





Health and ageing of Australia's prisoners 2018

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Older people are a growing part of Australia's prison population. Their social and lifestyle characteristics, before and during incarceration, mean prisoners experience age-related health conditions earlier than people in the community.

Older prisoners are more likely to experience poorer health, have chronic physical conditions such as cardiovascular disease, and use multiple types of medications compared to younger prisoners.

This report presents data on the health-care needs of prisoners who participated in the 2018 National Prisoner Health Data Collection (NPHDC), with a focus on how these needs differ for younger and older prison entrants.

Accelerated ageing—who is considered 'old' in prison?

There is little consistency in how an older prisoner in Australia is defined. Evidence suggests that prisoners experience age-related health conditions earlier than people in the broader Australian community (Baidawi et al. 2011).

A prisoner is commonly considered 'older' around the age of 45, which is 10 years younger than a person in the community. This earlier onset of age-related conditions is known as accelerated ageing (Baidawi et al. 2011; Turner & Trotter 2010).

In this report:

- older prison entrants and prisoners are defined as those aged 45 and over
- younger prison entrants and prisoners are those aged 18 to 44.

This age threshold was chosen to reflect the early ageing profile of prisoners.

Compared to younger prison entrants, older people (45+) coming into prisons were—



1.6 times as likely to self-report **consuming alcohol** 4 or more times per week



less likely to use illicit substances in the 12 months before prison (43% and 70%)



1.7 times as likely to report having ever been diagnosed with a chronic condition

In prison clinics, older people were—



less likely to be dispensed antidepressants or mood stabilisers than younger people (36% and 46%)





Older people in the community and in prison are at greater risk of developing age-related physical health conditions due to a range of socioeconomic, lifestyle and biomedical factors (AIHW 2018b, 2019b).

Accelerated ageing occurs to a greater extent amongst people in prison because they are more likely to live in poverty, achieve a lower standard of education, and experience housing instability and a lack of employment. These are some of the social determinants of health that can further contribute to poor physical and mental health (Turner & Trotter 2010).

At the same time, people with a history of incarceration are more likely to engage with risky lifestyles and behaviours that are typically associated with poorer physical and mental health (AIHW 2019b). Some of these factors are poor eating habits and nutrition, inactive lifestyles, tobacco smoking, alcohol and illicit substance use and being unable to access health-care services (Baidawi et al. 2011). Prison environments themselves can also contribute to age-related illnesses and conditions (UNODC 2009).

These factors can influence a person's ability to access quality health care prior to and upon leaving prison and further influence the likelihood of experiencing age-related illnesses and conditions throughout their lives (Baidawi et al. 2011; Ginnivan et al. 2018).

About the data

This report primarily uses the National Prisoner Health Data Collection (NPHDC) 2018 to understand more about the health-care needs of younger and older prisoners in Australia. It also uses Australian Bureau of Statistics (ABS) data from the Prisoners in Australia publication series to show how older prisoners are represented in the national prison population (Supplementary tables A.1 and A.2).

In the NPHDC 2018, the prison entrants' survey was completed by 803 of the 3,442 people who entered prison during the 2-week data collection period—a participation rate of 23%. Data were collected for 62 participating prisons in Australia, excluding New South Wales.

To adjust for certain sampling bias, NPHDC prison entrants' data were weighted to the Australian prison population using variables of age, sex and Indigenous status. This allows a more accurate comparison between younger and older prison entrants. The weighted sample data are provided in the supplementary tables (Table S1).

NPHDC data were also collected on prisoners who received medications and who attended clinic health-care services in participating prisons during the 2 week data collection period. Further analysis was undertaken on the prison clinic data so they would more accurately represent people's age in the data collection. Data in this report are not comparable with data published elsewhere in the NPHDC 2018 publication series.

Representativeness of findings

Numbers in this report represent the sample in this data collection and are not representative of the entire prison population. The NPHDC 2018 does not constitute a random sample of people entering prison during the data collection period for 3 reasons:

- The sampling method was based on convenience—not all people entering prison were asked to participate and some people were not eligible to participate. This was due to, for example, prison staff not being available to conduct the survey or prison entrants' physical or mental health limitations, which made them ineligible.
- Participation in the survey was voluntary and participants could decline to participate.
- New South Wales chose not to participate in the NPHDC 2018.

