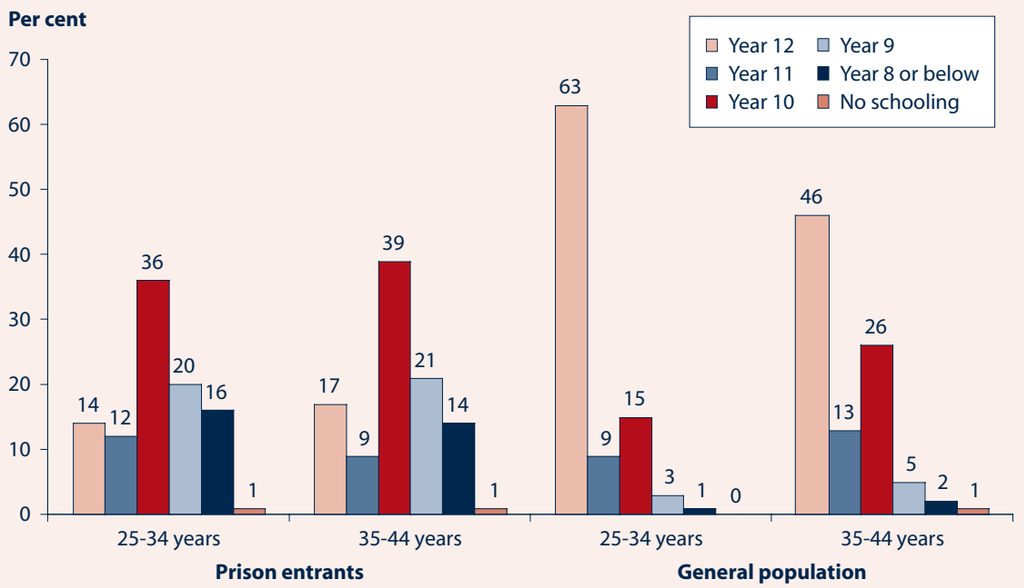
7 Comparisons with the general community and prisoners internationally

In this chapter, data from the general Australian community and from international prison populations have been presented (where available) for each indicator, to provide a comparison with the results found in this Census. Some of these data are directly comparable with the Census results, as they use similar methodologies and results for similar age groupings were available. Where appropriate, these data have been presented along with the relevant Census results. Other data which have used different methodologies or populations provide contextual information or are indicative only and should not be directly compared with the results from this Census. Caution should therefore be taken in interpreting these results.

7.1 Education

Data for the highest completed level of schooling in the general Australian household population are available from the ABS 2006 Census of Population and Housing. Prison entrants had a lower level of educational attainment than the general Australian population for those aged 25–34 years and 35–44 years (Figure 7.1). Almost two-thirds (63%) of the general population aged 25–34 years had completed Year 12, compared with just 14% of prison entrants in that age group. More than one-third of prison entrants (36–37%) had a highest completed level of schooling of Year 9 or less, compared with around one in twenty (4–8%) of the general population.

Figure 7.1: Prison entrants and general population, highest level of completed schooling, by age group, 2009 and 2006



Source: National Prisoner Health Census 2009 and ABS 2006 Census of Population and Housing

7.2 Mental health

The 2007 ABS National Survey of Mental Health and Wellbeing (NSMHWB) collected information on the prevalence of mental disorder in people who had been incarcerated. In the 12 months preceding the survey interview, the incidence of any mental disorder in individuals who had at some time been incarcerated was greater than in those who had not. Of the 100 people who reported they had ever been incarcerated, 41% had a 12-month mental disorder. This was more than twice the prevalence in people who reported they had never been incarcerated (19%). People who reported they had ever been incarcerated experienced:

- almost five times the prevalence of 12-month substance use disorders (23% compared with 5%)
- more than three times the prevalence of 12-month affective disorders (69% compared with 19%)
- almost twice the prevalence of 12-month anxiety disorders (28% compared with 14%) (ABS 2008).

