adult, child and adolescent, older persons and forensic mental health. The 13 KPIs have been mapped to Tier 3 of the NPHF. An additional five indicators have been added to the forensic data collection.

Forensic mental health providers from New South Wales, Victoria, Western Australia and Queensland are participating in the project and will provide the Commonwealth with comparable data for each KPI. All of the providers provide mental health services to prisoners but, in all states except New South Wales, prisoners constitute a small minority of the patients for whom these services provide care. Therefore, while this project does provide some information on the performance of mental health providers within prisons, it must be remembered that the information collected is only applicable to a small subsection of the general prisoner population.

Bearing this in mind, Table 16 shows the 18 KPIs included in the forensic part of the project mapped to Tier 3 of the NPHF. The additional five indicators are listed in the domain labelled 'Safe'.

Table 4.2: Key performance indicators for mental health services mapped to the National Health Performance Framework

Health system performance (Tier 3)		
Effective	Responsive	Continuous
28 day re-admission rate	n.a.	Pre-admission community care Pre-admission community care
Appropriate	Accessible	Capable
National Service Standards compliance	Population receiving care New client index Comparative area resources Local access to inpatient care	Outcomes readiness
Efficient	Safe	Sustainable
Average length of acute inpatient stay Cost per acute inpatient episode Treatment days per three month community care period Cost per three month community care period	Number of inpatients who experience at least one episode of seclusion Number of inpatients who experience at least two episodes of seclusion Number of inpatients who experience seclusion for more than four hours Number of inpatients who assault during an admission Number of inpatients who assault twice or more in an admission.	n.a.

n.a. Not available.

Access to hepatitis C treatment

Given the high prevalence of hepatitis C in Australian prisons, it would be useful to collect information on the numbers of inmates receiving HCV treatment and the type of treatment.

The medications most commonly used to treat HCV are the only prison medications subsidised by the Commonwealth. Jurisdictions can claim back the cost of these medications

through the Highly Specialised Drugs Program. Therefore, all jurisdictions that provide HCV treatment for inmates under this program can potentially provide information on the numbers of inmates treated. However, the lack of reliable information on the numbers of inmates who have HCV, and who have a need for treatment, means that this figure will be difficult to interpret.

Access to opioid substitution therapy

Opioid substitution therapies (methadone or buprenorphine) are available to varying degrees in some, but not all, Australian prisons.

Methadone and buprenorphine are Schedule 8 drugs. As the use of these medicines must be documented in accordance with state and territory legislation, information about administration and patients must be recorded. Therefore, all jurisdictions that provide opioid substitution therapy for inmates collect this information.

Adverse events

A number of jurisdictions use software developed by Patient Safety International to record adverse events, patient complaints, occupational health and safety and risk management information in health care settings. The software (Advanced Incident Management System or AIMS) is currently used in South Australia, Western Australia and New South Wales (where it is known as IIMS – the Incident Information Management System). The other states use paper based reporting systems.

Table 4.3: Manner in which adverse events and patient complaints are collected

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Electronic (AIMS)	✓			✓	✓			
Paper based		✓	✓			✓	✓	✓

Sustainability of the health workforce

The provision of health care services to prisoners is dependent upon the availability of suitably qualified staff. For a number of reasons it can be difficult to recruit staff to prison health care positions.

A sustainable workforce within the prison system could be measured in the following ways:

- number of full time equivalent nursing, medical and allied health staff employed within the correctional system of each jurisdiction
- ratio of full time equivalent staff employed within a jurisdiction to the number of prisoners held within that jurisdiction’s prisons
- proportion of nursing, medical and allied staff employed within the correctional system aged 55 years and over.

4.4 Summary of current custody data

The amount of readily accessible information on prisoner health and health service utilisation while in custody is very limited. Most of the information currently available on prisoner health and health service utilisation during custody has been collected from ad hoc prisoner health surveys conducted in a few Australian jurisdictions.

The introduction of electronic health records would greatly improve jurisdictions' capacity to generate disease prevalence and disaggregated service provision data. In the meantime, there is very little information on prisoner health and health service utilisation while in custody that can be mapped to the National Health Performance Framework. The little that is currently available at a national level is shown in Table 4.4.

Information on the KPIs collected through the National Mental Health Benchmarking Project has not been included in this table, as the data collected as part of this process only relates to a small subset of prisoners.

Table 4.4: Current in-custody data mapped to the National Health Performance Framework

Health status and outcomes (Tier 1)				
Health conditions	Human function	Life expectancy and wellbeing	Deaths	
Incidence of notifiable diseases Incidence of prisoner on prisoner assaults Incidence of injuries requiring hospitalisation Hospitalisations	Numbers of identified inmates with an intellectual disability	n.a.	Deaths in custody	
Determinants of health (Tier 2)				
Environmental factors	Socioeconomic factors	Community capacity	Health behaviours	Person-related factors
Overcrowding	Prison education Prison employment	Demographics	Unsafe injecting in prison	n.a.
Health system performance (Tier 3)				
Effective	Responsive		Continuous	
n.a.	n.a.		n.a.	
Appropriate	Accessible		Capable	
n.a.	Aggregated service data Number of inmates receiving HCV medication		n.a.	
Efficient	Safe		Sustainable	
n.a.	Adverse events		Workforce	

n.a. Not available.

5 Release

Most prisoners are released back into the community and poor health at release can affect the health of the community. Information on the health of prisoners on release will help to identify areas of service provision within prisons that can be improved, will identify health problems that may affect the community, and will enable suitable post-release health planning to occur.

5.1 In-reach services

In-reach services are programs where community health providers enter prisons to begin working with inmates prior to their release.