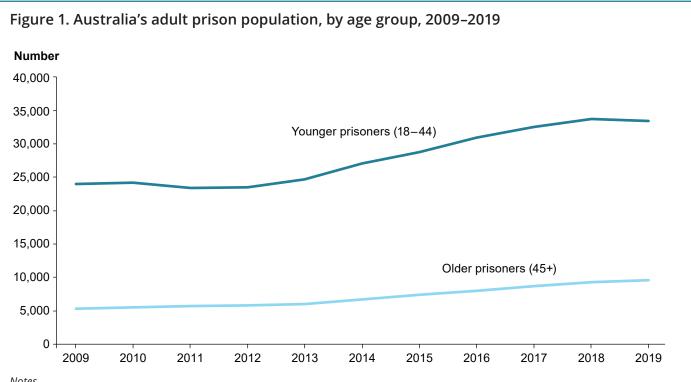
The sampling method can cause variations between the representativeness of the NPHDC and the characteristics of Australia's prison entrants during the data collection period.

While the AIHW weighted the NPHDC's survey data to adjust for certain sampling bias, these data should be interpreted with caution due to small sample sizes. As the sample size is relatively small, there can be large variations in relative standard errors.

Further details are provided in the Technical Notes.

Australia's prison population is growing and ageing

Australia's prison population has grown by 47% over the past 10 years—from around 29,300 in 2009 to 43,000 in 2019. Over this period, the proportion of Australia's prison population who were aged 45 and over has increased—from 18% of the total prison population on 30 June 2009 to 22% at 30 June 2019 (Figure 1; Table A.1).



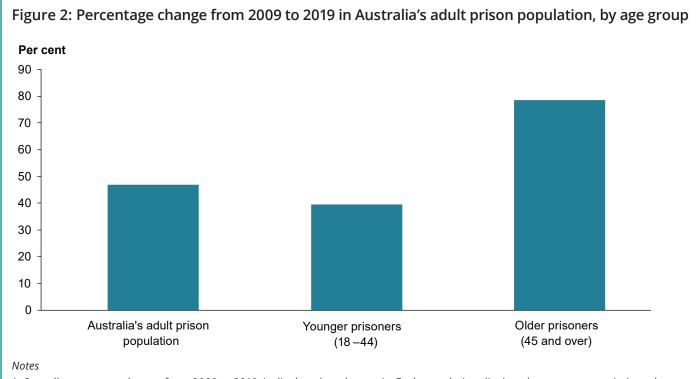
Notes

- 1. Numbers represent 30 June counts in each respective year.
- 2. The Queensland prison population may include young people aged less than 18 who have been sentenced to adult imprisonment from 2009 to 2018.

Source: Based on ABS 2020b data.

The population of older prisoners in Australia is growing at a greater rate than the population of younger prisoners. Since 2009, the number of older prisoners in Australia grew from around 5,300 to 9,600—that is, a growth of 79% (Figure 2).

The number of younger prisoners grew at a slower rate—from around 24,000 to 33,500 with an overall growth of 40%.



^{1.} Overall percentage change, from 2009 to 2019, is displayed on the y-axis. Each population displayed year-to-year variations that are not captured in the overall percentage change.

Source: Based on ABS 2020b data.

To examine growth over time within the broad group of older prisoners, those aged 45 and over were grouped in 5-year intervals: 45–49 years, 50–54 years, 55–59 years, 60–64 years, and 65 years and over. All 5-year age groups of older prisoners showed minor year-to-year fluctuations with an overall increase over the 10-year period (Table A.2).

Prisoners aged 65 and over increased the most over the 10-year period to 2019, from 505 to 1,225 prisoners, up 143%. The population aged 60–64 showed the smallest increase of 56%—from 519 to 810 prisoners.

This means that not only is Australia's prison population growing over time, but:

- older prisoners are a growing proportion of Australia's prison population
- the population of older prisoners is growing at a faster rate than the population of younger prisoners.