Further, rates of the major mental illnesses, such as schizophrenia and depression, have been found to be between three and five times higher in prisons than that expected in the general population (Ogloff et al. 2006).

Scores on the Kessler 10 scale were obtained in the ABS 2007–08 National Health Survey, and used the same scoring system for the distress levels as this Census. Prison entrants in this Census, particularly females, reported consistently higher levels of psychological distress than

the general Australian population. In each age group, 12% of the general population reported high or very high levels of psychological distress during the previous four weeks. Among prison entrants, this proportion ranged from over one-fifth (22%) of those aged 18–24 years, to over one-third (34%) of those aged 35–44 years (Figure 7.2). Half (50%) of female prison entrants reported high or very high levels of distress, compared with only 14% of the general female adult population. For males, this was over one-quarter (27%) compared with 10%.

Figure 7.2: Levels of psychological distress, prison entrants (2009) and general population (2007), by age group

Note: Prison entrants data include New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.

Sources: National Prisoner Health Census 2009; ABS National Health Survey 2007–08

In Canada, 12% of male offenders and 21% of female offenders were identified as having a mental health disorder at intake (Correctional Services Canada 2008). In comparison, the 2004 United States (US) Survey of Inmates in State and Federal Correctional Facilities found that 56% of state and 45% of federal inmates had a mental health problem[3] (James & Glaze 2006).

A study by Earthrowl and McGully (2002) of 135 New Zealand women prisoners found 14% of prisoners had a history of self-harm (Ministry of Health 2006). Similarly in a study of 1,741 sentenced male prisoners in England and Wales, 17% of men reported deliberate self-harm on at least one occasion in their life (Maden et al. 2006). The proportion of Australia's prison entrants with a history of self-harm (17%) was similar to that reported overseas.

[3] Mental health problems were defined by two measures: a recent history or symptoms of a mental health problem in the 12 months prior to the interview. A recent history of mental health problems included a clinical diagnosis or treatment by a mental health professional. Symptoms of a mental disorder were based on criteria specified in the *Diagnostic and statistical manual of mental disorders, fourth edition* (DSM–IV).

Data on self-harm in the community are difficult to obtain, as people who engage in self-harming behaviours may conceal their injuries and will not necessarily come in contact with medical or other services as a result of their self-harming behaviours. Self-harm data are limited to instances of 'hospitalised self-harm' and therefore do not capture those who have been attended to in emergency departments or by general practitioners, or have not sought medical assistance. In 2003–04 females accounted for 62% (14,228) of hospitalised self-harm cases. Three-quarters of all intentional self-harm cases were aged from 15 to 44 years (28% were aged 15 to 24 years and 47% were aged 25 to 44 years) (Berry & Harrison 2007).

7.3 Head injuries

The New Zealand Ministry of Health Prisoner Health Survey 2005 asked prisoners in custody whether they had ever had a head injury leading to a loss of consciousness (Ministry of Health 2006). A lower proportion of prison entrants in Australia (43%) were found to have sustained a head injury compared with sentenced prisoners in New Zealand (64%) (Table 7.1). In both countries, head injury was more common among male than female prisoners.

Table 7.1: Prisoners, head injury by sex, Australia (entrants) and New Zealand (sentenced), 2009 and 2005 (per cent)

Sex	Australia	New Zealand
Male	44	64
Female	33	53
Total	**43**	**64**

Source: National Prisoner Health Census 2009; New Zealand Prisoner Health Survey 2005.

7.4 Communicable disease

International research has found that there are higher rates of communicable diseases in the prison population than in the general population. One comparison study into the rates of hepatitis B and C in prison populations found that for all countries included in the analysis (Australia, USA, Greece, Denmark, India and Ireland) prisoners had higher rates of infection than the general community (Hunt & Saab 2009).

