

3 Health conditions

This chapter contains information on the health conditions of Australian prisoners, including mental health, head injuries, communicable diseases, chronic conditions and women's health. This chapter is organised based on the prevalence of the health condition in the prisoner population, with the most prominent conditions discussed at the beginning of the chapter. Data for this section come mostly from the National Prisoner Health Census; however, data for communicable diseases was obtained from the National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey (NPEBBV&RBS) 2004 & 2007 (Butler & Papanastasiou 2008). Information is disaggregated (where possible) by sex, age and Indigenous status.

3.1 Mental health

Mental health is an Australian national health priority area, and there has been concerted government action in recent years to reduce the burden and to improve the lives of people with mental health problems (AIHW 2009c).

Mental health is defined as 'a state of emotional and social well-being in which the individual can cope with the normal stress of life and reach his or her potential'. Mental health problems refer to 'the range of cognitive, emotional and behavioural disorders that interfere with the lives and productivity of people' (AHM 2003).

There is a higher incidence of mental health problems in the Australian prison population than in the general population (Senate Committee on Mental Health 2006), with similar situations found internationally. This has been attributed to a range of factors including a lack of, or poor access to, mental health services; the misconception that all people with mental health problems are a danger to the public; the intolerance of many societies to difficult or disturbing behaviour; and the failure to promote treatment, care and rehabilitation (WHO 2009).

Information on behaviours related to mental health problems is shared with custodial authorities to ensure appropriate placement and checks within the system, but only after a prisoner has signed a release form except when the prisoner is considered to be at imminent risk of harm (AIHW: Belcher & Al-Yaman 2007).

Incarceration may provide an opportunity for those with mental health problems to be screened and treated and, for some individuals, it may be the only time they are in contact

with treatment services (Butler et al. 2006). For example, a study of mental health in US inmates found that, when arrested by police, less than one-third of inmates with a mental health problem were taking medication. Almost 70% were medicated after being received into jail or prison, however (Wilper et al. 2009).

A study of mental health in the NSW prisoner population in 2001 found 43% of those screened had at least one of the following diagnoses: psychosis, anxiety disorder or affective disorder. Women had higher levels of psychiatric morbidity than men (61% and 39%) (Butler et al. 2005). Definitions of psychological terms are provided in the Glossary.

Mental health disorders and current medication

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor, psychiatrist, psychologist or nurse that they have a mental health disorder (including drug and alcohol abuse).

NUMERATOR: Number of prison entrants who report that they have ever been told by a doctor, psychiatrist, psychologist or nurse that they have a mental health disorder.

DENOMINATOR: Total number of prison entrants during the census week.

During the census week prison entrants were asked whether they had ever been told they have a mental health disorder and whether they were currently taking medication for a mental disorder. Prison entrants were asked whether have been told they have a mental health disorder by a doctor, psychiatrist, psychologist or nurse. Such disorders include those relating to drug and alcohol abuse. A nurse was included because prisoners most often see nurses, including mental health nurses, in prison clinics (see Chapter 6) and many entrants had been in prison previously.

Over one-third of entrants (205 or 37%) reported having been told they have a mental health disorder (Table 3.1). A history of mental health problems was more common among female entrants (57%) than male entrants (35%).

INDICATOR: Proportion of prison entrants who are currently taking medication for a mental health disorder.

NUMERATOR: Number of prison entrants who are currently taking medication for a mental health disorder.

DENOMINATOR: Total number of prison entrants during the census week.

A total of 98 prison entrants (18%) reported being currently on medication for a mental health disorder. This represents 48% of those who reported ever having been told they have a mental illness. As with mental health disorders, a greater proportion of female entrants (28%) were currently on medication than male entrants (17%).

Prison entrants aged 18–24 years were less likely than entrants of other ages to have been told they have a mental health disorder or to be on current medication for such a condition (Table 3.1). One-third (33%) of 18–24 year olds had been told they have a mental health disorder,

compared with 37–40% of other entrants, and 12% were on medication compared with 17–21% of other entrants.

Non-Indigenous prison entrants (41%) were more likely than Indigenous prison entrants (26%) to have been told they have a mental health disorder, and to be currently taking medication for a mental health condition. Non-Indigenous entrants (20%) were more than twice as likely as Indigenous entrants (9%) to be currently taking medication for a mental illness (Table 3.1). This may in part reflect problems associated with the cultural appropriateness of mental health screening, assessment and diagnostic tools (Heffernan et al 2009).

Table 3.1: Prison entrants, ever told they have a mental illness and current medication, by sex, age group and Indigenous status, 2009

| | Ever told they have a mental illness | | Currently on mental health medication | | Total prison entrants |
|--------------------------|--------------------------------------|-----------|---------------------------------------|-----------|-----------------------|
| | Number | Per cent | Number | Per cent | Number |
| Sex | | | | | |
| Male | 170 | 35 | 81 | 17 | 486 |
| Female | 35 | 57 | 17 | 28 | 61 |
| Age group | | | | | |
| 18–24 | 60 | 33 | 21 | 12 | 180 |
| 25–34 | 76 | 40 | 40 | 21 | 188 |
| 35–44 | 48 | 38 | 27 | 21 | 126 |
| 45+ | 20 | 37 | 9 | 17 | 54 |
| Indigenous status | | | | | |
| Indigenous | 36 | 26 | 13 | 9 | 141 |
| Non-Indigenous | 164 | 41 | 81 | 20 | 401 |
| Total | 205 | 37 | 98 | 18 | 549 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. There were 8 entrants whose diagnosis history was unknown and 29 whose current medication status was unknown.

Source: National Prisoner Health Census 2009.

Psychological distress

INDICATOR: Proportion of prison entrants reporting psychological distress experienced in the past 4 weeks (self-report).

NUMERATOR: Number of prison entrants by level of psychological distress.

DENOMINATOR: Total number of prison entrants during the census week.

The Kessler 10 (K10) scale was used as part of the Census to measure the levels of psychological distress experienced by prison entrants in the four weeks prior to entry to prison. The K10 is a 10-item self-report questionnaire intended to yield a global measure of 'psychosocial distress'

based on questions about the level of anxiety and depressive symptoms in the most recent four-week period (ABS 2003; Andrews & Slade 2001).