The available evidence suggests that similar trends are occurring internationally, such as in the United States of America and England (Williams et al. 2014). These trends highlight the need to understand how the health-care needs of Australia's younger and older prisoners are changing.

^{2.} Calculations are based on 30 June counts in each respective year.

Why is the population of older prisoners growing?

Australia's population is ageing both in prison and in the community for various reasons, including because people are generally living longer.

At the same time, Australia's population of older people in prison is growing. This is partially due to legal changes in sentencing options, such as mandatory sentencing and standard non-parole periods (Baidawi et al. 2011). However, an aspect of this growth can also be attributed to an increase in the number of older men in custody because of the increased prosecution of historical offences, such as for child sexual abuse (Ginnivan et al. 2018).

Australia's prison population encompasses diverse groups of people with varying sentence types and lengths that are served in custody, particularly among older people in prison. There are 4 main types of sentences served by older prisoners:

- people who are incarcerated for the first-time at an older age
- ageing people who enter and exit prison multiple times during their lifetime and return to prison at an older age
- people who are serving a long sentence and grow old while incarcerated
- people who are sentenced to shorter periods of incarceration later in life (Baidawi et al. 2011).

What are common types of offences?

Older people in Australia's prisons appear to be charged with different types of offences compared to younger people. From 30 June 2019, the top 3 most serious offences older prisoners were charged with were:

- sexual assault and related offences (29%)
- illicit drug offences (16%)
- acts intended to cause injury (15%) (based on ABS 2019).

In comparison, younger prisoners were:

- more likely to be charged with acts intended to cause injury (25%)
- less likely to be charged with sexual assault and related offences (9%)
- similarly as likely to be charged with illicit drug offences (15%).

Social and economic factors

Australia's prison population is fluid with more than 65,000 receptions each year (ABS 2020a). The flow of people through prisons means the high rates of physical and mental health concerns in prison eventually become issues requiring attention in the community.

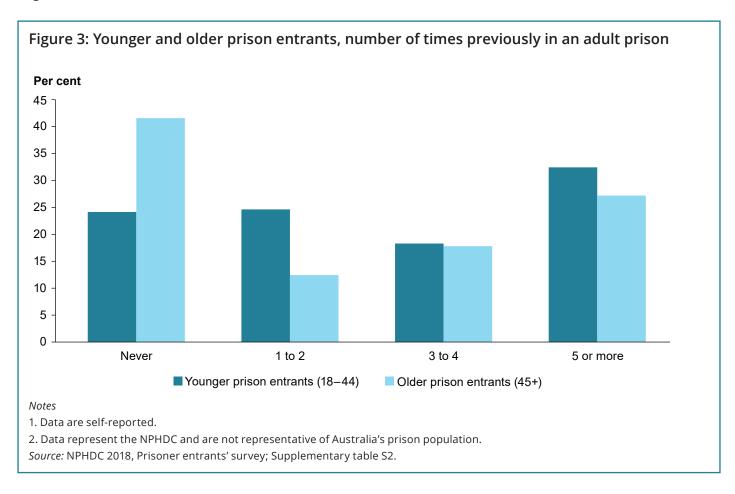
People who cycle through the prison system, having repeated contact and often for brief periods, are at risk of being further disadvantaged. As a group, people with experiences of incarceration tend to come from disadvantaged backgrounds that are characterised by high levels of unemployment, low educational attainment, insecure housing and experiences of alcohol and substance misuse (AIHW 2019b).

Alongside this, they tend to experience a range of complex physical and mental health problems that are present when they enter prison and persist when they re-enter the community. People with a history of incarceration are known to experience higher levels of mental illness, chronic and communicable disease, traumatic brain injury and disability including activity and participation limitations (AIHW 2019b; Karimina et al. 2007).

Patterns of imprisonment

In the NPHDC 2018, older people entering prison were 1.7 times as likely as younger prison entrants to have never previously been incarcerated in an adult prison. For 42% of older prison entrants and 24% of younger entrants, this was their first time in custody.

Younger people were 1.3 times as likely to have been incarcerated previously—75% of younger prison entrants and 58% of older prison entrants have been incarcerated on 1 or more occasions previously (Figure 3; Table S2).