There is currently no national report on whether jurisdictions have in-reach programs and the numbers of inmates who participate in such programs.

5.2 Health related post-release programs

A number of states have set up post-release support programs for prisoners. These programs aim to support prisoners in the transition from custody to the community through the provision of identification, Medicare cards and the establishment of links with community health providers.

There is currently no national report on whether jurisdictions have health related post-release programs, the details and capacity of any such programs, or the numbers of inmates who participate.

5.3 Discharge summaries

Inmates can be released from prison or from court without medical staff being aware that they have been released. This makes discharge planning and the provision of discharge summaries difficult.

Jurisdictions have developed different ways of addressing this uncertainty with varying degrees of success. In the Northern Territory discharge summaries are faxed to health providers in the community to which an inmate is expected to return. Queensland mails discharge summaries to the inmate's last known address while Western Australia is in the process of setting up a password protected online discharge summary system.

5.4 Community referrals

It is essential that patients who have recently been released from prison have continuing access to the treatment, care and support that they require, in the community. Prison health staff refer patients to community treatment providers but are unable to routinely report on whether ex-prisoners have accessed community services.

5.5 Community opioid substitution treatment referrals

Opioid substitution therapies (methadone or buprenorphine) are available to varying degrees in some, but not all, Australian prisons. It is essential that patients, who have recently been released from prison, have continuing access to the treatment, care and support that they require, in the community.

Prison health staff refer patients to community treatment providers but unless they subsidise doses for the first month (as in South Australia and Victoria) they are unable to routinely report on whether ex-prisoners have accessed community services.

5.6 Summary of current release data

Information on the health of prisoners as they re-enter the community is almost non-existent, primarily due to uncertainty around release dates. Information on the health of prisoners upon release is urgently needed.

6 Post-release

6.1 Post-release mortality

The risk of death is substantially elevated during the post-release period, with the risk being greatest in the days and weeks immediately following release (Kariminia et al, 2007).

Studies into mortality among ex-prisoners have been conducted in three jurisdictions (New South Wales, Victoria and Western Australia). The most common causes of death post-release are related to suicide, alcohol or drugs, circulatory system problems or accidents.

It may be possible to collect information about post-release mortality from the National Coroners Information System. This database contains the results of coronial inquests across Australia. While it is not currently possible to identify the deaths of people who have spent time in custody (as opposed to deaths defined as having occurred while in custody) the National Coroners Information System has published a new national police form template. This template is being trialled in some of the states and includes fields that identify whether an individual has:

- a criminal record
- spent time in custody
- been released from an institution within the last week.

Sources of information to be used to complete this entry will be police records, medical records, other official records or through family and friends. It is presently unclear how consistently these enquiries into previous criminal and custodial history are performed. Furthermore, there are currently no national guidelines as to how far back records should be searched to collect information on criminal activity or time spent in custody.

While the inclusion of such a field may not capture all ex-prisoner deaths it is likely to capture a significant proportion, given that the most common causes of post-release mortality are due to overdose, injury or suicide and many occur within the first few weeks after release.

Discussions with the National Coroners Information System into the feasibility of collecting information on sudden and unexpected deaths among ex-prisoners could be conducted.

6.2 Court diversion

While court diversion schemes technically fall outside the scope of this report – as these services are provided to people appearing in court, not prisoners – it is acknowledged that ex-prisoners may come into contact with these services after their release. Court diversion programs have the aim of managing individuals with a mental illness or a drug and alcohol problem in the community or in hospital settings, rather than within the criminal justice system.

Most states and territories have implemented a court diversion scheme for people with a serious mental illness, a court diversion scheme for people with a substance abuse problem

or both. It would be useful for any report on prisoner health to include information on jurisdictional diversion schemes, the number of individuals who are referred to these schemes and the numbers of individuals who are referred for management outside the criminal justice system.

6.3 Summary of current post-release data

Prison health providers have no way of monitoring health or health behaviour after release except by re-assessing health if an individual returns to prison. However, it may be possible to monitor post-release sudden and unexpected deaths through the National Coroners Information System.

7 A way forward: towards a national prisoner health information collection

Prisoner health is of concern to inmates, their friends and families, prison staff and the wider community. The high level of mobility between prisons and the community means that the health of prisoners impacts the health of the community. As well as the increased risk of the spread of infections and diseases to the wider community, lack of intervention and screening and poor management of prisoners' health results in a high burden of disease in prisons and increased costs to the community. Prison presents an important opportunity to intervene and treat prisoners, leading to better health for the prisoner during and after confinement and reduced risks to the community. Improved prisoner health during confinement has the potential to benefit both the prison population and the wider community.

The prison population is known to have relatively poor health. Of particular concern is the number of prisoners who have poor mental health. Prisoners also have higher than average rates of alcohol and illicit drug use, indulge more in risky sexual behaviour and suffer from a higher prevalence of communicable diseases such as hepatitis B and C.

Aboriginal and Torres Strait Islander peoples are over-represented in the prison system. Almost one quarter of the prison population identify as Indigenous. The overall health of Indigenous Australians is poorer than non-Indigenous Australians and so the health needs of Indigenous prisoners is also likely to be significantly greater. In addition, it is important that health services to Indigenous prisoners are offered in a culturally appropriate way.

7.1 Why a national prisoner health information collection is needed

The significant health needs of prisoners as a population group has been well documented, but no Australia-wide, systematic collection of information on prisoners' health exists. The need to develop statistics on the health of prisoners is a priority area in the National Information Development Plan for Crime and Justice (ABS 2005). The National Action Plan on Mental Health 2006-11 (COAG 2006) also calls for information to be collected on the prevalence of mental illness within Australian prisons. Prisoner populations are also recognised as priority groups in the National Hepatitis C Strategy 2005-2008 and the National Sexually Transmissible Infections Strategy 2005-2008.