The prevalence of hepatitis C in the general community is estimated at approximately 1%. Hepatitis C is more prevalent in prisons than in the general community. The extent of this difference is unclear, with sources estimating the prevalence of hepatitis C in prisons to be between 6 and 40 times more prevalent than in the general community (DOHA 2008; Butler et al. 2004).

HCV is considered the most prevalent bloodborne infection in US prisons, with the overall seroprevalance in US prisoners estimated at 30–40%, compared to approximately 1.8% of the general population (Hunt & Saab 2009).

The 2005 New Zealand Prisoner Health Survey found that one in three prisoners had a history of being diagnosed with one or more communicable disease, including hepatitis B, hepatitis C, chlamydia, STIs, rheumatic fever and tuberculosis (Ministry of Health 2006). A study in France from November 2000 to June 2003 of 579 males entering a remand centre found that 16% of prison entrants had at least one sexually transmitted disease—4% had condyloma, 4% had chlamydia infection and 5% were positive for hepatitis C virus antibodies (Verneuil et al. 2009).

A review of information on HIV prevalence in prisons in 2003–04 found that of 76 countries studied, the prevalence of HIV was greater than 10% in 18 countries: Brazil, Burkina Faso, Cameroon, Côte d'Ivoire, Cuba, Estonia, Indonesia, Lithuania, Malawi, Malaysia, Romania, Rwanda, Slovakia, South Africa, Ukraine, Vietnam, Yemen and Zambia (Dolan et al. 2007).

In the USA at the end of 2006, 20,450 (1.8%) state inmates and 1,530 (0.9%) federal inmates were diagnosed with HIV infection or had confirmed AIDS (Maruschak 2006). This equates to a prevalence of HIV that is five times higher in prisons than in the general population (Spaulding et al. 2002). Prisoners in the USA account for less than 1% of the population, but represent 5% of reported cases of HIV (Vlahov & Putnam 2006).

7.5 Chronic conditions

The 2007–08 National Health Survey estimated the proportions of the general Australian population who have certain chronic conditions (ABS 2009a). These are presented in Table 7.2 alongside the proportion of prison entrants who currently have these conditions.

For arthritis, the proportions of prison entrants were slightly lower than the proportions in the general population for those aged 25–34 years and those aged 35–44 years. For cancer, the proportions were the same for both age groups. For asthma, cardiovascular disease and diabetes, a higher proportion of prison entrants had the condition than those in the general population by the age of 35–44 years. Asthma was found in 20% of prison entrants aged 35–44 years, compared with 10% in the general population in that age group, for cardiovascular disease the proportions were 4% and 2% respectively, and for diabetes, 5% and 2% respectively.

Table 7.2: Chronic conditions in prison entrants (2009) and the general Australian population, by age group (2007–08) (per cent)

Chronic condition	Prison entrants		General Australian population	
	25–34 years	35–44 years	25–34 years	35–44 years
Asthma	15	20	10	10
Arthritis	5	9	5	9
Cardiovascular disease	1	4	0.7	2
Diabetes	2	5	0.5	2
Cancer	1	1	0.3	1

Source: National Prisoner Health Census 2009; ABS 2009a.

The levels of chronic conditions found among prisoners in New Zealand and the USA appear to be similar or slightly higher than found in this Australian census of prison entrants. Levels of cancer and diabetes were similar in each country, while some differences were found in

relation to asthma and arthritis. Levels of heart disease were found to be higher in the US and New Zealand surveys than CVD in Australian prison entrants (Table 7.3) (Ministry of Health 2006, Maruschak 2008). Caution should be taken in interpreting these results, as they are not directly comparable and may have used different definitions for the conditions surveyed.

Table 7.3: Chronic conditions in prisoners in Australia and internationally (per cent)

Chronic condition	Australia	USA	New Zealand
Asthma	16	7–9	22
Arthritis	6	12–15	n.a.
Cardiovascular disease/heart disease	3	6	8
Diabetes	3	4–5	2
Cancer	1	<1	2

Source: National Prisoner Health Census 2009; Survey of State and Federal Correctional Facilities 2004 (USA); New Zealand Prisoner Health Survey 2005.