Older prison entrants were less likely to report being on remand (or pre-trial detention) and more likely to have received a custodial sentence:

- 57% of older prison entrants and 69% of younger entrants were on remand. A person enters custody on remand when they have been charged with an offence and are awaiting the outcome of their court matter, or when they have been found or have pleaded guilty and are awaiting sentencing (Table S3) (AIHW 2018c).
- 38% of older prison entrants and 30% of younger entrants were on sentenced detention. An individual is received into sentenced detention when they are judged to be or have pleaded guilty in court (AIHW 2018c).

Families and their history of imprisonment

Nearly 1 in 5 people entering prison reported having a parent or carer incarcerated during their childhood, which included 17 older prison entrants (10%) and 129 younger prison entrants (20%) (Table S4a).

Around 17% (or 134) prison entrants reported that their father had been imprisoned and 5% (or 42) prison entrants reported that their mother had been imprisoned during their childhood (Table S4b).

Older prisoners appear to be less likely to have had their father or mother imprisoned during childhood, although these data should be interpreted with caution due to small sample sizes.

Broader studies have shown that, without appropriate family and community supports, children whose parents were incarcerated are at risk of experiencing socioeconomic disadvantage, social and emotional stress, housing instability and alcohol and substance use (Kinner et al. 2007; Roettger et al. 2019). These factors have been shown to increase a child's risk of having contact with the criminal justice system (Tzoumakis et al. 2019).

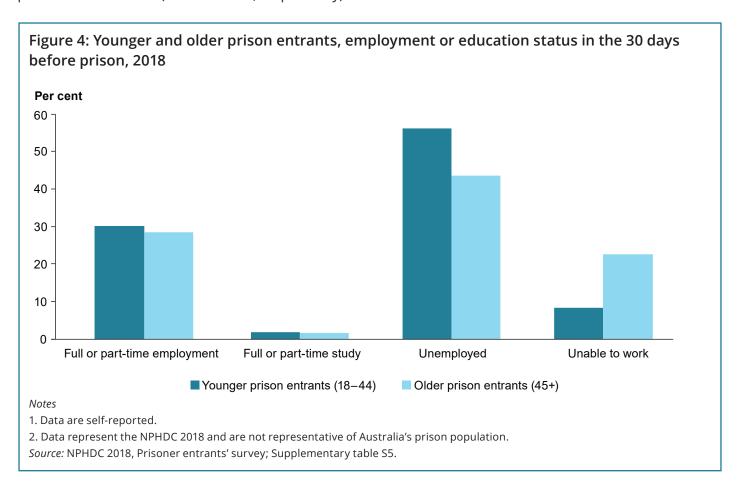
Employment, education and housing stability

Factors related to a person's socioeconomic background, including income, employment, education and housing, are important issues that affect a person's ability to access quality health care and can have long-term effects on their health (AIHW 2019b).

Older people were 2.7 times as likely as younger people to report being unable to work in the 30 days before prison entry—that is, 23% of older and 8% of younger prison entrants.

Younger people were more likely than older people to be unemployed before prison entry—that is, 56% of younger entrants and 44% of older prison entrants (Figure 4; Table S5).

Nearly 1 in 3 older and younger prison entrants reported being engaged in full- or part-time employment prior to incarceration (28% and 30%, respectively).



People with a history of imprisonment can experience multiple and compounding barriers to gaining meaningful employment. While a criminal conviction is a barrier in itself, a lower level of education and lack of vocational or trade qualifications are further barriers (Graffam & Shinkfield 2012).

Around 1 in 5 older and younger prison entrants completed Year 12 as their highest level of schooling (22% and 19%, respectively). Most prison entrants had no further education (56%) and nearly a third (31%) had completed a trade certificate (tables S6 and S7).

Older people entering prison were more likely to live in their own accommodation in the 4 weeks before prison (71%) compared to younger people entering prison (59%). Living in one's own accommodation includes rented or owner-occupied arrangements (Table S8).

