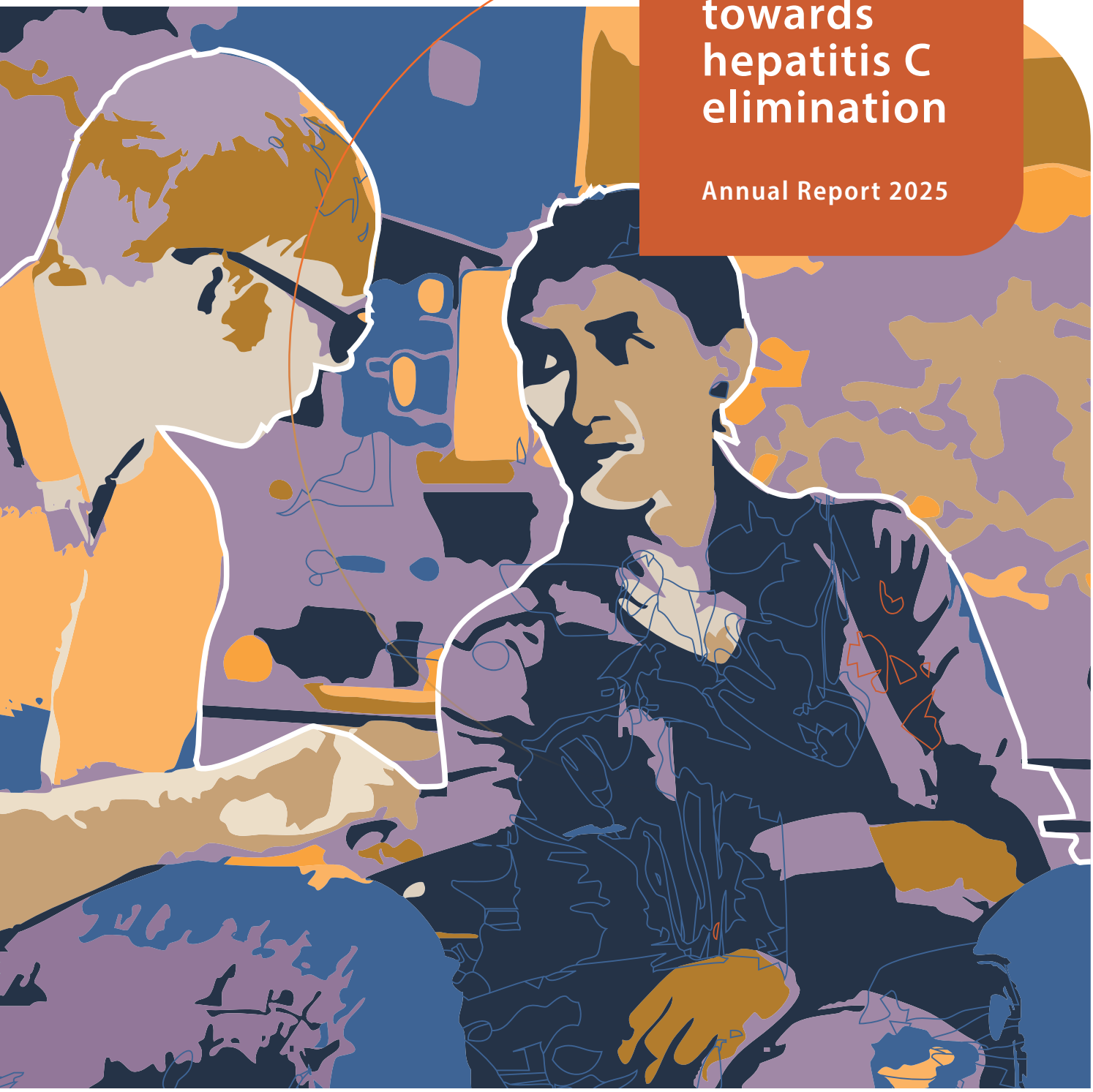
Australia's progress towards hepatitis C elimination

Annual Report 2025



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Suggested citation: Burnet Institute and Kirby Institute. Australia's progress towards hepatitis C elimination: annual report 2025. Melbourne: Burnet Institute; 2025.

ISBN: 978-0-646-72967-1
DOI: https://doi.org/10.26190/unsworks/31756

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Acknowledgement of Country

The authors acknowledge the Traditional Owners of the Lands on which this report was produced, including the Boon Wurrung people of the Kulin nations (where the Burnet Institute is located) and the Gadigal people of the Eora nation (where the Kirby Institute is located). We pay respect to all Aboriginal and Torres Strait Islander people and recognise their cultural, spiritual, and educational practices, their ongoing connection to Lands, Waters, and Communities, and acknowledge that sovereignty was never ceded.

Acknowledgement of people with living and lived experience

The authors acknowledge all the people who have lost their lives to hepatitis C and liver disease. We acknowledge, thank, and recognise all people with living and lived experience of injecting drug use and hepatitis C, that have contributed to this report and their crucial work to reduce harm to their community. Real people and real lives give meaning to the work that progresses us towards hepatitis C elimination, and in fighting the negative effects of stigma and criminalisation.

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Contents

Preface

Background

Hepatitis C is a significant public health issue in Australia. Because hepatitis C virus affects the liver, people living with hepatitis C have increased risk of poor health outcomes including liver disease and liver cancer.[1] Importantly, there is a highly tolerable and effective treatment for hepatitis C,[2,3] available through public subsidy since March 2016. At the end of 2015, an estimated 163 000* people were living with hepatitis C. Between 2016 and the end of 2024, an estimated 111 000 people started treatment for the first time. Current national estimates indicate that 66% of people eligible for treatment and living with hepatitis C have initiated therapy for the first time since 2015. But despite considerable achievements in the response to hepatitis C, at the end of 2024, around 63 000* people were estimated to be living with hepatitis C.[4] In Australia, hepatitis C disproportionately affects people who have experience of injecting drug use. Also, Aboriginal and Torres Strait Islander people are disproportionately affected by hepatitis C, accounting for 20% of all hepatitis C notifications in 2023, equivalent to a notification rate six times that of non-Indigenous people.[5] Given the overrepresentation of people who inject drugs and Aboriginal and Torres Strait Islander people among the incarcerated population, people in prison are another population disproportionately affected by hepatitis C. The estimated prevalence of hepatitis C was 8% among people in prison in Australia in 2023.[6]