The scoring used in this report is the same as that used in the ABS national health surveys, to allow for comparability between the prisoner and general Australian populations:

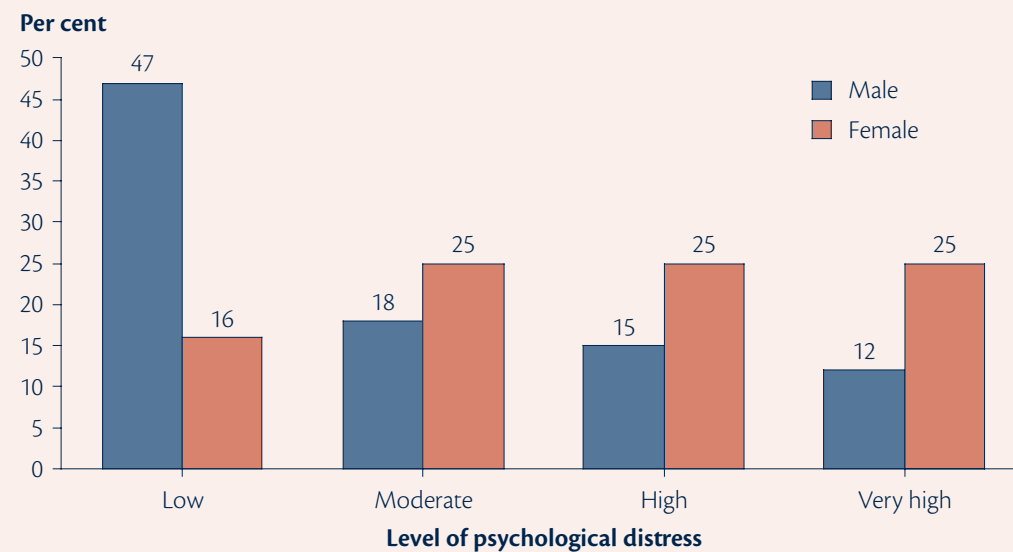
- low—indicated by a score of 10–15
- moderate—indicated by a score of 16–21
- high—indicated by a score of 22–29
- very high—indicated by a score of 30–50.

Slightly different scoring for the K10 is often used (low 10–19, moderate 20–24, high 25–29, very high 30–50), so caution should therefore be used when interpreting the results. The 'very high' category is identical in each scoring system.

Less than half of prison entrants (44%) had experienced low levels of psychological distress during the four weeks immediately preceding entry to prison (Table 3.2). Almost one-third (29%) had high or very high levels of distress. The K10 score was invalid or unknown for 8% of entrants.

Levels of psychological distress were higher among female than male prison entrants (Figure 3.1). Half (50%) of female entrants and 27% of male entrants experienced high or very high levels of distress. Conversely, almost half (47%) of male entrants experienced low levels of distress in the four weeks preceding prison entry, compared with 16% of female entrants.

Figure 3.1: Prison entrants, level of psychological distress by sex, 2009



Notes

1. Figure includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Levels of distress as indicated by scores on the K10: low (10–15), moderate (16–21), high (22–29) and very high (30–50).
3. Percentages do not add up to 100% as 8% of males and 10% of females had an unknown level of psychological distress.

Source: National Prisoner Health Census 2009.

Levels of psychological distress differed by age group, with older prison entrants reporting generally higher distress than younger entrants. Almost half (49%) of entrants aged 18–24 years had low levels of distress, compared with around 40% of entrants 24 years or older. The clearest trend was in the very high level of distress, which was experienced by increasingly higher proportions of entrants by age. Among entrants aged 18–24 years, 8% experienced very high distress, compared with one in five (20%) of entrants aged 45 years or older (Table 3.2).

Table 3.2: Prison entrants, level of psychological distress by age group, 2009

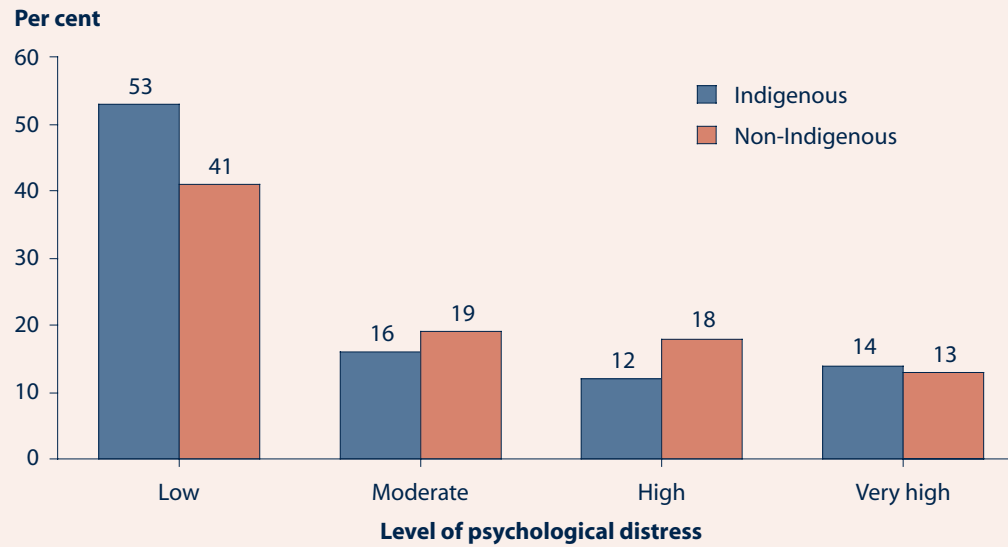
| Level of psychological distress | 18–24 | | 25–34 | | 35–44 | | 45+ | | Total | |
|---------------------------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent |
| Low | 89 | 49 | 79 | 42 | 50 | 40 | 22 | 41 | 241 | 44 |
| Moderate | 34 | 19 | 35 | 19 | 26 | 21 | 7 | 13 | 102 | 19 |
| High | 26 | 14 | 34 | 18 | 22 | 17 | 7 | 13 | 89 | 16 |
| Very high | 15 | 8 | 25 | 13 | 22 | 17 | 11 | 20 | 73 | 13 |
| Invalid | — | — | 1 | 1 | — | — | — | — | 1 | 0 |
| Unknown | 16 | 9 | 14 | 7 | 6 | 5 | 7 | 13 | 43 | 8 |
| Total | 180 | 100 | 188 | 100 | 126 | 100 | 54 | 100 | 549 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Levels of distress as indicated by scores on the K10: low (10–15), moderate (16–21), high (22–29) and very high (30–50).
3. Percentages do not add up to 100 as there are individuals with unknown level of psychological distress and unknown age.

Source: National Prisoner Health Census 2009.

Consistent with the results for ever having been told you have a mental illness and current medications for mental health problems, distress was lower for Indigenous than non-Indigenous prison entrants. In the four weeks prior to incarceration one-quarter (26%) of Indigenous entrants experienced high or very high distress compared with 31% of non-Indigenous entrants. A higher proportion of Indigenous than non-Indigenous prison entrants experienced low distress (53% and 41% respectively) (Figure 3.2).

Figure 3.2: Prison entrants, level of psychological distress by Indigenous status, 2009*Notes*

1. Figure includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Levels of distress as indicated by scores on the K10: low (10–15), moderate (16–21), high (22–29) and very high (30–50).
3. There were 7 entrants of unknown Indigenous status and 43 entrants with unknown or an invalid level of distress score.

Source: National Prisoner Health Census 2009.

Distress related to current incarceration

INDICATOR: Proportion of prison entrants who indicate their current distress is related to the present incarceration.

NUMERATOR: Number of prison entrants who report that their current distress is related to their current incarceration.

DENOMINATOR: Total number of prison entrants during the census week.

Distress experienced by prison entrants overall was almost equally likely to be related to the current incarceration (42%) as not related to the current incarceration (43%) (Table 3.3). However, the relationship between current incarceration and distress was very different for males and females. Over two-thirds (69%) of females (who also had higher levels of distress overall) reported their distress was related to their current incarceration, compared with 38% of male entrants. Leaving behind children for whom prisoners have care responsibilities may be a factor in this finding.

Where entrants felt they were not experiencing any distress, this question could be answered as 'not applicable'. This response was chosen by 14% of male entrants but only 2% of female entrants.