Younger prison entrants were 1.4 times as likely as older prison entrants to experience housing instability prior to incarceration—35% of younger prison entrants and 26% of older prison entrants reported sleeping rough or staying in short-term or emergency accommodation (Table S8).

Overall, the vast majority of prison entrants, who were primarily male, had no dependent children in the community (60%) (Table S9). Women entering prison (55%) were more likely than men (36%) to have one or more dependent children in the community (AIHW 2019), irrespective of whether these women were older or younger.

Lifestyle factors

Alcohol, tobacco and illicit substance use, particularly high-level consumption, are major risk factors for preventable disease and long-term chronic health conditions, including chronic disease, hospitalisation from injury, pregnancy complications, and mental illness in Australia.

In 2015, alcohol, tobacco and illicit substance use accounted for around 16% of the total burden of disease in Australia. In 2016, 12% of people aged 14 and over smoked tobacco daily and 16% had used illicit drugs in the last 12 months (AIHW 2020).

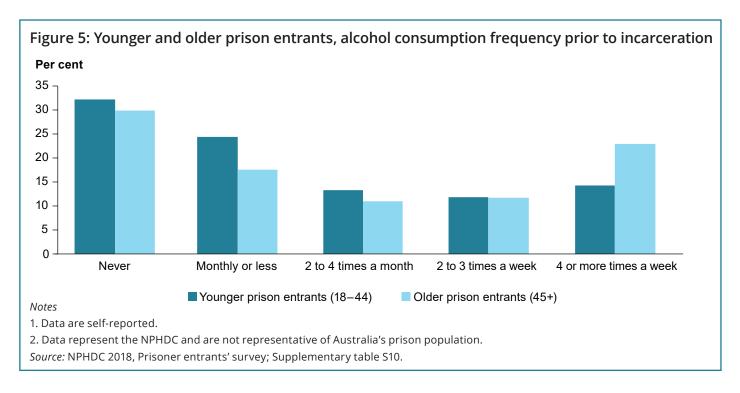
The available evidence suggests that the rate of smoking tobacco and using illicit substances among prison entrants is higher than the rate in the community (AIHW 2019b, 2020).

Risky alcohol consumption

Around a third of prison entrants (32%) reported not having consumed alcohol in the 12 months prior to incarceration, while 64% of prison entrants reported having consumed alcohol at some frequency (Figure 5; tables S10 and S11).

Older people entering prison were 1.6 times as likely to consume alcohol 4 or more times per week compared to younger prison entrants (23% and 14%, respectively). In contrast, younger people entering prison (24%) were more likely to consume alcohol monthly or less frequently compared to older prison entrants (18%).

Around 1 in 3 older (34%) and younger (33%) prison entrants were at high risk of alcohol related harm, when using the World Health Organization's Alcohol Use Disorder Identification Test (AUDIT) (Table S12).



Tobacco smoking

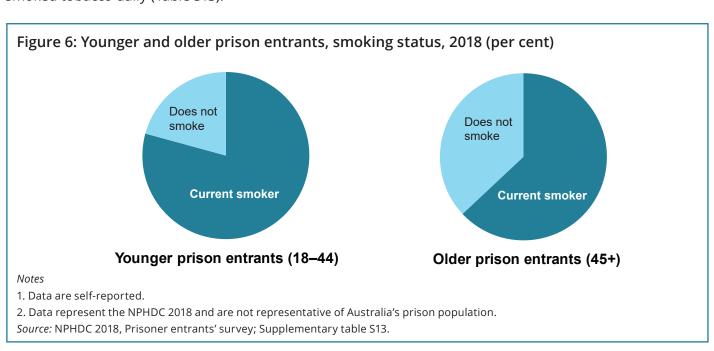
Tobacco use is the single most important preventable cause of ill health and death in Australia. Tobacco smoking is a major risk factor for many chronic physical conditions including coronary heart disease, stroke, diabetes, chronic obstructive pulmonary diseases and asthma, and multiple types of cancers (AIHW 2018a).

Three-quarters of prison entrants (75%) reported they currently smoked tobacco during the data collection period. The average age prison entrants reported they had smoked their first full cigarette was 14 (AIHW 2019b).