Australia is working towards eliminating hepatitis C as a public health threat by 2030. This elimination goal is in line with global targets set by the World Health Organization[7] and targets included in Australia's National Hepatitis C Strategy 2018–2022.[8] In 2016, the World Health Organization defined relative elimination goals for hepatitis C including an 80% reduction in incidence (new infection rate) and 65% reduction in mortality by 2030. The most recent Global Health Sector Strategies (2022–2030) include absolute impact goals of a reduction in new infections to annually ≤5 per 100 000 persons and ≤2 per 100 people who inject drugs. Plus, a reduction in the number of people dying from hepatitis C per year to ≤2 per 100 000 persons. Also, 2030 coverage goals include 90% of people living with hepatitis C diagnosed and 80% cured.[7]

Purpose

This is the seventh national report on progress towards hepatitis C elimination in Australia. Its purpose is to bring together data from across the sector, providing an integrated overview on progress towards eliminating hepatitis C in Australia. Much of these data are otherwise available in separate sources, making this report a unique resource for consolidating national-level data. The report focusses on tracking key indicators including new infections, testing and treatment uptake, and morbidity, while broadening the scope to include measures of primary prevention, stigma and discrimination, geographical equity, and mathematical models and projections. Importantly, the report also highlights gaps in existing data. By bringing together existing data sources in the one place, the report strengthens national efforts to track the response to hepatitis C.

Reflections

Alongside the quantitative indicators presented in this report, it is important to reflect on the social, structural, and legal frameworks that criminalise drug use and stigmatise people who use drugs and people living with hepatitis C. Without meaningful change, structural barriers will continue to hinder progress towards hepatitis C elimination. Further, data are not available for all priority settings and populations†. There are well recognised gaps, particularly for Aboriginal and Torres Strait Islander people and action is needed to improve data completeness. The visibility of all priority populations in data is essential for monitoring progress and achieving equitable outcomes. The elimination of hepatitis C can be achieved through concerted efforts to provide equitable access to prevention, testing and treatment, and care for all populations. This report aims to inform policy, practice, and research by providing a comprehensive synthesis of national data, identify knowledge gaps, highlight challenges and opportunities, and support Australia's ongoing efforts towards hepatitis C elimination.

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* Estimates of people living with hepatitis C at the end of 2015 and 2024 were derived as part of the national hepatitis C diagnosis and care cascade (Chapter Three).[4,9,10]

† The Fifth National Hepatitis C Strategy 2018–2022 identifies six priority populations: people living with hepatitis C, people who inject drugs and/or accessing drug treatment programs, people who previously injected drugs, people in custodial settings, Aboriginal and Torres Strait Islander people, and people from culturally and linguistically diverse backgrounds.[8]

Acronyms

BBV	blood borne virus
CI	confidence interval
DAA	direct-acting antiviral
GBM	gay, bisexual, and other men who have sex with men
HCV	hepatitis C virus
NSP	needle and syringe program
PBS	Pharmaceutical Benefits Scheme
RNA	ribonucleic acid
STI	sexually transmissible infection
SVR	sustained virological response

Figures

Executive Summary

This report provides a comprehensive overview of Australia's progress towards hepatitis C elimination, synthesising national data from surveillance, research, implementation programs, clinical, and community sources. By consolidating information that is otherwise dispersed across multiple datasets, this seventh national report offers a unique, integrated perspective on trends in new infections, testing and diagnosis, treatment uptake and cascades of care, morbidity, stigma and discrimination, primary prevention, geographical equity, and modelling and projections.

Key findings include:

New Infections: Hepatitis C notifications and incidence rates have continued to decline. In 2024, there were 112 notifications among men aged 15–19, 508 among men aged 20–24, 40 among women aged 15–19, and 110 among women aged 20–24. The number of notifications has markedly declined among women since 2017. The incidence of hepatitis C at sentinel primary care clinics declined from 2017 to 0.16 per 100 person-years in 2024.

Testing and Diagnosis: Testing rates remain high in some settings but have declined or plateaued in others. HCV RNA prevalence has substantially declined among people attending needle and syringe services.

Treatment uptake: In 2024, 5 238 people initiated direct-acting antiviral (DAA) treatment (first treatment). Also in 2024, 3 026 retreatment courses were initiated. The cumulative total number of treatment initiations from 2016 to 2024 was 129 233, which included 18 049 retreatments, due to non-response to initial therapy or post-treatment reinfection. Prison settings represented 41% of all treatment initiations in 2024. At the end of 2024, an estimated 62 880 people remained living with hepatitis C.

Morbidity: Liver-related morbidity, including hepatitis C-related liver transplants, continues to decline, with five hepatitis C cirrhosis-related transplants in 2024, reflecting the impact of improved access to curative therapies.

Stigma and Discrimination: Experiences of stigma and discrimination remain a barrier to care for many, highlighting the need for continued efforts to address social and legal determinants of health. In a national sample of the Australian public, approximately one-third of the participants reported that they would behave negatively towards other people because of their hepatitis C. Among this same sample, two-thirds reported that they would behave negatively towards other people because of their injecting drug use.

Primary Prevention: Needle and syringe distribution remains stable, supporting ongoing prevention efforts, though risk behaviours such as needle and syringe sharing persist in some communities. In 2023, approximately 46 million needle and syringe units were distributed through public sector programs, supporting ongoing prevention efforts.

Health Equity: There is considerable regional variation in treatment uptake, ranging from areas being 40% above to 60% below the national average, highlighting the need for tailored responses at the local level.

Modelling and Projections: Mathematical modelling indicates that Australia is on track for substantial reductions in hepatitis C prevalence and incidence, and the treatment goal of 80% of eligible people treated would be met by 2030 under the pessimistic scenario of approximately 4 000 people treated annually. But, the goal of 65% reduction in deaths would not be met by 2030, therefore sustained efforts are needed to maintain progress and address remaining gaps. Modelling by the Burnet Institute was used to project trends from 2025 to 2030, complementing existing knowledge by estimating the distribution of hepatitis C prevalence across different risk groups. The proportion of people who inject drugs among those living with hepatitis C was projected to decline from 23% (2015) to 6% (2030).