The association between prisoners' health and the health of the wider community (AIHW 2005) means that a prisoner health information system is needed that will:

- monitor prisoners' health, and provide trends and state and territory comparisons
- compare the health status of prisoners with the non-prison population and identify areas for improvement
- inform prisoner health service planning and funding
- assess and evaluate the provision of services
- assess differences in health care practices between prisons, providers and jurisdictions

- provide health performance indicators for correctional facilities
- measure health policy outcome among prisoners.

A national information collection on prisoner health will increase awareness of the problems of the health of Australian prisoners, will allow improved monitoring and the setting of national targets and outcomes.

7.2 Current information sources and problems

Currently, national information on prisoner health is scant; only two relevant national data collections exist – HIV prevalence among prison entrants and deaths in custody. The former data collection has problems associated with coverage with each jurisdiction adopting a different approach to testing. In 2003, Queensland screened 100% of prison receptions for HIV, NT 92%, NSW 41%, WA 41%, SA 26% and Tasmania 16% (National Centre in HIV Epidemiology and Clinical Research, 2004). All jurisdictions collect information at the time of reception and various data from clinic visits, as well as some information on the prevalence of selected conditions from surveys. Current data are either held only in some jurisdictions or are not collected in a standard format. As a result, the information cannot be aggregated to the national level. In addition, much important and relevant information that is needed to monitor prisoners’ health, and the health services provided to prisoners, is currently lacking. Furthermore, very little information is collected at release or post-release, which are important times for prisoners because of their impact on the wider community as well as for their own health.

Table 7.1: National currently collected indicators on prisoners

Time point	Available indicator
Reception	HIV prevalence ^(a)
Custody	Proportion of prisoners who identify as Aboriginal and Torres Strait Islanders Proportion of women in custody The age of people in custody Deaths in custody Prisoner on prisoner assaults Proportion of inmates employed within prison Proportion of inmates in education programs within prison Prison capacity
Release	—
Post-release	—

(a) Among tested inmates only. HIV testing is voluntary in most jurisdictions.

7.3 Strategies to overcoming data constraints

The Prisoners Health Information Group (PHIG) recommends that health information on prisoners should be collected at four points (reception, custody, release and post-release). Below are strategies to overcome present data constraints at each of these points.

Electronic health records

Electronic health records would be of great value in the collection of nationally comparable information for evidence and needs based prisoner health care. Such a system would improve the flow of health information between prisons when a prisoner is transferred, and between prison health care providers and external health care providers during custody and at pre- and post-release.

Work on the implementation of an electronic health record in the non-prison community has already begun. The Commonwealth and state and territory departments of health have been collaborating on a project that aims to develop better ways of electronically collecting, storing and exchanging health information.

As part of this process the National E-Health Transition Authority has been standardising health record design, standardising clinical and medical terminology used in electronic health information systems, developing templates for common documents such as discharge summaries or specialist referrals, ensuring the security and reliability of electronic health data and protecting the privacy of the health information of individuals (National E-Health Transition Authority 2006). Further information can be obtained at <www.nehta.gov.au>.

National E-Health Transition Authority defines an electronic health record (EHR) in the following way:

An electronic longitudinal collection of personal health information, usually based on the individual, entered or accepted by health care providers, which can be distributed over a number of sites or aggregated at a particular source. The information is organised primarily to support continuing, efficient and quality health care. The record is under control of the consumer and is stored and transmitted securely.

An electronic health record contains the medical details of individuals but it needs to be supplemented by software that allow for clinical delivery, referred to as Clinical Information Systems or Patient Administration Systems. Such programs may allow clinicians to schedule appointments, prescribe medications or order and retrieve pathology information.

Implementation of an electronic health record has already begun in community settings in some states. Eventually, whenever an individual sees a new community health provider their medical information will be readily available, even if the new provider is in another state or territory.

The ability to incorporate prison health providers in this network would be invaluable. It would ensure that information on prisoners' health is collected at reception, during custody and upon release.

Current situation

Electronic health data for prisoners are already available to varying extents in some jurisdictions.

The Northern Territory has had an electronic health record for prisoners since 1993. The system was developed and implemented in-house by the then contract health provider (Corrections Medical Services). It is written in Filemaker Pro and has undergone extensive modifications since development. Demographic data, reception outcomes, pathology results and clinical information are entered directly into the system as well as appointments and referrals.

Western Australia is in the process of implementing an electronic health record (Electronic Health Online) for prisoners which will be linked to an online electronic discharge portal and an electronic appointment system. Once this system has been implemented the reception health assessment will be entered directly into the system. The system will also include clinical and pathological information, appointments, referrals and demographic data.

New South Wales does not have an electronic health record for prisoners. However, Justice Health, as a statutory health corporation reporting to NSW Health, has implemented a number of electronic data collections in line with NSW Health requirements. These include Mental Health - Outcomes Assessment Tool (MH-OAT) and the Patient Administration System. PAS does not contain clinical information on patients – this remains in the paper based medical records. Instead the system records information on internal and external referrals, medical appointments, in-patient activities and walk-in clinic presentations. The clinic, clinician (nurse, medical practitioner or dentist) and speciality of the clinician are recorded.