Although older entrants had higher levels of psychological distress (Table 3.3), they were less likely than younger entrants to say that their distress was related to their current incarceration. Just over one-third (35%) of entrants aged 45 years or older related their distress to their current incarceration, compared with 42% of younger entrants.

For non-Indigenous entrants, 44% related their distress to their current incarceration, compared with 34% of Indigenous entrants (Table 3.3). Similar proportions of Indigenous (11%) and non-Indigenous (13%) entrants responded to this question as 'not applicable'.

Table 3.3: Prison entrants, distress related to current incarceration, by sex, age group and Indigenous status, 2009

| | Distress related to current incarceration | | Distress not related to current incarceration | | Not applicable (not distressed) | | Total | |
|--------------------------|---|-----------|---|-----------|---------------------------------|-----------|------------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent |
| Sex | | | | | | | | |
| Male | 185 | 38 | 217 | 45 | 66 | 14 | 486 | 100 |
| Female | 42 | 69 | 18 | 30 | 1 | 2 | 61 | 100 |
| Age group | | | | | | | | |
| 18–24 | 80 | 44 | 69 | 38 | 27 | 15 | 180 | 100 |
| 25–34 | 74 | 39 | 85 | 45 | 24 | 13 | 188 | 100 |
| 35–44 | 55 | 44 | 52 | 41 | 12 | 10 | 126 | 100 |
| 45+ | 19 | 35 | 28 | 52 | 5 | 9 | 54 | 100 |
| Indigenous status | | | | | | | | |
| Indigenous | 48 | 34 | 74 | 52 | 15 | 11 | 141 | 100 |
| Non-Indigenous | 175 | 44 | 161 | 40 | 51 | 13 | 401 | 100 |
| Total | 228 | 42 | 235 | 43 | 68 | 12 | 549 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Totals include 2 entrants of unknown sex, 1 entrant with unknown age, 7 entrants with unknown Indigenous status and 18 for whom the relationship between recent distress and the current incarceration was unknown.

Source: National Prisoner Health Census 2009.

Self-harm

Self-harm is when a person deliberately inflicts physical harm to themselves, often in secret and without anyone else knowing about it. Self-harm is not necessarily a suicide attempt, although it may include suicidal behaviour. Methods to achieve self-harm include cutting or slashing, blunt force, burning, hanging, strangulation, suffocation, biting, refusing food/water, binge eating or self-poisoning (Kraemer et al. 2009, Berry & Harrison 2007). Females are more likely than males to self-harm. Self-harm is often used as a method for coping with painful or difficult feelings (Reachout 2009).

Prisoner populations exhibit high levels of self-inflicted harm and injury, suicidal thoughts and suicide attempts (Kirchner et al. 2008). Risk factors for self-harm are common among prisoners and include a range of behavioural and social characteristics: young adults, mental health problems, chronic physical illness, drug and alcohol abuse, history of childhood sexual abuse and previous suicide attempts (Butler & Milner 2003, Fliege et al. 2008, Kenny et al. 2008).

Prisoners identified as being at risk are monitored at a frequency commensurate with the level of assessed risk until a risk management plan is prepared. Prisoners considered at high risk of self-harm may be placed in an observation or medical observation cell.

INDICATOR: Proportion of prison entrants who report that they have ever intentionally harmed themselves.

NUMERATOR: Number of prison entrants who report that they have ever intentionally harmed themselves.

DENOMINATOR: Total number of prison entrants during the census week.

INDICATOR: Proportion of prison entrants who report that they have thought of harming themselves in the last 12 months.

NUMERATOR: Number of prison entrants who report that they have thought of harming themselves in the last 12 months.

DENOMINATOR: Total number of prison entrants during the census week.

At reception, prison entrants were asked whether they had ever intentionally harmed themselves and whether or not they had thought of harming themselves in the last 12 months. Of prison entrants, 97 (18%) had a history of self-harming and 57 (10%) had thought about harming themselves during the previous 12 months. Thirty-six prison entrants (7%) had both intentionally harmed themselves in the past and had thoughts of self-harm in the last 12 months.

A history of self-harm was found for almost one-third (31%) of female prison entrants, compared with 16% of male entrants. There was less difference seen in recent self-harm thoughts, with 15% of females and 10% of males reporting having such thoughts (Table 3.4).

A history of self-harm was more common among younger than older prison entrants, but recent thoughts of self-harm was more common among older prison entrants (Table 3.4). A history of self-harm behaviour was reported by 21% of entrants aged 18–24 years, and decreased to a low of 11% of entrants aged 45 years or older. Self-harm thoughts in the last 12 months were reported by 11% of entrants aged 18–24 years, generally increasing to a high of 15% of entrants aged 45 years or older.

The proportions of Indigenous and non-Indigenous entrants reporting a history of self-harm (18% of each) and recent thoughts (9% and 11% respectively) were similar (Table 3.4).

Table 3.4: Prison entrants, self-harm history and recent thoughts, by sex, age group and Indigenous status, 2009

| | History of self-harm | | Self-harm thoughts in last 12 months | | Total prison entrants |
|--------------------------|----------------------|-----------|--------------------------------------|-----------|-----------------------|
| | Number | Per cent | Number | Per cent | Number |
| Sex | | | | | |
| Male | 78 | 16 | 48 | 10 | 486 |
| Female | 19 | 31 | 9 | 15 | 61 |
| Age group | | | | | |
| 18–24 | 37 | 21 | 20 | 11 | 174 |
| 25–34 | 35 | 19 | 14 | 7 | 191 |
| 35–44 | 19 | 15 | 15 | 12 | 125 |
| 45+ | 6 | 11 | 8 | 15 | 58 |
| Indigenous status | | | | | |
| Indigenous | 26 | 18 | 12 | 9 | 141 |
| Non-Indigenous | 71 | 18 | 45 | 11 | 401 |
| Total | 97 | 18 | 57 | 10 | 549 |

Note: Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
Source: National Prisoner Health Census 2009.

3.2 Head injury

Injury morbidity and mortality tends to be highest amongst disadvantaged young men, who constitute the majority of the prisoner population. 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 (TBI) (Butler & Milner 2003) or a current mental illness (Butler et al. 2007a) and the stress and frustration of prison life further increase the likelihood of injury (AIHW: Belcher & Al-Yaman 2007).

In 2003 Justice Health NSW implemented a prison injury surveillance system, which allowed patterns of injury among prisoners to be examined. A pilot study of the system was conducted at Windsor and Goulburn gaols from July to December 2002, based on prisoners attending their prison clinic. The study found injuries were most commonly caused by sports (33%), assault (24%) and machinery (11%). Over two-thirds (68%) of injuries were accidental and just under one-quarter (24%) were intentional harm by others (Butler et al. 2007b).

Many people in prisons have been exposed to TBI (Schofield et al. 2006), which is characterised by a blow or other force to the head which results in damage to the brain or an alteration in brain function (Helps et al. 2008). People with TBI may experience long-term changes in one or more of the following areas—physical and sensory abilities, cognition, behaviour and personality, communication and medical difficulties (Brain Injury Australia 2006).