Australia's progress towards hepatitis C elimination 2025

Since 2016

- Over ~129,000 **treatment courses** have been initiated, including ~111,000 **first-time treatments** and ~18,000 **retreatments**
- New infections have declined, more so among women
- Fewer people need liver transplants for hepatitis C-related cirrhosis

In 2024

- **Testing and treatment numbers stabilised,** with ~5,200 people **treated**
- **Stigma remains a major barrier:** 63% of the public and 53% of healthcare workers reported negative attitudes toward people who inject drugs
- And around 10 to 20% of people who inject drugs in the community said they borrowed needles or syringes
- There remain ~63,000 people living with hepatitis C

To eliminate hepatitis C by 2030

We need to…

… end stigma and discrimination against people living with hepatitis C

… expand testing and help people stay in care, to sustain at least 4,000 people treated each year

… strengthen prevention to stop new infections

Modelling shows elimination is achievable under current trends, but **continued investment and tailored efforts** are essential to maintain momentum and close remaining gaps

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One

Newly acquired hepatitis C infections

Measuring the rate of new hepatitis C infections helps monitor strategies that aim to prevent ongoing transmission, including primary and secondary prevention (testing and treatment strategies).

Measuring changes in the rate of new infections of hepatitis C can be monitored through the number of notifications of hepatitis C among people aged 15–24 years.[4,11] These notifications may reflect broader incident infections because younger people are likely to have initiated injecting drug use relatively recently.[12]

Hepatitis C incidence measurement in Australia is also possible using data collated by the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Sexually Transmissible Infections (STI) and Blood Borne Viruses (BBV; ACCESS),[13] which links individuals' diagnostic testing data over time.[14,15]

Progress on reducing new infections

National Notifiable Diseases Surveillance System

- Among men and women aged 15–24 years there were 770 hepatitis C notifications in 2024 which is fewer than 2023 (N=869) but higher than 2022 (N=677). There was a marked decline in the annual number of notifications among women 20–24 years, halving between 2017 and 2024. There were declines among men, more so among those aged 20–24 years (Figure 1).

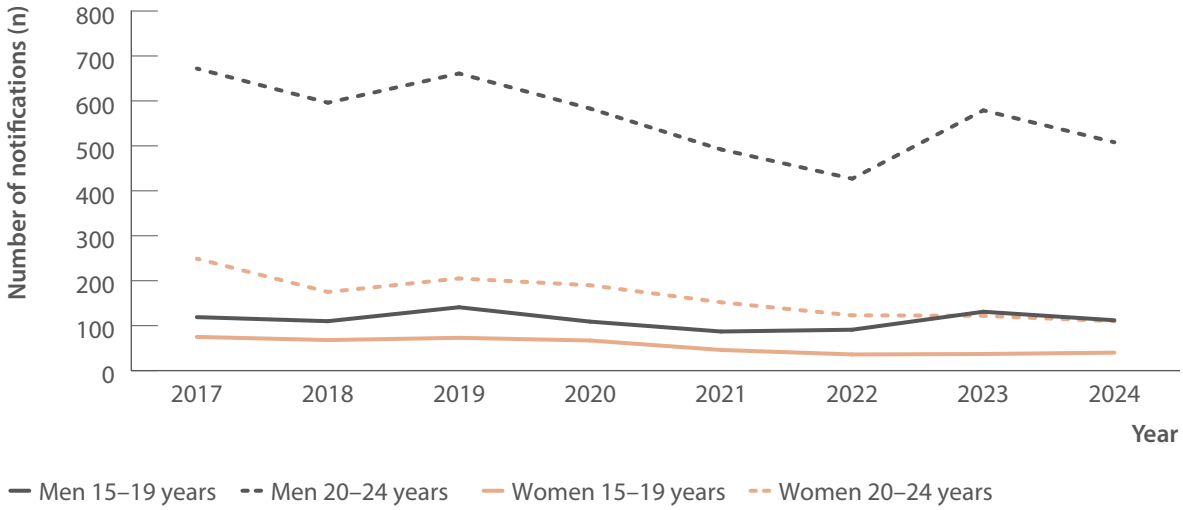
The monitoring of hepatitis C notifications among people aged 15–24 years as a surrogate measure for hepatitis C incidence needs to consider unknown levels of testing and their influence on trends. The increase in notifications among men in 2023 and 2024, compared to 2022, is likely due to targeted testing programs in specific settings in recent years, particularly prisons.

ACCESS

- At ACCESS primary care clinics, the rate of new infections declined from 0.42 per 100 person-years in 2017 to 0.16 per 100 person-years in 2024 (Figure 2).
- Among gay, bisexual, and other men who have sex with men (GBM) living with HIV tested at ACCESS GBM and sexual health clinics the rate of new infections has remained low at 0.34 per 100 person-years in 2024 (Figure 3).

Monitoring new hepatitis C infections

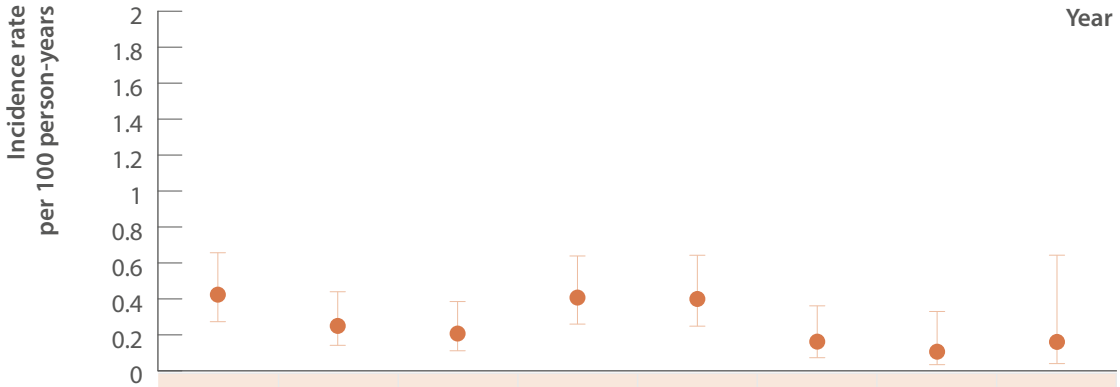
Figure 1. Number of hepatitis C notifications by age group and gender, 2017–2024



Source: Australian National Notifiable Diseases Surveillance System.[4,11]

Notes: Cases other than newly acquired were assigned as unspecified.