None of the other states or territories (Queensland, Victoria, South Australia, Tasmania and the Australian Capital Territory) currently have electronic health records for prisoners. In Queensland the Integrated Offender Management System can incorporate health information but this module of the system is not yet functional. Tasmania will introduce an electronic health record as part of the state's move towards the introduction of electronic health records in all health services. Victoria is currently in the early stages of investigating the implementation of an electronic health record. The Australian Capital Territory is still in the process of finalising issues around health service provision to prisoners entering its new prison. South Australia is planning to implement an electronic health record for prisoners. This project is considered to be a key ICT initiative. The indicative timeline for implementation is 2009–10.

Reception

Standardised reception forms

A set of standardised reception questions would provide a wealth of information on the health of individuals entering Australian prisons and would assist health care providers to manage prisoners' health. At present, every jurisdiction has a different reception form and, while there are enough consistencies between the states and territories to enable some national information on prisoner health to be collected from current forms, work towards setting national standards for all the questions would be invaluable.

The inclusion of short standardised screening examinations as part of the reception process in all jurisdictions would assist in the collation and comparison of information on the health of individuals entering prisons in all of the jurisdictions. Such screening tests could include:

- The ASSIST which identifies harmful, hazardous and dependent use of alcohol, tobacco and other psychoactive substances. It is already routinely used in South Australia and Western Australia.
- The K10 which identifies psychological distress and is routinely used in New South Wales. Other mental health screeners that could be used are the Referral Decision Scale (Teplin & Swartz 1989) or the Brief Jail Mental Health Screen (Steadman et al, 2005).

Expansion and continuation of the NPEBBV&RBS

All jurisdictions have agreed to participate in the 2007 National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey and planning for this survey is currently underway. This survey was first conducted in 2004 with the intention that it should be conducted biennially. The NPEBBV&RBS provides a way of providing national information on the prevalence of bloodborne viruses and risky behaviours such as unsafe sex, tattooing and body piercing, drug use, and unsafe injecting behaviours among prison entrants.

It will be important to streamline the health, substances and mental health information collection activities to reduce the burden of work placed on prison staff during the reception stage.

Custody

Patient encounter information

Although a number of jurisdictions are moving towards electronic recording systems they will not be implemented fully for some time. Consequently, information collected by prison health providers on patient encounters is limited. In many cases all that is collected and reported is a simple count of how many patients have been seen by each clinical stream (for example dentists, drug and alcohol workers). More detailed information on why prisoners attend prison clinics would be valuable.

In the non-prison population, information about visits to general practitioners (GPs) in the community is collected through the BEACH program. This program collects information on around 100,000 patient encounters from a random sample of GPs every year. It provides information on the reasons for visits to GPs and how patients' problems are managed and treated.

Prison health clinics provide a similar service to that provided by GPs in the non-prison community. Given that it may be some years before each jurisdiction has an electronic health recording system for all prisoners, it may be worthwhile to conduct a similar study to BEACH within the prison system in order to collect information on:

- why prisoners attend clinics
- the health problems managed by prison clinics
- the treatments provided to prisoners
- the average number of occasions of service provided by prison health care providers in a given time period.

Flagging routinely reported data

There is the potential to collect information on hospital separations, injuries requiring hospitalisation and the incidence of notifiable diseases among prisoners through current reporting processes at the state and national level. This could be facilitated by identifying individuals as prisoners (through a flag) in routine reporting systems.

Use of existing national collections/reports

Information on aspects of prison life is already reported in the following publications:

- Report on Government Services – prisoner assaults, prison capacity, number of prisoners in education or employment
- Prisoners in Australia report – number of prisoners, age, sex and Aboriginal and Torres Strait Islander status
- Deaths in Custody report
- National Mental Health Benchmarking Project.

Although none of this information is linked to other data, it would be worthwhile including relevant parts of it in reports on prisoner health indicators.

Injury surveillance

An injury surveillance system was recently piloted in some New South Wales prisons. It was based upon the National Injury Surveillance Unit standard for data collection which records injury type, body part injured, cause of injury, the injury setting, intent and treatment. Data were directly recorded via remote data entry into a central database.

Given the nature of the prison environment and the potential for inter-personal conflicts to arise, it would be valuable for injury surveillance systems to be adopted by all jurisdictions.

Discharge and post-release

Standardised discharge data collection

Information on the health of prisoners as they re-enter the community is almost non-existent, primarily due to uncertainty around release dates. Information on the health of prisoners upon release is urgently needed.

It may be feasible to collect consistent information on individuals leaving prison over a short period, for example a week or a fortnight. Information could be collected electronically once an electronic health recording system is in place or a standardised discharge summary form.

Post-release death

It may be possible to collect information about post-release mortality from the National Coroners Information System (see Section 6.1). While using coronial information to collect information on post-release death will not capture all ex-prisoner deaths, it is likely to capture a significant proportion given that the most common causes of post-release mortality are due to overdose, injury or suicide and many occur within the first few weeks after release. However, it would require name matching against a list of prisoners and release dates.

Data linkage

One method for improving the availability and accessibility of information is through the linkage of records from two or more data collections. This is possible where the data are collected electronically, and where a common person identifier is available. Other data linkage methods are ‘record matching’ and link records through the use of a common statistical linkage key (statistical linkage). This approach, depending on the type of linkage undertaken, can provide valuable information, for example on the movement of prisoners between prisons and health services, on repeat usage of health services over time or, as mentioned above, on post-release mortality. Data linkage in the context of prisoner health information should be considered as one of the methods for improving the availability of information, with the understanding that privacy issues would need to be addressed.