Previous studies have found TBI to be highly prevalent among prisoners (Slaughter et al. 2003). Estimates of the proportion of prisoners with TBI range from 25% (Morrell et al. 1998) to 82% of

the prison population (Schofield et al. 2007). This may be attributed to the neuropsychological deficits and aggressive, violent, criminal behaviours that can result from TBI.

INDICATOR: Proportion of prison entrants who report that they have ever received a blow to the head resulting in a loss of consciousness.

NUMERATOR: The number of prison entrants who report that they have ever received a blow to the head resulting in a loss of consciousness

DENOMINATOR: Total number of prison entrants during the census week.

Prison entrants were asked whether they had ever received a blow to the head resulting in a loss of consciousness (LOC) or blacking out. Loss of consciousness following an injury to the head is an indication that there has been an effect on the brain. Over two-fifths (43%) of prison entrants in the census week reported that they had received a blow to the head resulting in a LOC. This was more common among male (44%) than female (33%) entrants (Table 3.5).

There was no particular pattern of head injury by age. The proportion of entrants with a head injury was highest for those aged 35–44 years (50%) and lowest for those aged 45 years or older (35%) (Table 3.5).

The proportion of prison entrants who reported a blow to the head resulting in a loss of consciousness was slightly higher for non-Indigenous (44%) than Indigenous prison entrants (39%) (Table 3.5).

Table 3.5: Prison entrants' head injury, by sex, age group and Indigenous status, 2009

| | Ever had head injury | | No head injury | | Total | |
|--------------------------|----------------------|-----------|----------------|-----------|------------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent |
| Sex | | | | | | |
| Male | 216 | 44 | 265 | 55 | 486 | 100 |
| Female | 20 | 33 | 40 | 66 | 61 | 100 |
| Age group | | | | | | |
| 18–24 | 77 | 43 | 102 | 57 | 180 | 100 |
| 25–34 | 78 | 41 | 107 | 57 | 188 | 100 |
| 35–44 | 63 | 50 | 62 | 49 | 126 | 100 |
| 45+ | 19 | 35 | 34 | 63 | 54 | 100 |
| Indigenous status | | | | | | |
| Indigenous | 55 | 39 | 85 | 60 | 141 | 100 |
| Non-Indigenous | 178 | 44 | 218 | 54 | 401 | 100 |
| Total | 237 | 43 | 306 | 56 | 549 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Totals include 2 entrants of unknown sex, 1 entrant with unknown age, 7 entrants with unknown Indigenous status and 6 whose head injury history was unknown.

Source: National Prisoner Health Census 2009.

3.3 Communicable diseases

Communicable diseases are those which are capable of being transmitted between individuals, including infectious and parasitic disease (Healey 2004). Examples of communicable diseases are AIDS, HIV, bacterial infection, hepatitis C, hepatitis B, malaria, meningitis and meningococcal infections, STIs, viral infections and vaccine-preventable diseases such as chickenpox and influenza.

In Australia, due to high levels of sanitation and the use of antibiotics and immunisation programs, communicable diseases are not among the leading contributors to the burden of disease. In 2004–05, infections and immunisation accounted for about 7% of all GP consultations, and in 2005–06, 4% of deaths were attributed to infection (AIHW 2008c).

The Australian Government monitors communicable diseases through the National Notifiable Diseases Surveillance System (NNDSS). The NNDSS was established in 1990 and coordinates the surveillance of over 50 communicable diseases. This includes information on bloodborne viruses, gastrointestinal diseases, quarantinable diseases, STIs, vaccine preventable diseases, vectorborne diseases, zoonoses and other bacterial infections (DoHA 2009).

INDICATOR: Number of notifications of a notifiable disease for prisoners in custody.

The Australian Department of Health and Ageing (DoHA) National Hepatitis C Strategy 2005–2008 and the National Sexually Transmissible Infections Strategy 2005–2008 recognises prisoner populations as priority populations for bloodborne viruses such as hepatitis C and STIs. In response the Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis has produced national guidelines for the prevention, treatment and care of hepatitis C in custodial settings (MACASHH 2008). Australian and international studies have consistently found high levels of exposure to bloodborne viruses (e.g. hepatitis C, hepatitis B and HIV) and STIs (Butler et al. 2004a; Vescio et al. 2008) in the prison population.

As part of the Census, jurisdictions were asked to provide data regarding notifications of notifiable diseases during 2007–08. These data were only available from two jurisdictions, and therefore will not be included in this report.

Hepatitis C

Hepatitis C is a bloodborne viral disease, which is transmitted through blood-to-blood contact. It is a serious disease that can result in problems such as liver failure, liver cancer and cirrhosis. In Australia, the most common mode of exposure to hepatitis C infection is through sharing of injecting equipment (DoHA 2008a).

Hepatitis C is a notifiable disease in all Australian jurisdictions. In 2009 there were almost 13,000 notifications of hepatitis C (DoHA 2010). This equates to a national prevalence of less than 1% of the Australian population (Dyer & Tolliday 2009). The population groups at greatest risk of hepatitis C infection are injecting drug users (IDUs), people in custodial settings, women in prison, Aboriginal and Torres Strait Islander people, young people, people from culturally and linguistically diverse backgrounds and people from rural and remote areas (MACASHH 2008).

Currently, there is no national surveillance system for hepatitis C infection in prisons. Prisoner health studies have estimated the overall prevalence of hepatitis C infection amongst all Australia's prisoners to be between 23% and 47%, and even higher for females (between 50% to 70%) (Black et al. 2004, Miller et al. 2006).

A history of incarceration is a risk factor for hepatitis C transmission, not only due to the high prevalence of hepatitis C infection among the custodial population but also due to the prevalence of high-risk behaviours in prison such as sharing contaminated injecting equipment and tattooing. Prisoners are unlikely to have access to sterile equipment for injecting, piercing, tattooing and personal care, leading to prisoners sharing equipment (Dyer & Tolliday 2009; Hunt & Saab 2009).

A history of injecting drug use in prison is an independent risk factor for hepatitis C transmission. A 2008 Australian meta-analysis on hepatitis C virus (HCV) prevalence found that IDUs in prison were 24 times more likely to have HCV than prisoners who were non-IDUs, and at least 8 times more likely to contract the virus whilst in prison than non-IDUs (Vescio et al. 2008). Similarly, the 2002 Victoria Prisoner Health Study found 64% of males who were IDUs had been diagnosed with hepatitis C compared with 16% of non-IDUs, and 85% of females who were IDUs were diagnosed with hepatitis C compared with 26% of non-IDUs (Deloitte Consulting 2003).

INDICATOR: Proportion of prison entrants testing positive to hepatitis C antibody.

NUMERATOR: Number of prison entrants who tested positive to hepatitis C antibody.

DENOMINATOR: Total number of prison entrants tested.

Data on the prevalence of hepatitis C in prisons were obtained from the 2007 National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey (NPEBBV&RBS) (see Appendix 2 for further explanation). The NPEBBV&RBS screened 581 prison entrants for hepatitis C antibody. Just over one-third (35%) of prison entrants tested positive for hepatitis C antibody. Female prison entrants had a higher prevalence of hepatitis C antibody (60%) compared with male prison entrants (33%) (Table 3.6).