Older people entering prison were 1.8 times as likely as younger people to report not smoking tobacco (36% and 20%, respectively), including:

- 19% of older and 12% of younger prison entrants had never smoked.
- 17% of older and 8% of younger prison entrants were ex-smokers (Figure 6).

Younger people entering prison were 1.3 times as likely as older entrants to be current smokers at the time of the survey (78% and 62%, respectively), including 68% of younger and 60% of older prison entrants who smoked tobacco daily (Table S13).



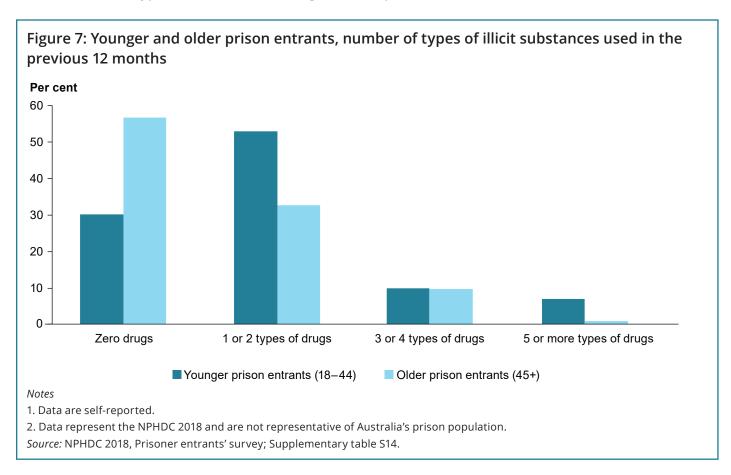
Substance use

Illicit substance use involves the use of illegal drugs, volatile substances and prescription drugs for non-medical purposes. It can contribute to a range of health and social concerns that affect people in and out of prison, including substance dependence, social and family disruption, and poorer long-term mental and physical health (AIHW 2019b, 2020).

Younger people entering prison were 1.6 times as likely as older people entering prison to have used illicit substances in the 12 months before entering prison. Around 70% of younger and 43% of older prison entrants reported using illicit substances during this time (Figure 7; Table S14).

Younger prison entrants were more likely to have used multiple types of illicit substances in the 12 months before prison. Among younger prison entrants, more than half (53%) reported using 1–2 types of substances and 1 in 6 used 3 or more types of substances. This compares to one-third of older prison entrants (33%) who reported using 1–2 types of substances.

Of those who reported using illicit substances, younger people entering prison used an average of 2.2 types of substances in the 12 months before entering prison. Older people entering prison on average used fewer, or 1.8 types of substances, during the same period (Table S15).



Methamphetamines, cannabis and analgesics or pain-killers were the most commonly used substances among prison entrants (Table S16).

Compared to older prison entrants, younger entrants were around—

- 2 times as likely to use methamphetamines (46% and 24%, respectively)
- 1.7 times as likely to use cannabis (43% and 26%, respectively).

Mental and physical health

In Australia, older people entering prison are known to have poorer self-assessed physical health and experience chronic physical health conditions to a greater degree when compared to younger prison entrants (AIHW 2019b; Kariminia et al. 2007).

Chronic physical health conditions tend to have long-lasting and persistent effects and are leading causes of illness, disability and death in Australia. Socioeconomic, lifestyle and biomedical factors can influence a person's likelihood of developing a chronic condition (AIHW 2019a). Older age amongst other factors increases the risk of an individual experiencing cardiovascular disease, cancer, arthritis and endocrine problems such as diabetes (AIHW 2016).

Mental health

Mental health is fundamental to emotional, psychological and social well-being, and affects individuals, families and the wider community.

Prison entrants with mental health conditions are more likely to experience alcohol and substance issues and poor physical and mental health conditions post-release (AIHW 2019b). These complex issues can affect their ability to successfully transition into the community (Butler et al. 2018).

Younger prison entrants (41%) were more likely to report ever having been diagnosed with a mental health disorder than older prison entrants (33%) (Table S17).

Despite this, overall, younger prison entrants (32%) were more likely than older prison entrants (23%) to report their self-assessed mental health as excellent or very good. Similar proportions rated their mental health as fair or poor (Table S18).