7.6 Women's health

The Cervical Screening in Australia 2006–2007 report prepared for the National Cervical Screen Program (AIHW 2009a) provides an outline on the national picture of cervical screening in Australia. In Australia, the proportion of women undertaking cervical screening tests is higher than in the prison population (62% compared with 46%) (Table 7.4).

A study from the United Kingdom (UK) in 2004 found that female prisoners were less likely to have been screened in the last five years than females generally. However, those who had been in prison longer than three months were much more likely to have had a Pap smear in the last five years compared with those who had been in for three months or less (79% and 38%) (Plugge & Fitzpatrick 2004). In New Zealand, 76% of female prisoners aged between 20 and 69 years had undergone a cervical screening in the last four years (Ministry of Health 2006).

Table 7.4: Proportion of female prison entrants[(a)] (2009) and female general population (2006–07) who report that they have had a cervical screening in the last two years (per cent)

	Had cervical screening
Prison entrants	46
General population[(b) (c)]	62

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

(b) General population refers to women aged 20–69 years.

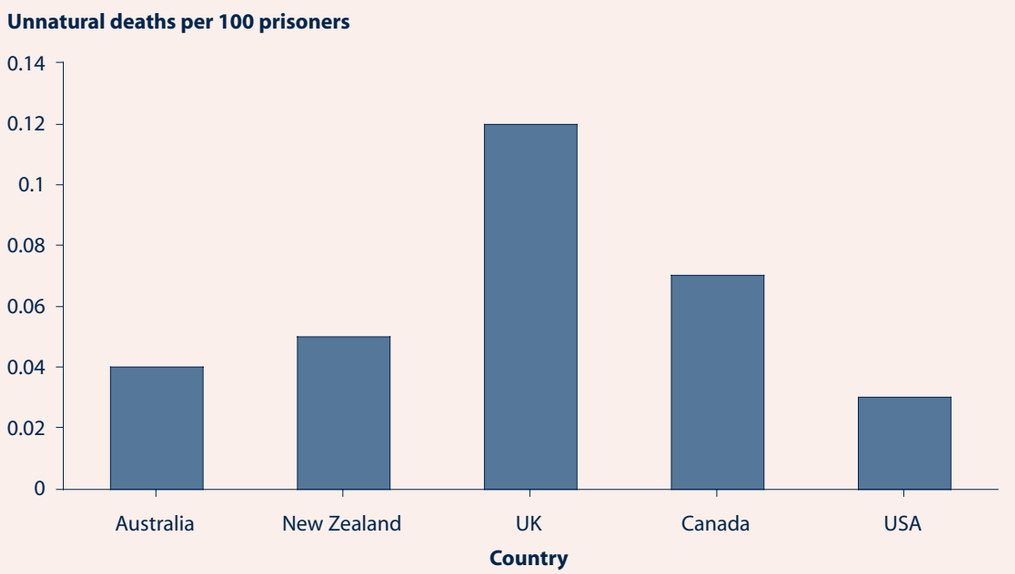
(c) The percentage is calculated as the number of women screened as a proportion of the eligible female population and age-standardised to the Australian population at 30 June 2001. The eligible female population is the average of the ABS's estimated resident population, adjusted for the estimated proportion of women who have had a hysterectomy using national hysterectomy fractions derived from the ABS 2001 National Health Survey.

Source: National Prisoner Health Census 2009; AIHW 2009a.

7.7 Deaths in custody

Many countries produce annual reports monitoring deaths in custody, similar to the NDICP in Australia. The rate of unnatural deaths in Australian, New Zealand, UK, Canadian and US prisons is small (less than 0.2% of prisoners) (Figure 7.3). Caution should be taken in comparing these rates, as each country may have different definitions of a death in 'custody'.