Figure 2. Incidence of primary hepatitis C infection among individuals tested at ACCESS primary care clinics, ACCESS, 2017–2024



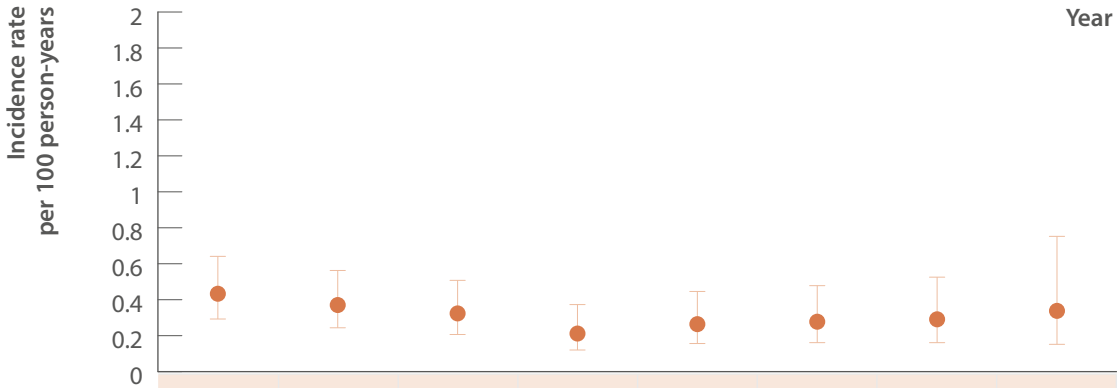
	2017	2018	2019	2020	2021	2022	2023	2024
Incident infections	20	12	10	19	17	6	3	2
Person-years	4 721	4 804	4 823	4 663	4 254	3 695	2 818	1 243

Observed incidence rate — 95% CI

Source: ACCESS.[13]

Notes: Analysis includes N=14 998 individuals and 24 818 tests (2009–2024) with data from 2017 shown for brevity. Analysis includes 18 sites: 16 in Victoria (VIC), one in Western Australia (WA), and one in Queensland (QLD). Primary care clinics see high caseloads of people at risk of hepatitis C and provide both specialist services to current or former people who inject drugs as well as general health services. First incident infection only included in analysis. Incident infection date was assigned as the midpoint between the positive HCV antibody or HCV RNA test date and previous HCV antibody negative test date. ACCESS collates data from January 2009. Individuals included tested HCV antibody negative on their first test observed and had at least one follow-up test (HCV antibody or HCV RNA or both) on or before 31 December 2024. Individuals were 15 years or older. CI: confidence interval.

Figure 3. Incidence of primary hepatitis C infection among GBM living with HIV tested at ACCESS GBM or sexual health clinics, ACCESS, 2017–2024



	2017	2018	2019	2020	2021	2022	2023	2024
Incident infections	25	22	19	12	14	13	11	6
Person-years	5 771	5 939	5 868	5 665	5 301	4 682	3 780	1 775

● Observed incidence rate — 95% CI

Source: ACCESS.[13]

Notes: Analysis includes N=9 507 individuals and 69 679 tests (2009–2024) with data from 2017 shown for brevity. Analysis includes 23 sites: 12 in New South Wales (NSW), four in VIC, two in South Australia (SA), two in WA, two in QLD, and one in Tasmania (TAS). GBM were classed as being HIV-positive for the entire calendar year of their diagnosis and were 15 years or older. First incident infection only included in analysis. Incident infection date was assigned as the midpoint between the positive HCV antibody or HCV RNA test date and previous HCV antibody negative test date. ACCESS collates data from January 2009. Individuals included tested HCV antibody negative on their first test observed and had at least one follow-up test (HCV antibody or HCV RNA or both) on or before 31 December 2024. CI: confidence interval.

Two

Testing and diagnosis

Eliminating hepatitis C in Australia relies on preventing new infections and finding people living with chronic hepatitis C through diagnostic testing and facilitating appropriate care and treatment. More recently, there has been expanded access to new testing modalities including a NSW program implementing dried blood spot testing and a national finger-stick point-of-care testing program. Both programs have been implemented in community and prison settings, with the aim of increasing the uptake of testing and removing venepuncture-related barriers to testing and diagnosis. Also, to streamline venepuncture-based testing for individuals, guidelines published in 2022 recommend clinicians request reflex testing for hepatitis C, meaning a laboratory proceeds to an HCV RNA test if HCV antibodies are detected.[16,17]

ACCESS collates data on consultations, HCV antibody and HCV RNA tests conducted, and test outcomes from primary care, community health, and sexual health services. ACCESS sites offer general healthcare and specialist services for people at risk of hepatitis C, including people currently or have previously injected drugs and GBM living with HIV.

The Australian Needle Syringe Program Survey is a sentinel surveillance system conducted annually at participating Needle Syringe Program (NSP) sites across Australia (N=1 760 participants across 54 NSP sites in 2024). The Australian Needle Syringe Program Survey asks about a range of risk and health-seeking behaviours, including hepatitis C testing. Respondents are invited to provide a dried blood spot sample for HCV antibody and HCV RNA testing. The proportion of respondents undergoing dried blood spot for HCV RNA testing has increased over time, with approximately 80% of respondents tested for HCV RNA in all years since 2019.[18]

Population-level monitoring of testing related to diagnosis of current hepatitis C infection can occur through the publicly available Medical Benefits Scheme claims dataset, when item numbers are restricted to 69499 and 69500. These item numbers are specifically used for testing to detect HCV RNA and not used for tests associated with treatment monitoring. Medical Benefits Scheme data can also be stratified by age groups and sex.[19]

The National Prisons Hepatitis Network[20] collates data from jurisdictional Justice Health services and the Australian HCV Point-of-Care Testing Program[21] and provides the total number of hepatitis C tests and the number of individuals who received testing for hepatitis C in 2024, where available. There were 102 prisons across the network in 2024. Ninety- eight prisons from all jurisdictions provided the total number of HCV antibody and HCV RNA tests conducted (venepuncture and point-of-care testing). Forty-five prisons in NSW, Australian Capital Territory (ACT), TAS, and the Northern Territory (NT), provided the number of individuals tested for HCV antibodies or HCV RNA (venepuncture and point-of-care testing), as well as test positivity. Testing in prisons is conducted both as standard of care (predominantly venepuncture testing) and high intensity testing and treatment campaigns (predominantly point-of-care HCV antibody and/or HCV RNA testing). Testing algorithms may vary between jurisdictions and testing modalities; for example, when an individual self-reports, or has a record of, a previous hepatitis C infection, they may be tested only for HCV RNA.