Summary of potential ways of addressing data constraints

It would be beneficial to individual prisoners and to the general prison population if all jurisdictions moved towards implementing an electronic health record – including an electronic reception form and standardised discharge summary – taking into consideration the National E-Health Transition Authority guidelines. Using data linkage as a way to improve the availability and accessibility of information is also a potential option in the future.

However, these options are likely to be some way off. In the meantime other strategies to collect data should be considered. Table 7.2 provides an overview of ways in which data could be collected at each of the four stages of incarceration (reception, in custody, release and post-release), until electronic health records for prisoners are available nationally.

Table 7.2: Possible data collection strategies at reception, while in custody, upon release and post-release

Time point	Data collection strategy	Possible areas collected
Reception	Reception review using standardised questions	Mental illness, infectious disease, chronic disease, injury and dental problems Health risk behaviours Biomedical risk factors
National Prison Entrants Bloodborne Virus and Risk Behaviour Survey	NPEBBV&RBS	HIV, HBV and HCV Health risk behaviours such as unsafe sex and unsafe injecting
Custody	The addition of a prison flag to the relevant data collections	Hospitalisations Injuries requiring hospitalisation Notifiable disease incidence
	BEACH adaptation	Occasions of service Health problems managed by prison clinics Treatments provided to prisoner
	Prison injury surveillance data	Injuries within prisons Injury type
Release	Discharge data collection	Mental illness Chronic diseases Bloodborne diseases
Post-release	Discussion with the NCIS	Post-release sudden and unexpected deaths

7.4 Method of collection and setting

A number of issues need to be addressed when starting a new data collection. These include the format in which the data is to be collected, whether it will be a unit record file or aggregate data collection, whether all the information will be collected on all prisoners or on a sample of prisoners and the setting in which the information is collected.

Paper-based versus electronic data collections

It would be useful in the development of the national data collection to use existing electronic data collections to capture indicators where relevant. In the long term, an electronic data collection of all indicators would be efficient and more practical.

However, information on the health and wellbeing of individuals entering the prison system will need to be manually extracted from paper-based forms for some time yet.

Unit record or aggregate

A unit record snapshot data collection is recommended for the prisoner health data collection.

Unit record data consist of individual records of data stored on an electronic flat file. In the case of the prisoners' health data collection, the unit would be the individual prisoner. For each prisoner the file would contain a set of selected and agreed data items. The definitions and specifications for the data items to be included on the unit record file would be contained in a data dictionary that would be developed by the AIHW, in consultation with PHIG and TEG.

One of the main advantages of reporting and collecting the data in unit record format is that the data are much more flexible and therefore easier to analyse. The ease in which the data can be disaggregated also means that some of the differences in the prison systems across jurisdictions could be taken into account when undertaking data analyses and reporting of results. Furthermore, data in unit record format can be checked for errors, resulting in improved data quality.

Continuous collection or a sample

Given the large number of prison receptions every year, it is not feasible to review all reception assessments conducted over a year. However, it would be feasible to collect information on individuals entering reception prisons over a short period, for example a week or a fortnight. The NPEBBV&RBS managed to collect information on 739 prison entrants at seven Australian reception prisons in four states over a two-week period. Extrapolating this figure, it could be anticipated that collecting the reception forms of all inmates entering all reception prisons across Australia over a two-week period would gather information on between 1,000 and 1,500 individuals.

Information setting

The aim of the current project is to collect information (demographic and health information at reception, while in custody, and ultimately also upon release) that will allow monitoring of the health of prisoners from reception, while in custody and at discharge. Additional information on the prisons themselves also needs to be collected (location, intervention services and post-release programs) (Table 7.3).

Table 7.3: Draft core data set for prisoner health – potential data elements or areas for future collection

Client (prisoner)	Episode (reception)	Episode (custody)	Organisation (prison)
Data element:	Data related to:	Data related to:	Data related to:
Person identifier	Health conditions e.g. diabetes, asthma, heart disease, cancer, hypertension, hepatitis B & C, HIV, head injury leading to loss of consciousness	Health conditions e.g. tuberculosis, new incidence of a notifiable disease	Prison identifier
Date of birth		Clinic attendance	State/territory identifier
Sex		Clinic attendance for repeat medications e.g. psychiatric, methadone, buprenorphine, analgesics, insulin	Health service staff
Indigenous status	Risk factors e.g. smoking, alcohol, drugs, unprotected sex, sharing injecting equipment	Immunisation e.g. hepatitis B, meningococcal, tetanus, influenza, measles, mumps, rubella	Occasions of service by prison health care providers
Country of birth		Treatment or other medical intervention e.g. chronic health conditions, hepatitis C, communicable disease	Aboriginal and Torres Strait Islander-specific health service
State/territory identifier	Mental health e.g. mental illness, self harm	Pregnancy	Post-release programs
	Medication e.g. buprenorphine, cyproxine, methadone	Hospital separations	
	Pap smear	Mortality	
	Level of education	Access to Aboriginal and Torres Strait Islander specific health service	
		Dental occasions of service	

7.5 Development of indicators

The information contained in this report will inform the next stage of this project which is the development of indicators of prisoner health. The development of indicators for prisoner health needs to take into account the information that is presently collected in each jurisdiction. This will help to minimise the collection burden on correctional facilities and health services within prisons. However, as the data collected varies across the jurisdictions, collection of some new information and modification of the way certain information is currently collected will be required in all jurisdictions. The development of the indicators will take into account the priority of information needed and its relevance to policy. In particular, information detailing the number of prisoners requiring particular health care services and the number of prisoners using existing services is needed to plan prison health care services. The indicators will be developed in consultation with experts in the field, and with state and territory prison health planners and other stakeholders.