Figure 7.3: Rate of unnatural deaths in prison, international comparison

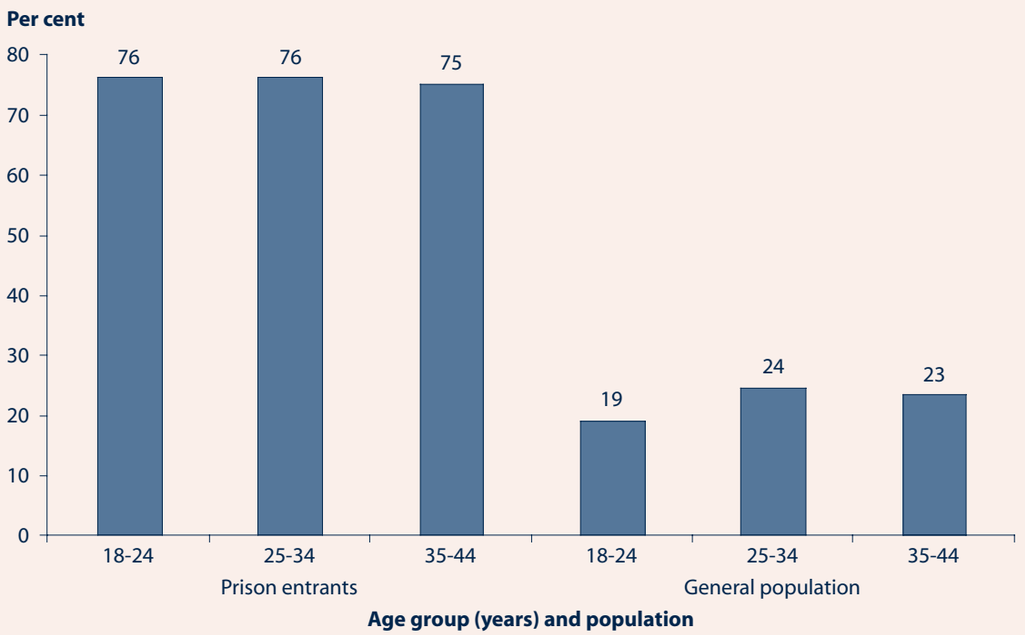


Sources: Deaths in Custody Monitoring Program 2007 Report; Corrections New Zealand 2007–08 Annual Report; Forum on Prevention of Deaths in Custody Annual Report 2007–08; Correctional Service Canada 2007–08 Performance Report; Deaths in Custody Reporting Program 2006.

7.8 Tobacco smoking

The ABS 2007–08 National Health Survey reported the same smoking status categories as this census. In each of the age groups, the proportions of daily smokers to ex-smokers/never smoked were almost reversed for prison entrants compared with the general household population. Around 75% of prison entrants in each age group were daily smokers, and around the same proportion in the general population were ex-smokers or had never smoked (Figure 7.4).

Figure 7.4: Daily smokers, prison entrants (2009) and the general population (2007), by age group



Note: Prison entrants data include New South Wales, Victoria, Queensland, Western Australia, South Australia and the Australian Capital Territory.

Sources: National Prisoner Health Census 2009; ABS National Health Survey 2007–08.

The prevalence of smoking in international prisons is similar to that in Australia. In the USA, smoking prevalence is 3 to 4 times higher among prisoners than in the non-incarcerated adult population. Among incarcerated men, 70–80% are current smokers while smoking prevalence among incarcerated women ranges from 42% to 91% (Cropsey et al. 2008).

In New Zealand in 2005, two-thirds of all prisoners reported being current smokers (67%), with females more likely to be current smokers than males (Ministry of Health 2006).

In European prisons, the smoking prevalence rate is estimated at between 64% and 88%. As approximately 95% of the European prison population are male, if prevalence rates in prisons are compared with the average of the male smoking population (which is 40%), the prevalence of smoking in imprisoned males is one-and-a-half to two times higher than that in the general male population (Hartwig et al. 2008).