Specific studies can provide estimates of testing and diagnosis among priority populations or within specific settings. The Australian HCV Point-of-Care Testing Program has implemented point-of-care HCV antibody and HCV RNA testing within specific settings since 2022 and is ongoing. Whilst finalised data were unavailable for this report, data presented here should be interpreted in the context that additional testing conducted by this program is occurring, including in community (including community corrections) and prison settings.[21]

The NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot was implemented in 2017 across online, community, and prison sites in NSW and is ongoing. The pilot is an interventional cohort study and sites were identified and enrolled and then provided with dried blood spot testing kits.[22] Participants were either enrolled online and completed self-collection, or sites enrolled patients and provided assisted collection. Testing at sites can be conducted as part of routine hepatitis C clinical care or as part of an enhanced testing activity. The pilot provides data on the annual number of tests conducted and proportion of tests that were reactive to HCV RNA, by gender, and setting type (community settings and Justice Health and Forensic Mental Health Network (Justice Health)). Dried blood spot tests that are reactive to HCV RNA indicate possible hepatitis C infection and confirmatory testing is required to complete a person's diagnosis.

Progress on diagnosis of hepatitis C infection

ACCESS

Test uptake

- Less than one in ten people attending a primary care clinic in 2024 received any hepatitis C testing; test uptake was 8% (8 942/110 609) in 2024 (Figure 4).
- Almost half of GBM living with HIV were tested; test uptake was 46% (4 122/8 986) in 2024 (Figure 5).
- One in ten people ever prescribed opioid agonist therapy received hepatitis C testing in 2024; test uptake was 10% (810/7 913) in 2024 (Figure 6).
- One in five Aboriginal and Torres Strait Islander people attending a primary care or sexual health clinic received a hepatitis C test; test uptake was 21% (626/2 921) in 2024 (Figure 7).

Progress on diagnosis of hepatitis C infection (continued)

ACCESS

Test positivity

- The number of people tested for HCV antibodies in primary care clinics increased from 2020 through to 2024.
- HCV antibody positivity among men has almost halved between 2017 (14%, 359/2 625) and 2024 (8%, 271/3 611) (Figure 8).
- HCV antibody positivity remained stable at 1% (41/3 726) in 2024 among GBM living with HIV (Figure 9).
- More than one in three people who have ever been prescribed opioid agonist therapy were HCV antibody positive in 2024 (men: 37%, 103/277; women: 39%, 50/128) (Figure 10).
- HCV antibody positivity was 4% (15/383) among Aboriginal and Torres Strait Islander men and 3% (5/182) among Aboriginal and Torres Strait Islander women in 2024 (Figure 11).

Australian Needle Syringe Program Survey

- In 2024, the proportion of respondents tested for hepatitis C in the past year varied between jurisdictions with the lowest being 32% and the highest 61% (Figure 12).
- The same proportion of men and women (48%) reported testing for hepatitis C in the past year (Figure 13).
- Among respondents tested for HCV RNA, the proportion positive continued to decline over time, to 9% (98/1 084) of men and 7% (37/560) of women in 2024 (Figure 14).

Medicare Statistics

- There has been some recovery in the number of Medicare claims for HCV RNA tests related to hepatitis C diagnosis since 2021 to 14 182 claims in 2024, an increase from 13 222 in 2022 and 11 674 claims in 2021 (Figure 15).
- In 2024 claims for HCV RNA tests, more men were tested than women; most tests among men occurred in those aged 45–54 years and among women, most tests occurred in those aged 35–44 years (Figure 16).

Progress on diagnosis of hepatitis C infection (continued)

National Prisons Hepatitis Network

Total tests

- In 2024, across 98 prisons in all jurisdictions, a total of 31 460 HCV antibody tests and 19 997 HCV RNA tests were conducted.

Individuals tested

- In 2024, across 45 prisons, among 7 998 individuals HCV antibody tested at least once in NSW, ACT, TAS, and NT, 14% (1 144/7 998) were HCV antibody positive. HCV antibody test positivity ranged from 2 to 25% between these jurisdictions.
- Among 4 333 individuals who were tested for HCV RNA at least once in NSW, ACT, TAS, and NT, 26% (1 142/4 333) were HCV RNA positive. HCV RNA test positivity ranged from 7 to 28% between these jurisdictions.

It is important not to interpret HCV RNA test positivity as prevalence, since testing may be tailored, rather than universal; testing for HCV RNA may occur following a positive HCV antibody test or based on self-report of hepatitis C infection history.

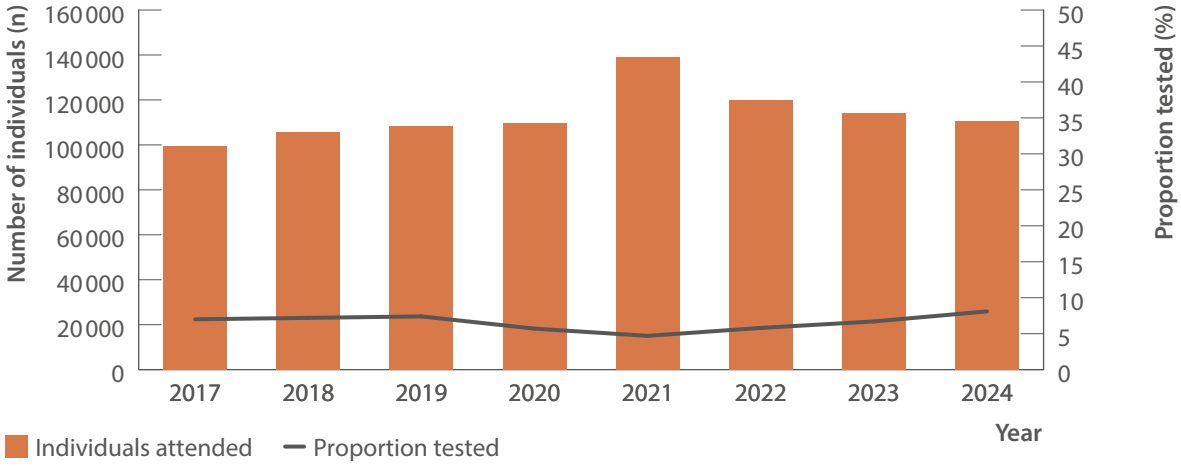
NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot

Test uptake and HCV RNA reactivity

- Between 2019 and 2024, 7 965 dried blood spot tests have been recorded in Justice Health settings and 18 276 in community settings (Figure 17).
- In Justice Health settings, the number of tests varied between 2019 and 2024, declining to 437 in 2024. Each year, more men than women were tested and a higher proportion of tests among men were reactive compared to women; in 2024 13% (53/408) of tests among men were reactive compared to 7% (2/29) among women (Figure 17).
- In community settings, the number of tests increased each year, to 4 936 tests in 2024; the proportion of tests reactive declined year-on-year. Each year, more men than women were tested and a higher proportion of tests among men were reactive compared to women; in 2024, 8% (264/3 342) of tests among men were reactive compared to 5% (79/1 563) among women (Figure 17).

Monitoring hepatitis C testing

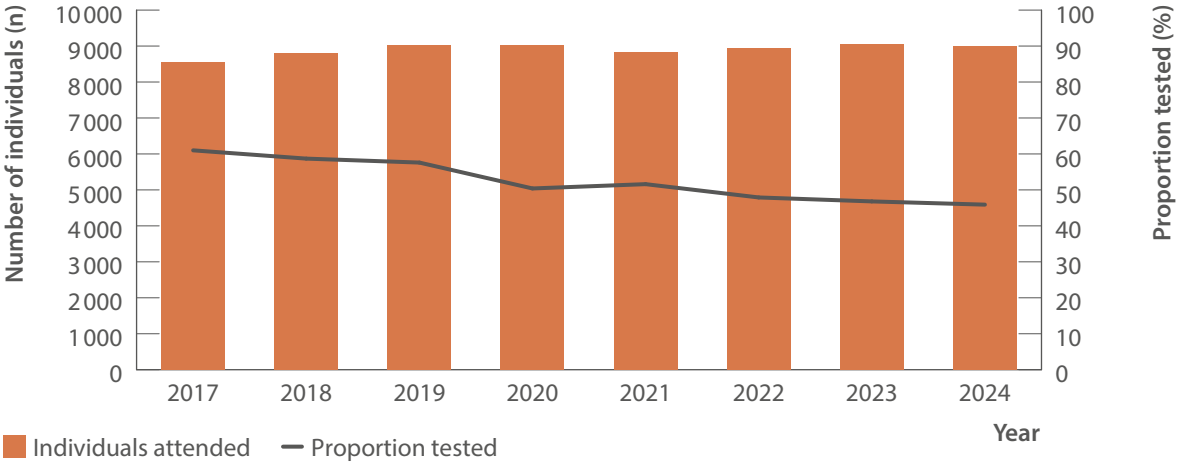
Figure 4. Number of individuals attending ACCESS primary care clinics and proportion tested for HCV (HCV antibody only or HCV antibody and RNA or HCV RNA only), ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 18 sites: 16 in VIC, one in WA, and one in QLD. Primary care clinics see high caseloads of people at risk of hepatitis C and provide both specialist services to current and former people who inject drugs as well as general health services. Clinic attendances included in-person and telehealth consultations. Individuals were 15 years or older and contributed one consultation and one test per year.

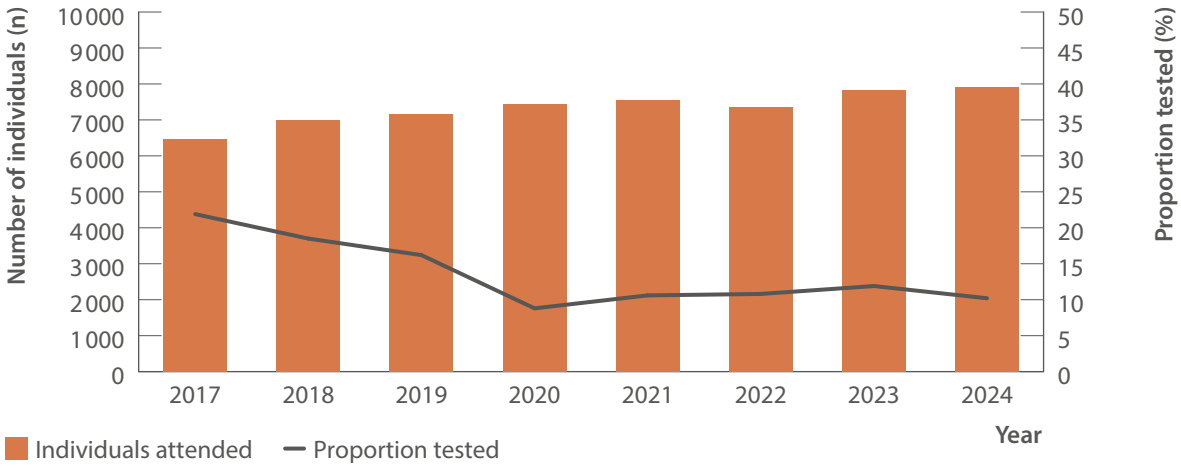
Figure 5. Number of GBM living with HIV attending ACCESS GBM or sexual health clinics and proportion tested for HCV (HCV antibody only or HCV antibody and RNA or HCV RNA only), ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 23 sites: 12 in NSW, four in VIC, two in SA, two in WA, two in QLD, and one in TAS. Clinic attendances included in-person and telehealth consultations. GBM were classed as being HIV-positive for the entire calendar year of their diagnosis, were 15 years or older, and contributed one consultation and one test per year.