Once indicators have been approved by TEG and PHIG, a set of data items, or a data set specification, to report on these indicators will be developed.

The first step in developing indicators is to clearly define the purpose of the indicator. Indicators need to be developed to meet a specific purpose in a defined context. The development of indicators should not be dependent on the availability of data. Indicators need to be selected based on their importance and relevance to the situation to be measured. It is important however that data gaps are identified early in the process so a staged approach to the development of necessary data is adopted and enough time is allowed for this to happen.

The following criteria will guide the development of indicators. Indicators need to be:

- national in scope or applicable to regional or national issues of significance
- normative
- able to show a link between the indicator and outcomes
- reliable and valid
- consistent with other existing indicators
- responsive to change.

Potential areas for indicator development

The prisoner health indicators need to be related to the prisoners (client-related information – Tier 1 and Tier 2 of the NHPF) as well as the setting in which services are provided (prison health service-related information – Tier 3 of the NHPF) (Tables 7.3 and 7.4).

Members of the PHIG and TEG developed a list of health issues considered to be important within the three tiers of the NHPF – these are listed below. The ability to separate information by Aboriginal and Torres Strait Islander status will be particularly important in the prison environment, given the significant over-representation of Indigenous people in the criminal justice system.

Health status and outcomes (Tier 1)

- Mental health – concern is growing in the community and among correctional health providers at the disproportionate number of prisoners with a mental illness. The recent Senate Committee on Mental Health commented that ‘there is a much higher incidence of mental illness in the Australian prison population than in the general population’ (Senate Committee on Mental Health 2006). This statement is also supported by recent research in New South Wales showing an excess of mental illness among prisoners compared with the general community (Butler et al. 2006).
- Infectious diseases – prisoners are a high-risk group for communicable diseases. A substantial proportion of Australian prisoners come from backgrounds where the prevalence of communicable diseases is higher than in the wider community. Prisoners may also contract diseases through sharing contaminated injecting equipment and unsafe sex.
- Chronic diseases – chronic diseases are ongoing or recurrent conditions that include cardiovascular disease, cancer, diabetes, renal diseases and respiratory diseases. These diseases are responsible for a significant proportion of the burden of disease within the general community. Given the substantial proportion of prisoners from Aboriginal and Torres Strait Islander backgrounds and other socioeconomically disadvantaged

backgrounds, the prevalence of chronic disease among Australian prisoners is likely to be relatively high.

- Injury – prisoner populations are predominately young men. In the general population, injury rates are highest among young males with a third of the deaths among males between the ages of 20 and 45 being caused by injury. Mortality due to injury is even higher among young Aboriginal and Torres Strait Islander men (AIHW 2004).
- Oral and dental health – people of lower socioeconomic status tend to have poor oral and dental health (AIHW 2004). Disadvantaged people are over-represented in prisons and so prison populations are likely to have dental health problems. Indeed, for many inmates, prison is a rare opportunity to access dental services.
- Death – within prison and after release.

Determinants of health (Tier 2)

Things that influence health, in a negative or a positive way, in an individual or a population are referred to as ‘determinants of health’. Determinants may be environmental, socioeconomic, behavioural, biomedical or genetic.

PHIG and TEG identified the following determinants of health as important within the prisoner population:

- socioeconomic background
- tobacco use
- illicit drug use (particularly injecting drug use)
- alcohol use
- risky sexual behaviour
- physical activity
- biomedical factors such as high blood pressure, high cholesterol, etc.

Health system performance (Tier 3)

Finally the members of PHIG and TEG expressed a desire to know how accessible health care services are to prisoners.

These include, but are not limited to, access to Aboriginal and Torres Strait Islander health services, dental health services and hepatitis C treatment.

Table 7.4 shows the data currently collected at the state/territory or national level, mapped to the Health Performance Framework. These will be used to develop the indicator set.

Table 7.4: Currently available data mapped to the National Health Performance Framework

Health status and outcomes (Tier 1)				
Health conditions	Human function	Life expectancy and wellbeing	Deaths	
Reception Reception prevalence of: • mental illness • infectious disease • chronic disease • injury	Reception n.a.	Reception n.a.	Reception ..	
Custody Incidence of notifiable diseases Incidence of prisoner on prisoner assaults Incidence of injuries requiring hospitalisation Hospitalisations	Custody Numbers of identified inmates with an intellectual disability	Custody n.a.	Custody Deaths in custody	
Determinants of health (Tier 2)				
Environmental factors	Socioeconomic factors	Community capacity	Health behaviours	Person-related factors
Reception ..	Reception Age Sex Aboriginal and Torres Strait Islander status	Reception ..	Reception Tobacco use Alcohol use Illicit drug use Unsafe injecting in the community Risky sexual behaviour	Reception Blood pressure Cholesterol levels Body weight
Custody Overcrowding	Custody Prison education Prison employment	Custody Demographics	Custody Unsafe injecting in prison	Custody n.a.
Health system performance (Tier 3)				
Effective		Responsive		Continuous
Reception ..		Reception ..		Reception ..
Custody n.a.		Custody n.a.		Custody n.a.
Appropriate		Accessible		Capable
Reception ..		Reception ..		Reception ..
Custody n.a.		Custody Aggregated service data Number of inmates receiving HCV medication		Custody n.a.
Efficient		Safe		Sustainable
Reception ..		Reception ..		Reception ..
Custody n.a.		Custody Adverse events		Custody Workforce

.. Not applicable.

n.a. Not available.