The proportion of prisoners who tested positive to hepatitis C increased with age. Only 6% of those aged less than 20 years tested positive to hepatitis C, while 21% of those aged 20–24 years and 42% of those aged 25 or older tested positive for hepatitis C antibody (Table 3.6). Over two-thirds (69%) of female prison entrants aged 25–29 years tested positive for hepatitis C antibody (Butler & Papanastasiou 2008 Table 22).

A higher proportion of Indigenous prison entrants (43%) tested positive for hepatitis C antibody than non-Indigenous prison entrants (33%) (Table 3.6). Almost three-quarters (72%) of Indigenous female entrants tested positive for hepatitis C antibody.

Table 3.6: Proportion of prison entrants testing positive for hepatitis C antibody, by sex, age group and Indigenous status, 2007

| | HCV antibody prevalence | | Total prison entrants tested |
|--------------------------|-------------------------|-----------|------------------------------|
| | Number | Per cent | Number |
| Sex | | | |
| Male | 175 | 33 | 533 |
| Female | 33 | 60 | 55 |
| Age group | | | |
| <20 | 2 | 6 | 36 |
| 20–24 | 26 | 21 | 123 |
| 25–29 | 55 | 42 | 130 |
| 30+ | 125 | 42 | 299 |
| Indigenous status | | | |
| Indigenous | 47 | 43 | 110 |
| Non-Indigenous | 155 | 33 | 471 |
| Total | 208 | 35 | 588 |

Note: Totals include 7 entrants of unknown Indigenous status.

Source: NPEBBV&RBS 2007 Table 22, Table 29.

Prison entrants who had ever injected drugs (IDUs) were much more likely to test positive for hepatitis C antibody than those who had not (60% compared with 4%) (Table 3.7). This pattern was more distinct for females than males.

Table 3.7: Proportion of prison entrants testing positive for hepatitis C antibody, by drug use status and sex, 2007

| Injecting status | Male | | Female | | Total | | Total prison entrants tested |
|--------------------------|--------|----------|--------|----------|--------|----------|------------------------------|
| | Number | Per cent | Number | Per cent | Number | Per cent | Number |
| Injecting drug users | 166 | 58 | 31 | 78 | 197 | 60 | 327 |
| Non-injecting drug users | 9 | 4 | 2 | 13 | 11 | 4 | 262 |

Source: NPEBBV&RBS 2007 Table 20.

In part, the proportion of prison entrants testing positive for hepatitis C antibody increased with the number of times they had been in prison. Of those who had only been imprisoned once, 9% tested positive for hepatitis C antibody (5% for males, 43% for females), compared with three-quarters (75%) of prison entrants who had been imprisoned ten or more times. The pattern was different for females with 88% of those imprisoned 5–9 times testing positive for hepatitis C antibody compared with 66% of males (Table 3.8).

Table 3.8: Proportion of prison entrants testing positive for hepatitis C antibody, by number of previous imprisonments, 2007

| Number of previous imprisonments | Male | | Female | | Total | |
|----------------------------------|--------|----------|--------|----------|--------|----------|
| | Number | Per cent | Number | Per cent | Number | Per cent |
| 1 | 9 | 5 | 9 | 43 | 18 | 9 |
| 2–4 | 66 | 31 | 13 | 65 | 79 | 34 |
| 5–9 | 54 | 66 | 7 | 88 | 61 | 68 |
| 10+ | 39 | 75 | 3 | 75 | 42 | 75 |

Source: NPEBBV&RBS 2007 Table 28.

Hepatitis B

Hepatitis B is a viral disease, which can be transmitted from one person to another through unprotected sexual intercourse, blood-to-blood contact and from mother to child during pregnancy or at birth. Hepatitis B causes inflammation of the liver and over time can lead to scarring of the liver, chronic liver damage and liver cancer (DoHA 2008). In Australia, the majority of new hepatitis B transmissions are through sharing injecting equipment and from unprotected sex (Hep C Council 2008).

In 2008 there were 245 incident and 6,591 unspecified notifications of hepatitis B¹ in Australia, and approximately 107,000 people who have ever been diagnosed with hepatitis B (DoHA 2009).

Risk factors for hepatitis B include injecting drug use and a history of imprisonment (Hunt & Saab 2009; Sutton et al. 2008). Jurisdiction-based research has found a higher level of hepatitis B in prisons than in the general population. For example, the New South Wales Inmate Health Survey (2001) found that 31% of female prisoners and 28% of male prisoners tested positive to hepatitis B core antibody (Butler & Milner 2003). Similarly, the Victorian Prisoner Health Survey (2003) found that 40% of participants were diagnosed with hepatitis, and that of that group 65% had hepatitis B (Deloitte Consulting 2003).

INDICATOR: Proportion of prison entrants testing positive to hepatitis B core antibody.

NUMERATOR: Number of prison entrants who tested positive to hepatitis B core antibody.

DENOMINATOR: Total number of prison entrants tested.

¹ Hepatitis B incident cases are defined as 'incident' or 'newly acquired' based on the detection of the virus and a previously negative test history within the last 24 months prior to diagnosis. Hepatitis B unspecified cases are based on the detection of the virus where there is no evidence to suggest that the infection is recent (i.e. within the last 24 months)—it is essentially the remainder of cases where a negative history within the last 24 months cannot be established. For further information on national case definitions, refer to <<http://www.health.gov.au/casedefinitions>>.

Data on hepatitis B were obtained from the 2007 NPEBBV&RBS (Butler & Papanastasiou 2008). In 2007, 119 (21%) prison entrants tested positive to hepatitis B core antibody. Female prison entrants (28%) had a higher prevalence of hepatitis B compared with male entrants (21%).

The proportion of prison entrants with hepatitis B was lowest for those aged less than 20 years (6%) and highest for those aged 30 years or older (28%). Overall, females aged over 30 years had the highest level of hepatitis B (39%) (Table 3.9).

Indigenous entrants (42%) were more likely to test positive to hepatitis B than non-Indigenous entrants (17%) (Table 3.9).

Table 3.9: Proportion of prison entrants testing positive for hepatitis B core antibody, by sex, age group and Indigenous status, 2007

| | Male | | Female | | Total | |
|--------------------------|------------|-----------|-----------|-----------|------------|-----------|
| | Number | Per cent | Number | Per cent | Number | Per cent |
| Age group | | | | | | |
| <20 | 2 | 6 | — | — | 2 | 6 |
| 20–24 | 11 | 10 | — | — | 11 | 9 |
| 25–29 | 24 | 22 | 2 | 13 | 26 | 21 |
| 30+ | 68 | 27 | 13 | 39 | 81 | 28 |
| Indigenous status | | | | | | |
| Indigenous | 37 | 42 | 7 | 39 | 44 | 42 |
| Non-Indigenous | 67 | 16 | 8 | 22 | 75 | 17 |
| Total | 105 | 21 | 15 | 28 | 120 | 21 |

Note: Totals include 1 entrant of unknown Indigenous status.

Source: NPEBBV&RBS 2007 Table 45.

Prison entrants who were IDUs were more likely to test positive to hepatitis B than prison entrants who were non-IDUs. The NPEBBV&RBS found prison entrants who were injecting drug users (31%) had a higher proportion of hepatitis B compared with non-IDUs (9%). Further, prison entrants who had a long history of IDU were more likely to test positive to hepatitis B. The NPEBBV&RBS found that 38% of prison entrants who were IDUs for over ten years tested positive to hepatitis B, compared with 10% of prison entrants who were IDUs for less than three years.