Physical health

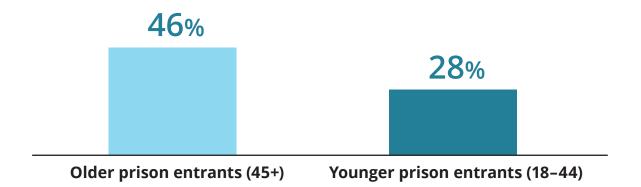
Older prison entrants were more likely to self-report having poor or fair physical health (35%) compared to younger entrants (22%). Younger entrants were more likely to self-assess their physical health as very good or excellent (36%) than older entrants (20%) (Table S19).

Female prison entrants were also more likely to self-rate their physical health as poor or fair (40%) compared to men (21%) (AIHW 2019). There were insufficient data to understand how older women's self-assessed physical health compares to older men's physical health.

Chronic physical health conditions

Almost 1 in 3 prison entrants (or 31%) reported being told they had at least 1 of 5 chronic conditions at some stage in their lives. These 5 chronic conditions were cardiovascular disease, diabetes, asthma, arthritis and cancer (Table S20).

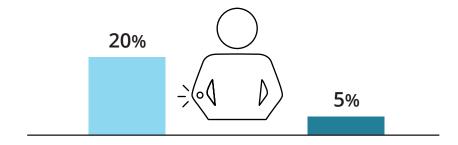
Older people entering prison were 1.7 times as likely as younger people to have ever been diagnosed with at least 1 of 5 chronic conditions* in their lives.



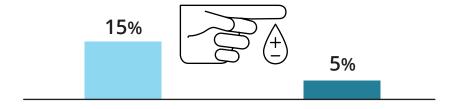
Compared to younger prison entrants, **older people** entering prison were:



3.7 times as likely to have ever been diagnosed with cardiovascular disease



3.9 times as likely to have ever been diagnosed with arthritis



3.1 times as likely to have ever been diagnosed with **diabetes**.

^{*} These 5 chronic conditions were cardiovascular disease, diabetes, asthma, arthritis and cancer.

Health-care services

This section uses data extracted from prison clinics to identify what health-care services were provided, the problems treated and what medications were dispensed in participating prison clinics during the data collection period.

Health services in prison

More than 1 in 4 people in custody (28%) attended the prison clinic during the 2-week data collection period (AIHW 2019b). Around 18,800 prison clinic visits were recorded by more than 8,200 prisoners during that time. That is, an average of 2.3 visits per person.

Prisoners attended these clinics for health-care related assessment, treatment or referrals or education and advice. Of those who attended the clinic, most prisoners visited the clinic a total of once (61%) or twice (19%) during the period (Table S21).

Most prisoners had a total of 1 (48%) or 2 problems managed (20%) during all visits. There was little difference between the number of problems managed for older prisoners compared to younger prisoners for all visits during the data collection period (Table S22).

Nurses (68%) were the most common health professional seen during the clinic visits followed by a general medical practitioner (14%) and a mental health nurse or worker (10%) (Table S23). For information on how prison clinic visits operate, and how they differ to clinic visits in the community, see *The health of Australia's prisoners 2018*.

People entering prison are routinely given an initial health assessment which provides clinicians with an indication of their health-care needs and whether further referral, assessment or treatment is required. General health assessments were conducted for 16% of all prison entrants during the data collection period, including 18% of older prisoners and 15% of younger prisoners (tables S24 and S25).

Older prisoners were more likely than younger prisoners, respectively, to visit the clinic for:

- medication or a vaccination (30% and 25%)
- pathology (17% and 13%)
- diabetes (13% and 5%)
- cardiovascular disease (8% and 3%).

In comparison, younger prisoners were more likely than older prisoners, respectively, to visit the clinic for:

- psychological or mental health condition (20% and 11%)
- alcohol and substance use (8% and 3%)
- musculoskeletal injury (8% and 6%).