7.6 Where to from here?

The provision of health services to prisoners is the responsibility of different authorities in the different jurisdictions. In Western Australia, South Australia, Queensland and the Northern Territory, the provision of health services to prisoners rests with corrective services departments. In New South Wales, Victoria, Tasmania and the Australian Capital Territory, it is carried out by health departments. A national collection of information on prisoner health will need to have the full cooperation of the appropriate jurisdictional authority in each jurisdiction.

The collection of information on the health of prisoners will also require the implementation of new data collection processes and practices by these authorities. It is desirable that all jurisdictions move towards collecting a core set of information at each stage of the imprisonment process (reception, custody, release and post-release), using national standards established by the project and agreed to by the appropriate authorities in each jurisdiction. This information should be collected, stored, managed and be made available in electronic formats.

Greater standardisation will be achieved through the implementation of an electronic health record collection system that uses nationally agreed data standards. Data collections such as the National Prisoner Entrants' Bloodborne Virus and Risk Behaviour Survey provide a useful model and have the potential to be expanded to other areas, such as mental health. Access to information during incarceration could be improved using census models such as the BEACH survey of consultations with general practitioners.

This report lays the foundation for the next stage in the development of a national data collection for prisoner health, the development of the health indicators. This will involve further consultation with state and territory prison health providers, policy makers and other stakeholders.

Appendix 1 Committee membership

Prisoner Health Information Group

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Fadwa Al-Yaman	Australian Institute of Health and Welfare
Tony Butler	National Drug Research Institute (previously of the Centre for Health Research in Criminal Justice, Justice Health)
Mark Cooper-Stanbury	Australian Institute of Health and Welfare
Chris Holmwood	Australasian Council of Prison Health Services (until September 2006)
Debbie Robb (secretariat)	Department of Health, South Australia
Donna Scott/David Greene	Corrective Services Administrators Conference
Nick Skondreas/Soula Macfarlane	Australian Bureau of Statistics
Mike Taylor	National Aboriginal and Torres Strait Islander Health Officials Network; formerly, Standing Committee on Aboriginal and Torres Strait Islander Health

Technical Expert Group

Tony Butler (chair)	Centre for Health Research in Criminal Justice, Justice Health
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Kate Fennell

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Appendix 2 Prisoner health surveys

Much of the currently available information on the health of inmates while they are in prison, and their utilisation of prison health services, relies on ad hoc prisoner health surveys. To date Queensland, Victoria and New South Wales have conducted surveys of the health of their inmates.

New South Wales conducted prisoner health surveys in 1996 and 2001, with another scheduled for late 2007 (Butler 1997; Butler & Milner 2003). Approximately 10% of the total number of male inmates and a third of the total number of female inmates participated in each survey. In 1996, 789 inmates were interviewed while in 2001, 914 inmates participated.

In 2001, New South Wales conducted mental health diagnostic interviews with 953 newly received inmates and 566 of the sentenced inmates (Butler & Allnutt 2003). The interview allowed ICD-10 diagnoses of psychiatric or mental disorders, substance misuse and substance dependence to be made.

Both the Queensland and the Victorian prisoner health surveys used modified versions of the New South Wales survey instrument enabling some comparisons to be made between the three states. In Victoria, 491 inmates participated in at least one part of the survey (Deloitte Consulting 2003). This equates to about 10% of the total number of male inmates and a quarter of female inmates. In Queensland, however, only women prisoners were interviewed (Hockings et al. 2002). The survey interviewed 60% of Queensland's women prisoners with 212 out of a possible 347 women participating.

Mental illness

Table A1: Mental health data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Lifetime prevalence of a psychiatric illness Lifetime prevalence of treatment for a psychiatric illness Prevalence of current psychiatric illness Prevalence of current treatment for a psychiatric illness Prevalence of current depression and/or hopelessness Prevalence of current of recent suicidal or self-harm Proportion meeting cut-off score for psychiatric disturbance (schizophrenia, manic depression or major depression) on the Referral Decision Scale
Mental Illness among New South Wales Prisoners (2003)	ICD-10 diagnoses of psychiatric or mental disorders ICD-10 diagnoses of substance misuse and substance dependence Composite International Diagnostic Interview (including): SF-12 and BDQ (disability measures); International Personality Disorder Examination (personality disorder measure); GHQ-12 (general psychiatric morbidity); and Kessler 10 (psychological distress)
Victorian Prisoner Health Survey (2003)	Lifetime prevalence of a psychiatric illness Lifetime prevalence of treatment for a psychiatric illness Prevalence of current treatment for a psychiatric illness Prevalence of current depression Prevalence of current of recent suicidal or self-harm Proportion meeting cut-off score for psychiatric disturbance (schizophrenia, manic depression or major depression) on the Referral Decision Scale
Queensland Women Prisoners' Health Survey (2002)	Lifetime prevalence of a psychiatric illness Lifetime prevalence of treatment for a psychiatric illness Prevalence of current psychiatric illness Prevalence of current treatment for a psychiatric illness Prevalence of current depression Prevalence of current of recent suicidal or self-harm Proportion meeting cut-off score for psychiatric disturbance (schizophrenia, manic depression or major depression) on the Referral Decision Scale

Infectious disease

Table A2: Infectious disease information collected in prisoner health surveys

Survey	Screening conducted for:
NSW Inmate Health Survey (1996 & 2001)	HIV, HBV and HCV Tuberculosis Syphilis HSV-1 and HSV-2 Chlamydia Gonorrhoea
Victorian Prisoner Health Survey (2003)	HIV, HAV, HBV and HCV Tuberculosis Syphilis HSV-2 Chlamydia Gonorrhoea
Queensland Women Prisoners' Health Survey (2002)	HCV Medical record checks were used to obtain the results of screening tests for: HIV, HBV and HCV Syphilis Chlamydia Gonorrhoea