7.9 Risky alcohol consumption

The ABS 2007–08 National Health Survey collected information on alcohol consumption. Persons were classified to a health risk level (low risk, risky or high risk) based on their estimated average daily consumption of alcohol during the previous week. Of those who drank alcohol in the previous week (59% of the total population), 21% did so at a risky or high risk level. The same proportion of males and females drank at risky or high risk levels (21%).

The 2007 National Drug Strategy Household Survey (NDSHS) found that almost one in ten (8.6%) of Australians aged 14 years or over drank alcohol at levels considered risky or high risk for both short-term and long-term harm (AIHW 2008a).

A systematic review of 13 studies into substance abuse and dependence among prisoners before they had entered prison—covering a total of 7,563 prisoners (9 surveys in the USA, two in Ireland, one in New Zealand and one in the UK)—estimated that the prevalence of alcohol abuse and dependence in male prisoners ranges from 18–30% and from 10–24% in female prisoners (Fazel et al. 2006).

The NPHDC found that 51% of males and 52% of females were at risk of alcohol-related harm. This proportion is substantially higher than that reported in the above systematic review. This difference could be attributed to the fact that alcohol abuse and dependence are mental disorders, which require specific criteria for the diagnosis. The NPHDC did not ask prison entrants whether they had been diagnosed with either of these disorders and so a direct comparison is not possible.

7.10 Illicit drug use

According to the 2007 NDSHS, 13% of Australians aged 18 years and over said they used at least one illicit drug in 2007. The most commonly used illicit drug in the past 12 months was marijuana/cannabis (9%,) followed by ecstasy (4%), pain killers/analgesics (3%) and meth/amphetamine (which includes 'ice') (2%). Aboriginal and Torres Strait Islander people were more likely than other Australians to have used an illicit drug in the previous 12 months (AIHW 2008a).

Prison entrants were 5 times as likely as those in the general population to have used illicit drugs (71% compared with 13%). In each age group (18–24 years, 25–34 and 35–44) and for each type of illicit drug, a far greater proportion of prison entrants had used the drug during the last 12 months, compared with the general population. The differences were most marked in the older age groups where, for several drug types, proportionally around ten times as many entrants had used the drug as had those in the general population. The use of heroin was also markedly different among prison entrants (12–27%) than the general population (0–1%). There were some differences, too, in the types of illicit drugs used by prison entrants and the general population. In the general population, people aged 18–34 years used cannabis/marijuana most commonly, followed by ecstasy. Among prison entrants of the same age, cannabis/marijuana was the most common drug, followed by meth/amphetamines (Table 7.5).

The 2007 NDSHS found that, of Australians aged 14 years or older, 2% had ever injected illicit drugs. Males were more likely than females to have ever injected drugs (3% and 1% respectively). Of recent injecting drug users, 38% had re-used a needle or other injecting equipment after someone else had already used it (AIHW 2008a).

Injecting drug use was substantially higher amongst prison entrants than in the general population (55% compared with 2%). Female entrants were more likely than male entrants to have injected drugs, which was the opposite to the situation in the general population. Prison entrants were, however, less likely to have shared injecting equipment (26%) than injecting drug users in the general population (38%).

Table 7.5: Use of illicit drugs during the last 12 months, prison entrants and the general population (per cent)

Age group	Cannabis/ marijuana	Meth/ amphetamine	Heroin	Analgesics/ pain killers	Ecstasy	Tranquillisers/ sleeping pills
Prison entrants						
18–24	60	28	12	15	24	8
25–34	54	35	27	22	17	21
35–44	45	30	20	19	13	12
General population						
18–24	21	5	0	3	11	3
25–34	17	7	1	3	9	3
35–44	9	2	0	3	2	1

Source: National Prisoner Health Census 2009; National Drug Strategy Household Survey 2007 (AIHW 2007).