HIV

HIV (human immunodeficiency virus) is a virus which weakens the human immune system, leaving an individual at risk of a number of serious infections and cancers. HIV is transmitted by sexual contact with an infected person, through blood contact or from mother to child during pregnancy. The final stage of HIV is known as the acquired immune deficiency syndrome or AIDS (AIHW 2008c).

HIV prevalence in Australia remains one of the lowest in the world, at about 0.1% (NCHECR 2009a). An estimated 17,444 people (including 12,053 people aged 15–49 years) were living with HIV infection in Australia at the end of 2008. Risk factors for HIV include male

homosexuality or bisexual contact, and injecting drug use. Some ethnic groups are also at greater risk of HIV. In 2007, of those with HIV 76% had bisexual/homosexual contact, 4% had a history of injecting drug use and 4% had both bisexual/homosexual contact and a history of injecting drug use. There was a similar rate of HIV diagnosis in the Aboriginal and Torres Strait Islander and non-Indigenous populations, although higher proportions of cases were attributed to heterosexual contact and injecting drug use in the Aboriginal and Torres Strait Islander population (NCHECR 2009a).

In the early 1990s in Australia, prisoners were indentified as a high-risk group for HIV infection. Australian authorities were concerned that the transmission of HIV would occur at a higher rate in prison and that further transmission would occur in the general population upon release. The key solution was to test all prisoners for HIV antibodies, and in 1990 compulsory HIV testing programs were established in prisons in New South Wales, South Australia, Queensland, the Northern Territory and Tasmania (Egger & Heilpern 1991). Currently, HIV screening coverage varies across the states and territories. In 2007, Queensland and the Northern Territory screened all men for HIV on entry to prison, Western Australia 47%, New South Wales 29%, Victoria 28%, South Australia 26% and Tasmania 21% (NCHECR 2009a).

INDICATOR: Proportion of prison entrants testing positive for HIV.

NUMERATOR: Number of prison entrants who tested positive for HIV.

DENOMINATOR: Total number of prison entrants tested.

Data on HIV in Australia's prisons were obtained from the 2007 NPEBBV&RBS (Butler & Papanastasiou 2008). Both the 2004 and 2007 NPEBBV&RBS reported the prevalence of HIV among prison entrants to be less than 1% nationally in both men and women. No difference was found in HIV rates for IDUs and non-IDUs.

3.4 Chronic conditions

A chronic condition is an ongoing impairment characterised by a physical or mental condition, functional limitation and service use or need beyond routine care (Sawyer & Aroni 2005). Chronic diseases contribute significantly to the burden of illness and injury in Australia. Consequently chronic conditions such as asthma, diabetes, cardiovascular disease, cancer and arthritis have been identified as National Health Priority Areas. Targeting these areas can potentially reduce the burden of disease experienced by people with these conditions and reduce the health care required and associated costs.

This section reports on findings from prison entrants in the Census, relating to self-reported chronic conditions. Information regarding the use of the prison clinics and prisoners taking prescribed medication for chronic conditions can be found in Chapter 6.

As part of the reception process, prison entrants were asked whether they had ever been told by a doctor or nurse that they had any of the following: arthritis, asthma, cancer, cardiovascular disease or diabetes, and whether they currently had the condition.

Asthma was the most common chronic condition, reported by 16% of prison entrants, followed by arthritis (6%) (Table 3.10). Overall, one-quarter (25%) of prison entrants reported currently having one or more of these chronic conditions.

Table 3.10: Prison entrants^(a) with current chronic conditions, 2009

| Current chronic condition | Number | Per cent |
|---|------------|------------|
| Asthma | 89 | 16 |
| Arthritis ^(b) | 31 | 6 |
| Cardiovascular disease ^(c) | 15 | 3 |
| Diabetes ^(d) | 15 | 3 |
| Cancer ^(e) | 3 | <1 |
| Total with any current chronic condition | 137 | 25 |
| Total number of prison entrants | 549 | 100 |

(a) Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.

(b) Arthritis includes gout, rheumatism, osteoarthritis, rheumatoid arthritis, other type and arthritis type unknown.

(c) Cardiovascular disease includes coronary heart disease, heart failure, rheumatic fever and rheumatic heart disease, congenital heart disease, stroke and peripheral vascular disease.

(d) Diabetes includes Type 1 diabetes, Type 2 diabetes and gestational diabetes.

(e) Cancer excludes non-melanoma skin cancer.

Source: National Prisoner Health Census 2009.

Asthma

Asthma is a chronic inflammatory disorder of the airways. This inflammation causes recurrent episodes of wheezing, breathlessness, chest tightness and coughing particularly in the night or in the morning. Asthma is triggered by a range of genetic, age and gender factors. Environmental triggers induce airway narrowing, with triggers including exercise, viral infections, irritants (such as smoking and other air pollutants), specific allergens (house dust mites and mould spores) and some food preservatives (ACAM 2008). Asthma affects all age groups and ranges in severity from intermittent mild symptoms to a severe, incapacitating and sometimes life-threatening disorder.

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor or nurse that they have asthma, and who still have the condition currently.

NUMERATOR: Number of prison entrants who report that they have been told by a doctor or nurse that they have asthma, and who still have the condition currently.

DENOMINATOR: Total number of prison entrants during the census week.

Of the 549 prison entrants in the census period, 162 (30%) reported that they had ever been told they have asthma. Of these, 89 (55% or 16% of all entrants) still had the condition currently.

A higher proportion of female prison entrants (43%) than males (28%) reported ever having been told they have asthma (Table 3.15). This is consistent with reporting in the general population.

Younger prison entrants were more likely than older prison entrants to report ever having been told they have asthma. Over one-third (34%) of entrants aged 18–24 years reported ever having been told they have asthma, compared with one-fifth (20%) of entrants aged at least 44 years (Table 3.11). This observed difference may be partly due to changes in diagnostic practice for asthma over time (Magnus & Jaakkola 1997).

There was little difference between Indigenous (30%) and non-Indigenous (29%) prison entrants in reporting ever having been told they have asthma (Table 3.11). This is not consistent with the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), which found that Indigenous adults were one-and-a-half times as likely as non-Indigenous adults to report having asthma (16% and 10% respectively). However, this is consistent with a comparative study of Indigenous and non-Indigenous prisoners in New South Wales which found few differences in health status between the two groups (Kariminia et al. 2007b). Nevertheless, the rates of asthma among these prison entrants are far higher than in the general population for both Indigenous and non-Indigenous people.