Chronic disease

Table A3: Chronic disease data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Cardiovascular disease Cancer Diabetes Renal disease Respiratory diseases
Victorian Prisoner Health Survey (2003)	Cardiovascular disease Cancer Diabetes Renal disease Respiratory diseases
Queensland Women Prisoners' Health Survey (2002)	Cardiovascular disease Cancer Diabetes Renal disease Respiratory diseases

Risky sexual behaviour

Table A4: Risky sexual behaviour data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Sex before the age of 16 Sex work Sex without a condom in the 12 months before prison
Victorian Prisoner Health Survey (2003)	Sex without a condom in the 12 months before prison
Queensland Women Prisoners' Health Survey (2002)	Sex before the age of 16 Sex work Sex without a condom in the 12 months before prison

Oral/dental health

Table A5: Oral and dental health data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Time since last visit to dentist Number of times seen dentist in last year Type of dentist Type of treatment Any dental treatment the inmate thinks they require Frequency of brushing In the 1996 survey dentists conducted oral examinations on a subset of respondents and reported on: Number of decayed, filled or missing permanent teeth Endentulousness Denture status and needs Periodontal status and needs Malocclusion status and needs Gum disorders Treatments performed
Victorian Prisoner Health Survey (2003)	Time since last visit to dentist Number of times seen dentist in last year Type of dentist Type of treatment Any dental treatment the inmate thinks they require Frequency of brushing Dentists conducted oral examinations on a subset of respondents and reported on: Oral mucosa Denture status Periodontal status Malocclusion status Dentition status and treatment needs
Queensland Women Prisoners' Health Survey (2002)	Time since last visit to dentist Number of times seen dentist in last year Type of dentist Type of treatment Any dental treatment the inmate thinks they require Frequency of brushing

Disability

Table A6: Impairment data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Illness or disability for six months or more Nature of disability Limitation in activities due to illness or disability Restricted activities in last two weeks due to injury or disability
Victorian Prisoner Health Survey (2003)	Illness or disability for six months or more Nature of disability Limitation in activities due to illness or disability
Queensland Women Prisoners' Health Survey (2002)	Illness or disability for six months or more Nature of disability Limitation in activities due to illness or disability Restricted activities in last two weeks due to injury or disability

Tobacco use

Table A7: Tobacco use information collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Current smoker Age when first started Daily tobacco consumption Prison and community tobacco consumption Smoking reduction strategies Attitudes to quitting
Victorian Prisoner Health Survey (2003)	Not collected
Queensland Women Prisoners' Health Survey (2002)	Current smoker Age when first started Daily tobacco consumption Prison and community tobacco consumption Smoking reduction strategies Attitudes to quitting

Illicit drug use

Table A8: Illicit drug data collected by prisoner health survey

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Ever used illicit drugs Lifetime and regular illicit drug use Injecting drug use and history Drug consumption in prison Ease of obtaining drugs in prison Drug use and offending
Victorian Prisoner Health Survey (2003)	Ever used illicit drugs Lifetime and regular illicit drug use Injecting drug use and history Drug consumption in prison
Queensland Women Prisoners' Health Survey (2002)	Ever used illicit drugs Lifetime and regular illicit drug use Injecting drug use and history Drug consumption in prison Ease of obtaining drugs in prison Drug use and offending

Unsafe injecting

Table A9: Data on sharing needles in prison collected by prisoner health surveys

Survey	Shared needle in prison	Shared other injecting equipment in prison	Cleaned injecting equipment	Method of cleaning	Number of people who used injecting equipment	Use of clean injecting equipment in the community
NSW Inmate Health Survey (1996 & 2001)	Yes	Yes Spoon, mixing solution, drug, water, filter or tourniquet	Yes	Yes 3x3x3, 2x2x2, bleach, water, wiped or other	Yes	Yes Always; most of the time; half of the time; some of the time; never
Victorian Prisoner Health Survey (2003)	Yes	No	Yes	No	No	No
Queensland Women Prisoners' Health Survey (2002)	Yes	Yes Spoon, mixing solution, drug, water, filter or tourniquet	Yes	Yes	Yes	Yes Always; most of the time; half of the time; some of the time; never

Alcohol use

Table A10: Alcohol data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Alcohol: use (as per Alcohol Use Disorders Identification Test) Alcohol risky behaviour 12 month before prison Alcohol use within prison
Victorian Prisoner Health Survey (2003)	Alcohol: use (as per Alcohol Use Disorders Identification Test) Alcohol risky behaviour 12 month before prison Alcohol use within prison
Queensland Women Prisoners' Health Survey (2002)	Alcohol: use (as per Alcohol Use Disorders Identification Test) Alcohol risky behaviour 12 month before prison Alcohol use within prison

Physical activity

Table A11: Physical activity data collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Number of times exercised in the last four weeks Minutes of exercise in the last four weeks
Victorian Prisoner Health Survey (2003)	Number of times exercised in the last four weeks Minutes of exercise in the last four weeks
Queensland Women Prisoners' Health Survey (2002)	Average amount of exercise per week

Physical health measures

Table A12: Physical health measures collected by prisoner health surveys

Survey	What was collected
NSW Inmate Health Survey (1996 & 2001)	Weight Height Overweight and obesity Blood pressure Cholesterol Creatinine Blood sugar level
Victorian Prisoner Health Survey (2003)	Blood sugar level Cholesterol Iron levels
Queensland Women Prisoners' Health Survey (2002)	Weight Peak expiratory flow Blood sugar level Blood pressure Cholesterol

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