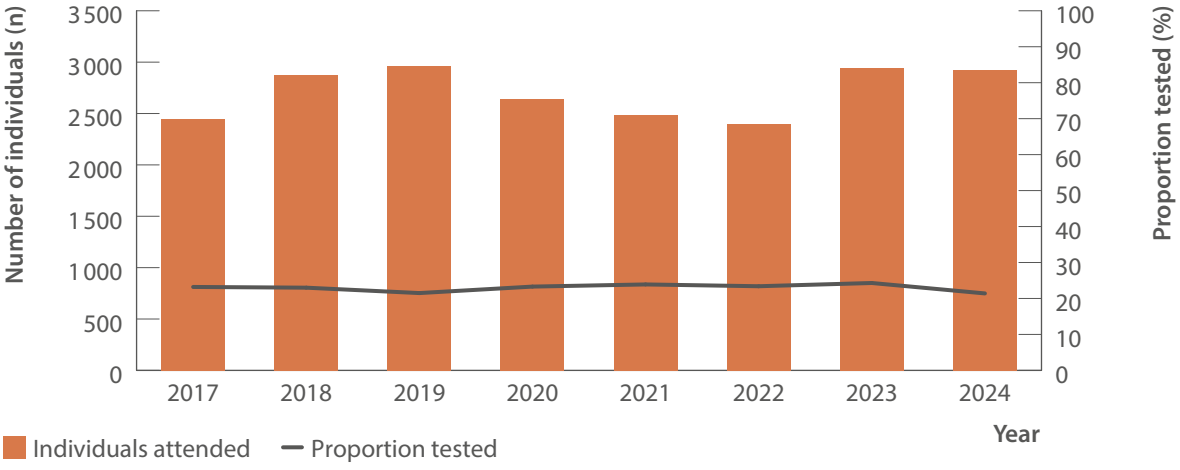
Figure 6. Number of individuals ever prescribed opioid agonist therapy attending ACCESS primary care clinics and proportion tested for HCV (HCV antibody only or HCV antibody and RNA or HCV RNA only), ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 18 sites: 16 in VIC, one in WA, and one in QLD. Primary care clinics have high caseloads of people at risk of hepatitis C and provide both specialist services to current and former people who inject drugs as well as general health services. Clinic attendances included in-person and telehealth consultations. Individuals were 15 years or older, had at least one electronic medical record of a prescription for opioid agonist therapy between January 2009 and December 2024, and contributed one consultation and one test per year.

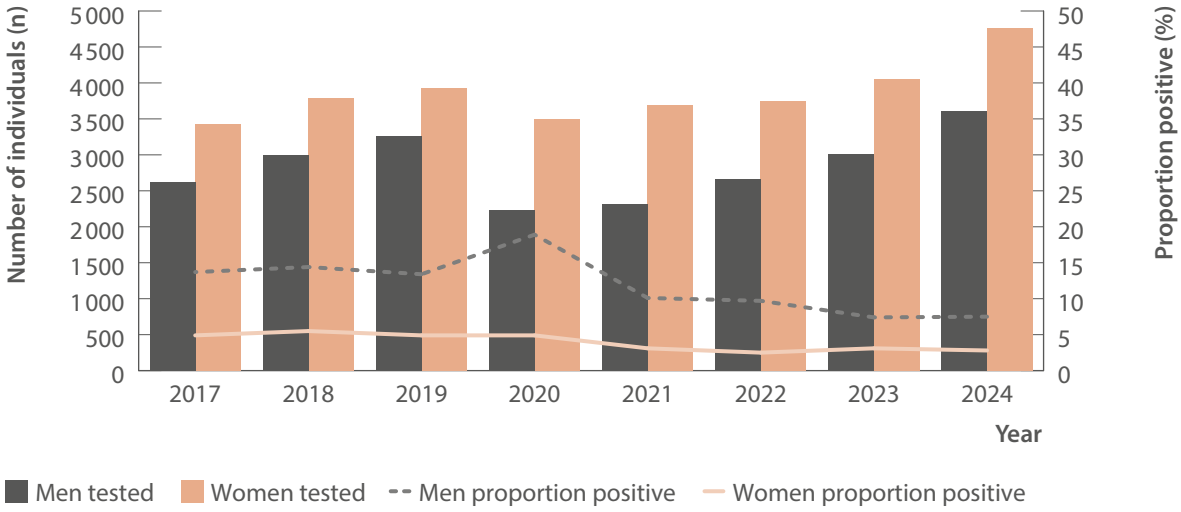
Figure 7. Number of Aboriginal and/or Torres Strait Islander people attending ACCESS sexual health or primary care clinics and proportion tested for HCV (HCV antibody only or HCV antibody and RNA or HCV RNA only), ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 19 sites: seven in NSW, six in VIC, three in QLD, two in WA and one in SA. Clinic attendances included in-person and telehealth consultations. Individuals were 15 years or older and contributed one consultation and one test per year. Overall, of unique individuals who attended included clinics 2014–2024 for a consultation (N=538 044), 3% of people had no Aboriginal or Torres Strait Islander status recorded (missing), 7% were recorded as 'not stated', 87% were neither Aboriginal nor Torres Strait Islander people, and 3% were Aboriginal and Torres Strait Islander people. Two clinics included in this analysis are primary care clinics specialising in the health of GBM, so some individuals presented in this data may also be presented in ACCESS data relating to GBM.