Table 3.11: Prison entrants' history of asthma, by sex, age group and Indigenous status, 2009

| | Ever had asthma | | Never had asthma | | Unknown | | Total | |
|--------------------------|-----------------|-----------|------------------|-----------|-----------|----------|------------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent |
| Sex | | | | | | | | |
| Male | 135 | 28 | 322 | 66 | 29 | 6 | 486 | 100 |
| Female | 26 | 43 | 30 | 49 | 5 | 8 | 61 | 100 |
| Age group | | | | | | | | |
| 18–24 | 62 | 34 | 112 | 62 | 6 | 3 | 180 | 100 |
| 25–34 | 57 | 30 | 118 | 63 | 13 | 7 | 188 | 100 |
| 35–44 | 32 | 25 | 86 | 68 | 8 | 6 | 126 | 100 |
| 45+ | 11 | 20 | 36 | 67 | 7 | 13 | 54 | 100 |
| Indigenous status | | | | | | | | |
| Indigenous | 42 | 30 | 94 | 67 | 5 | 4 | 141 | 100 |
| Non-Indigenous | 118 | 29 | 255 | 64 | 28 | 7 | 401 | 100 |
| Total | 162 | 30 | 353 | 64 | 34 | 6 | 549 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Totals include 2 entrants of unknown sex, 1 entrant with unknown age, and 7 entrants with unknown Indigenous status

Source: National Prisoner Health Census 2009.

Arthritis

Arthritis is an umbrella term for more than 100 medical conditions that affect the musculoskeletal system, specifically joints. The three most common forms of arthritis—osteoarthritis, rheumatoid arthritis and gout—account for more than 95% of cases in Australia. Females are at a greater risk than males for developing osteoarthritis and rheumatoid arthritis (AIHW 2008b). Rheumatoid arthritis occurs most often in people aged between 35 to 64 years (AIHW 2009d).

The treatment and management of arthritis and other musculoskeletal conditions results in the frequent use of primary care, hospital and allied health services (AIHW 2008b).

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor or nurse that they have arthritis, and who still have the condition currently.

NUMERATOR: Number of prison entrants who report that they have been told by a doctor or nurse that they have arthritis, and who still have the condition currently.

DENOMINATOR: Total number of prison entrants during the census week.

Of prison entrants, 38 (7%) reported ever having been told they have arthritis. The majority of them (31 or 6% of all entrants) reported that they still had the condition.

Proportionally, twice as many female prison entrants (13%) reported ever having been told they have arthritis as males (6%) (Table 3.12).

As may be expected for a condition affecting joints, the higher proportions of entrants reporting having arthritis were found in the older age groups. Just 1% of entrants aged 18–24 years had been told they have arthritis, compared with almost one-quarter (24%) of entrants aged 45 years and over (Table 3.12).

A smaller proportion of Indigenous prison entrants (4%) reported having ever been told they have arthritis than non-Indigenous entrants (8%) (Table 3.12).

Table 3.12: Prison entrants' history of arthritis, by sex, age group and Indigenous status, 2009

| | Ever had arthritis | | Never had arthritis | | Unknown | | Total | |
|--------------------------|--------------------|----------|---------------------|-----------|-----------|-----------|------------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent |
| Sex | | | | | | | | |
| Male | 30 | 6 | 408 | 84 | 48 | 10 | 486 | 100 |
| Female | 8 | 13 | 43 | 70 | 10 | 16 | 61 | 100 |
| Age group | | | | | | | | |
| 18–24 | 1 | 1 | 164 | 91 | 15 | 8 | 180 | 100 |
| 25–34 | 10 | 5 | 156 | 83 | 22 | 12 | 188 | 100 |
| 35–44 | 14 | 11 | 99 | 79 | 13 | 10 | 126 | 100 |
| 45+ | 13 | 24 | 33 | 61 | 8 | 15 | 54 | 100 |
| Indigenous status | | | | | | | | |
| Indigenous | 6 | 4 | 125 | 89 | 10 | 7 | 141 | 100 |
| Non-Indigenous | 31 | 8 | 323 | 81 | 47 | 12 | 401 | 100 |
| Total | 38 | 7 | 453 | 83 | 58 | 11 | 549 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Totals include 2 entrants of unknown sex, 1 entrant with unknown age, and 7 entrants with unknown Indigenous status

Source: National Prisoner Health Census 2009.

Cardiovascular disease

Cardiovascular disease (CVD) includes coronary heart disease, heart failure, rheumatic fever and rheumatic heart disease, congenital heart disease, stroke and peripheral vascular disease (AIHW 2004). CVD is the largest cause of premature death in Australia and one of the leading causes of disability.

Most people need medicines to treat their cardiovascular conditions—65% of people who reported a cardiovascular condition in 2004–05 also reported using medicines for it (ABS 2006b). Medications to treat CVD include cholesterol-lowering agents, certain blood pressure-lowering medicines and clot-preventing medicines.

The major preventable risk factors for CVD are smoking, high blood pressure, high blood cholesterol, insufficient physical activity, being overweight or obese, poor nutrition and diabetes (AIHW 2008c).

The prisoner population has a high prevalence of risk factors for CVD including high cholesterol, high blood pressure, obesity and smoking (see Chapter 5), compared with the general Australian population (AIHW: Belcher & Al-Yaman 2007). Mortality from CVD in prisoners has been found to be higher than that of the general community (Kariminia et al. 2007a).

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor or nurse that they have cardiovascular disease, and who still have the condition currently.

NUMERATOR: Number of prison entrants who report that they have been told by a doctor or nurse that they have cardiovascular disease, and who still have the condition currently.

DENOMINATOR: Total number of prison entrants during the census week.

Of the 549 prison entrants in the census week, 27 (5%) reported ever having been told they have CVD, and just over half of them (15 or 3% of all entrants) still had the condition.

A higher proportion of female (10%) than male (4%) entrants reported ever having been told they have CVD. This was more common among older than younger prison entrants, with 15% of entrants aged at least 45 years having been told they have CVD, compared with just 2% of those aged 18–24 years. There was no difference between Indigenous and non-Indigenous entrants in CVD.

Diabetes

Diabetes mellitus (diabetes) is a disease marked by high blood glucose levels resulting from defective insulin production, insulin action or both (WHO 1999). The three main types of diabetes are Type 1 diabetes, Type 2 diabetes and gestational diabetes. When diabetes is left undiagnosed or unchecked for too long, it can be responsible for a number of complications such as heart disease, kidney disease, blindness, limb amputation, erectile dysfunction and persistent infections.

Type 2 diabetes accounts for about 85–90% of all cases of diabetes in Australia and is largely preventable. The prevalence of Type 2 diabetes increases with age, particularly for those over 55 years or those over 45 years of age who are overweight or have high blood pressure. Aboriginal or Torres Strait Islander people are considered at higher risk if they are over 35 years of age (Diabetes Australia 2009).

The management of diabetics in prison can be difficult due to their special dietary requirements, the need for regular access to health clinics (particularly for those who are insulin dependent) and the need to closely monitor the condition (Martin 1989).

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor or nurse that they have diabetes, and who still have the condition currently.

NUMERATOR: Number of prison entrants who report that they have been told by a doctor or nurse that they have diabetes, and who still have the condition currently.

DENOMINATOR: Total number of prison entrants during the census week.

Of the 549 prison entrants in the census week, 20 (4%) reported ever having been told they have diabetes and 15 (3%) still had the condition at the time of reception assessment.

Diabetes was more common among female (7%) than male (3%) entrants. Consistent with the increasing prevalence of diabetes with age, diabetes was reported by 11% of entrants aged 45 years and over, compared with just 2% of those aged less than 35 years. Diabetes was also more common among Indigenous (5%) than non-Indigenous (3%) entrants.