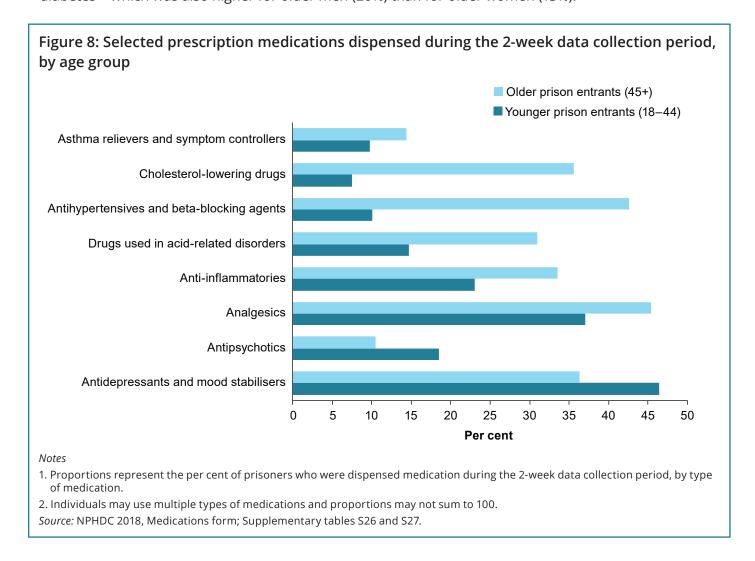
Medications dispensed in prison

Around 22,000 medications were dispensed to nearly 8,300 prisoners during the 2-week data collection period—that is, an average of 3.5 medications dispensed to older prisoners and 2.3 to younger prisoners (tables S26, S27 and S28).

Older prisoners were more likely to be dispensed medications for chronic conditions typically associated with age, such as cardiovascular disease and diabetes:

• just over 2 in 5 (43%) older prisoners received antihypertensive or beta-blocking medications—this was higher for older men (45%) than older women (22%) (Figure 8)

- almost 2 in 5 (36%) older prisoners received cholesterol-lowering drugs—which was also higher for older men (37%) than older women (16%)
- 1 in 5 (20%) older prisoners and 6% of younger prisoners were dispensed medications used to treat diabetes—which was also higher for older men (20%) than for older women (13%).



Younger prisoners, however, were more likely to be prescribed medications typically prescribed for mental health conditions including:

- antidepressants or mood stabilisers—including almost half (46%) of younger prisoners and over one-third (36%) of older prisoners
- antipsychotic medications—including around 1 in 5 (19%) younger prisoners and just over 1 in 9 (11%) of older prisoners.

In combination with higher rates of self-reported mental health diagnoses, this provides further indication of younger prisoners presenting for treatment of mental health conditions, including anxiety and depression, while in prison.

Future directions

Older prisoners are a diverse group with complex health-care needs and whose population have a growing presence in Australia's prisons. Due to their socioeconomic backgrounds and the risky behaviours they engage with throughout life, prisoners tend to show signs of ageing at a younger age compared to people in the community.

Older people in prison have experienced different social, economic and lifestyle factors compared to younger people. As such, some older people have entered prison for the first time at a later age and have different experiences in and outside of prison. The growing presence of older people in Australia's prison facilities highlights the need to understand more about their interaction with the criminal justice system and their health-care needs.

Future research is needed to understand how older prisoners' health and wellbeing needs compare with older people in the community, particularly those without experiences of incarceration. Of particular importance is the need to enhance data about under-represented groups, especially older women and older Indigenous Australians, and understand more about their health and wellbeing needs when transitioning back into the community.

Forthcoming iterations of the NPHDC could enhance the data's potential for statistical linkage with other criminal justice and health-care data collections. This would provide better data about participants' experiences of imprisonment and how these experiences influence the range of complex health conditions older people experience in prison and upon re-entry into the community.

More information

More information on the methods used in this report, *Health and ageing of Australia's prisoners 2018*, can be found online https://www.aihw.gov.au/reports/prisoners/health-and-ageing-of-australias-prisoners-2018>. The Resources section contains the Supplementary tables and Appendix, including Technical notes and references.

Comprehensive results from the National Prisoner Health Data Collection 2018 are available online at *The health of Australia's prisoners 2018*.





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