Australia's prisons have similar proportions of prisoners who have used illicit drugs to those in international prisons. For example, 69% of New Zealand's prisoners had ever used non-prescription drugs, while approximately 67% of offenders in Canadian federal prisons have substance abuse problems (Ministry of Health 2006; Correctional Services Canada 2008). Further, 53% of all US state prisoners and 45% of all US federal prisoners met the DSM-IV criteria for drug dependence or abuse (Mumola & Karberg 2006).

7.11 Health service use

Approximately 85% of Australians in the general population see their GP at least once a year (AIHW 2008c; Kraemer et al. 2009). In this Census, 83% of prison entrants had seen a health professional at some time during the last 12 months. This was more common among females (93%) than males (82%), and non-Indigenous (85%) than Indigenous (79%) entrants.

Information about visits to GPs in the community is collected through the Bettering the Evaluation and Care of Health (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.

Between April 2007 and March 2008, females accounted for the greater proportion of GP encounters (57%), according to the BEACH study of Australian GP visits. This was reflected across all age groups.

The 2007–08 BEACH study reported that (between April 2007 and March 2008) the most frequently managed problems in Australian general practice were:

- respiratory problems, in particular upper respiratory tract infection, acute bronchitis and asthma (13% of total problems)
- musculoskeletal problems, such as arthritis and back complaints (11%)
- skin problems (11%)
- digestive problems (7%)

- check-ups (6 per 100 encounters)
- diabetes (4 per 100 encounters).

Psychological problems (depression, anxiety and sleep disturbances) represented 8% of total problems managed in Australian general practice (Britt et al. 2008).

Similar to general practice, diabetes, skin and check-ups (health checks) were common problems managed at prison clinics. The high proportion of psychological/mental health issues and drug and alcohol issues seen at prison clinics compared with general practices highlights some health issues particular to prisoners. Also, the prison clinic data includes allied health professionals, rather than just general practitioners.

In the 2007–08 BEACH survey, of the top five most frequently prescribed medications, two were antibiotics, two were plain or combination paracetamol and the fifth was atorvastatin, a lipid-modifying agent for cholesterol (Britt et al. 2008).

The 2004–05 NHS found that 19% of adults in the general population had used some form of medication to assist their mental wellbeing in the fortnight prior to the NHS interview (ABS 2006a).

In the UK, prisoners consulted primary care doctors three times more frequently than the equivalent community populations, and they saw other primary health-care workers almost 80 times more frequently than equivalent community populations. Prisoners received inpatient care at least 10 times as frequently as equivalent community populations (Marshall et al. 2001).

In New Zealand, almost one in five prisoners (18%) had seen a medical specialist (including psychiatrists) in the last year while in prison, and one in five prisoners (21%) had been to a public hospital in the same period. Levels of health service use were higher in older age groups (Ministry of Health 2006). Of Maori male prisoners, 92% had seen the prison nurse in the last 12 months while in prison, 18% had also been referred to see a medical specialist and over half (55%) had seen another health-care worker in the last 12 months in prison (Ministry of Health 2008).

Women in prison in Western Europe tend to place a greater demand on medical services than men. For instance, in Italy, approximately twice as many women in prison are asking to see a doctor or nurse each day than men in prison. Among the reasons for their higher demand on medical services are their higher needs for care related to a history of violence and abuse, drug use problems and reproductive needs (Zoia 2005).

In this Census, there were 37 clinic visits for women's health, which was less than 1% of problems managed.

A national Norwegian study found that 52% of prisoners were taking some prescription medication—16% were taking medication for both mental and physical illness, 17% mental illness only and 19% physical illness medications only (Kjelsberg & Hartvig 2005).

7.12 Immunisations

All prisoners in England are offered a hepatitis B vaccination on entry to prison (Sutton et al. 2008). In 2008, 41% of prison entrants in England and Wales were vaccinated against hepatitis B within one month of entering prison (HPA 2009). Similarly hepatitis B immunisation is provided in many US prison systems (Jacobs et al. 2004).

8

Data gaps and future directions