Cancer

Cancer is a group of several hundred diseases in which abnormal cells are not destroyed by normal metabolic processes but instead proliferate and spread out of control, after being affected by a carcinogen or after developing from a random genetic mutation, and form a mass called a tumour or neoplasm. Tumours can be benign (not a cancer) or malignant (a cancer). Benign tumours do not invade other tissues or spread to other parts of the body, although they can expand to interfere with healthy structures. Cancers are distinguished from each other by the specific type of cell involved and the place in the body in which the disease begins (AIHW & AACR 2008). The age of onset of cancer varies with the type of cancer but generally the risk of getting cancer increases with age.

The type and stage of the cancer will determine the treatment required. Treatment may include chemotherapy (such as oral, injection or intravenous), radiation therapy, biological therapy or surgery.

In Australia, prisoners requiring treatment for cancer will either receive medication from the prison clinic or be transferred to the local hospital for treatment.

Cancer pain management among prison inmates is an emerging problem. A commentary from the United States of America (USA) on the management of incarcerated cancer patients reported that the median overall survival for cancer patients in prison was inferior to that of a non-incarcerated, age, sex and race matched cohort (Markman 2007).

INDICATOR: Proportion of prison entrants who report that they have been told by a doctor or nurse that they have cancer, and who still have the condition currently.

NUMERATOR: Number of prison entrants who report that they have been told by a doctor or nurse that they have cancer, and who still have the condition currently.

DENOMINATOR: Total number of prison entrants during the census week.

Few prison entrants reported having cancer. Of the 549 entrants taking part in the census, only 9 (2%) reported ever having been told they have cancer and 3 (less than 1%) currently had cancer.

3.5 Women's health

Women represent a minority of the Australian prisoner population, at less than 10%. Women in prison internationally frequently come from deprived backgrounds, have often experienced physical and sexual abuse, alcohol and drug dependency and inadequate health care prior to their imprisonment (PRI 2007). Many women in prison also have young children, for whom they were often the primary or sole carer before they entered prison (WHO 2008).

Women constitute a special group within prisons due to their gender. This report will focus on two aspects of women's reproductive health—pregnancy and cervical screenings.

Pregnancies

Pregnancy affects many areas of a woman's life, including health, diet and exercise requirements (Robertson 2008).

Early pregnancies, in particular, have numerous health, psychological and socioeconomic consequences. The long-term health implications of becoming pregnant during teenage years include pelvic inflammatory disease, infertility, cervical cancer and susceptibility to HIV infection (Amu & Appiah 2006). For women aged less than 15 years, pregnancy is associated with a higher risk for gestational hypertension, anaemia, poor nutritional status, preterm delivery and both maternal and neonatal mortality (Amy & Loeber 2007).

Teenage parenthood has been linked to lower levels of completed education, poverty, welfare dependence, domestic violence and poor partner relationships (Fergusson et al. 2007). Women who become parents during adolescence have also been found to be more likely to have repeat teenage pregnancies (Raneri & Wiemann 2007).

In Australia in 2006, 4% of women giving birth were aged less than 20 and 15% were aged 20–24 years. One in five (21%) Indigenous mothers were teenagers, compared with 4% of non-Indigenous mothers. The average age of mothers giving birth to their first child was 28.2 years (Laws & Hilder 2008).

Pregnancy history

INDICATOR: Proportion of female prison entrants who report that they have ever been pregnant.

NUMERATOR: Number of female prison entrants who report that they have ever been pregnant.

DENOMINATOR: Total number of female prison entrants during the census week.

INDICATOR: Mean age at first pregnancy for female prison entrants.

Prison entrants were asked whether they had ever been pregnant and, if so, their age at first pregnancy. Most female prison entrants reported that they had been pregnant (51 out of 61 or 84%). The average age of first pregnancy was 19 years (ranging from 14 years to 36 years). A slightly lower proportion of Indigenous female entrants (79%) reported having ever been pregnant than non-Indigenous female entrants (85%). However, the average age of first pregnancy for Indigenous entrants was 17 years compared with 20 years for non-Indigenous entrants.

Pregnant prisoners

Some women are pregnant while imprisoned. Imprisonment may place pregnant women and their unborn child at increased health risk due to prison related stressors. Alternatively, it may enhance pregnancy outcomes for women from disadvantaged backgrounds as prison provides shelter, regular meals, protection from abusive partners, access to antenatal care and moderates the use of alcohol and drugs (Scott & Gerbasi 2005; Knight & Plugge 2005; Kyei-Aboagye et al. 2000).

A systematic review by Knight and Plugge (2005) showed evidence that pregnant prisoners are a socially disadvantaged group at high risk of poor perinatal outcomes. The review identified risk factors associated with adverse pregnancy outcomes in imprisoned women. Pregnant prisoners were more likely to:

- be single
- smoke, drink alcohol to excess and take illegal drugs
- not have completed high school
- have a medical problem which could affect the pregnancy outcome.

Despite these factors, they were less likely to receive adequate antenatal care.

The Mothers and Gestation in Custody project conducted by the NSW Perinatal and Reproductive Epidemiological Research Unit recently completed a study of pregnancy outcomes in prisoners in Australia. The study investigated the impact of imprisonment during pregnancy on birth and neonatal outcomes. This study was due to conclude in December 2009.

INDICATOR: Number of pregnant female prisoners in custody.

There were 235 pregnant prisoners in custody (excluding Tasmania) during 2007–08.

Cervical screening

Women in prison are a high-risk group for sexual and reproductive health diseases, including particular cancers and sexually transmitted diseases. This is particularly due to the typical background of women in prison, which can include injecting drug use, sexual abuse, violence, sex work and unsafe sexual practices (UNODC 2007).

Early detection and treatment of cervical cancer can reduce morbidity and mortality due to the disease. It is recommended that women aged 18–69 years, who have ever had sex, have a cervical screening every two years (DOHA 2006).

In 2006–07, the two-year participation rate for the National Cervical Screening Program was 62% of women in the age group of 20–69 years (AIHW 2009a).

INDICATOR: Proportion of female prison entrants who report that they have had a cervical screening in the last two years.

NUMERATOR: Number of female prison entrants who reported having a cervical screening in the last two years.

DENOMINATOR: Total number of female prison entrants during the census week.

Prison entrants were asked whether they had had a cervical screening in the last two years. Of the 61 female prison entrants in the census week, just under half (28 or 46%) of the women had had a cervical screening in the last two years, which is lower than the general population (62%). A higher proportion of Indigenous (57%) than non-Indigenous (43%) entrants had a cervical screening in the last two years (Table 3.13).

Table 3.13: Proportion of female prison entrants who report that they have had a cervical screening in the last two years, by Indigenous status, 2009

| Cervical screening status | Indigenous | | Non-Indigenous | | Total | |
|---------------------------|------------|------------|----------------|------------|-----------|------------|
| | Number | Per cent | Number | Per cent | Number | Per cent |
| Had cervical screening | 8 | 57 | 20 | 43 | 28 | 46 |
| No cervical screening | 6 | 43 | 22 | 48 | 29 | 48 |
| Total | 14 | 100 | 46 | 100 | 61 | 100 |

Notes

1. Includes New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.
2. Totals include 1 female entrant whose Indigenous status was unknown and 4 whose cervical screening status was unknown

Source: National Prisoner Health Census 2009.



4

Deaths