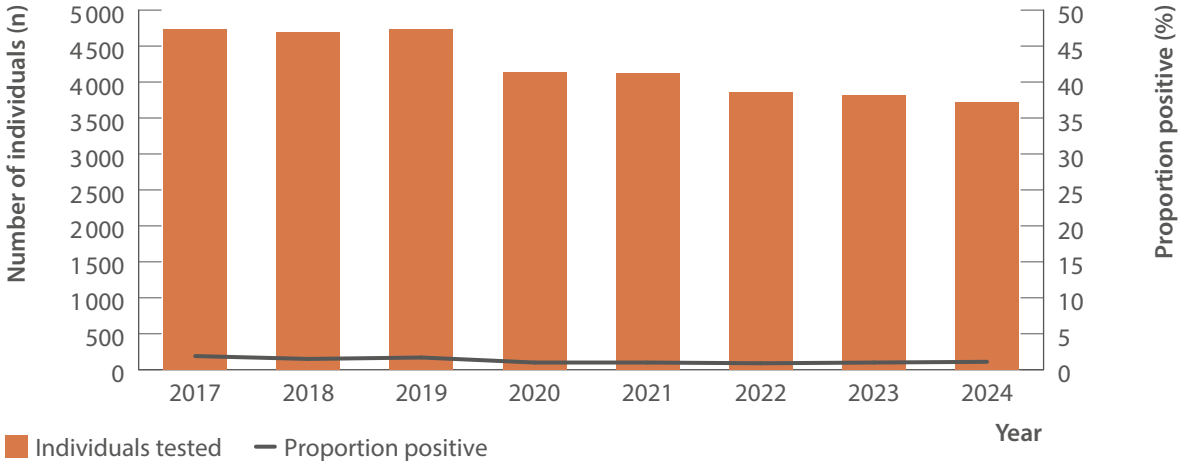
Figure 8. Number of individuals tested for HCV antibody at ACCESS primary care clinics and proportion of HCV antibody tests positive by gender, ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 18 sites: 16 in VIC, one in WA, and one in QLD. Primary care clinics have high caseloads of people at risk of hepatitis C and provide both specialist services to current and former people who inject drugs as well as general health services. Individuals were 15 years or older and contributed one test per year. Individuals recorded as a gender other than man or woman were not reported due to small sample size. Individuals included either had no previous HCV antibody test recorded in ACCESS since 2009 or had previously tested HCV antibody negative. Individual's HCV antibody tests after an HCV antibody positive test being observed were excluded from analysis.

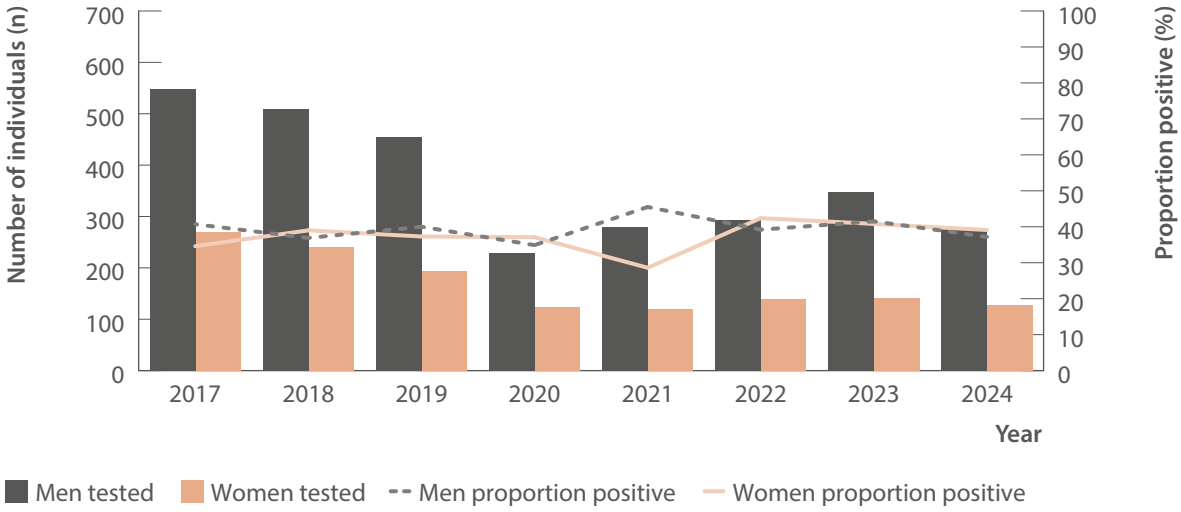
Figure 9. Number of GBM living with HIV tested for HCV antibody at ACCESS GBM or sexual health clinics and proportion of HCV antibody tests positive, ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 23 sites: 12 in NSW, four in VIC, two in SA, two in WA, two in QLD, and one in TAS. GBM were classed as being HIV-positive for the entire calendar year of their diagnosis, were 15 years or older, and contributed one test per year. Individuals included either had no previous HCV antibody test recorded in ACCESS since 2009 or had previously tested HCV antibody negative. Individual's HCV antibody tests after an HCV antibody positive test being observed were excluded from analysis.

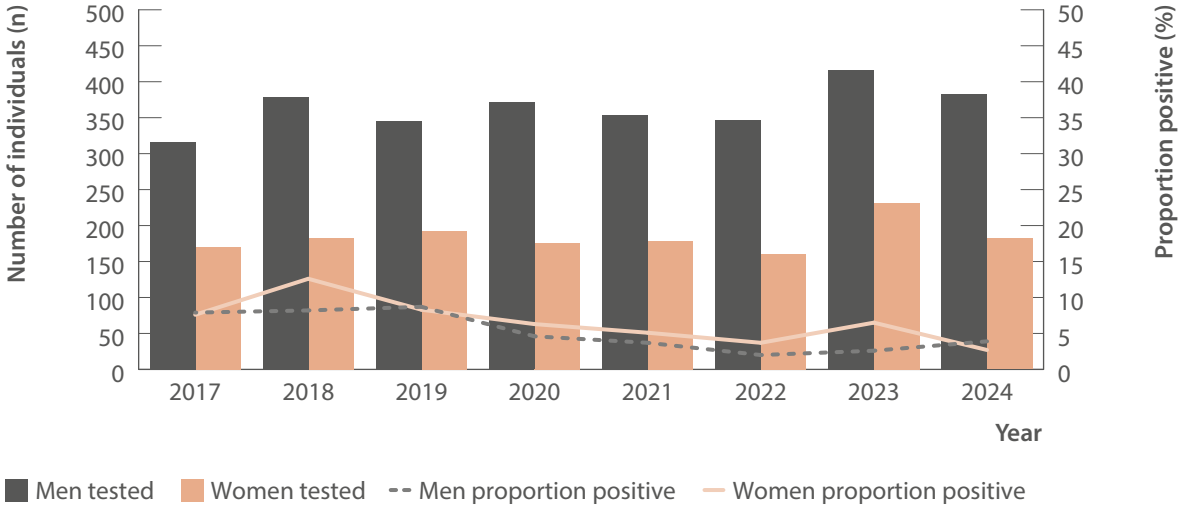
Figure 10. Number of individuals ever prescribed opioid agonist therapy tested for HCV antibody at ACCESS primary care clinics and proportion of HCV antibody tests positive by gender, ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 18 sites: 16 in VIC, one in WA, and one in QLD. Primary care clinics have high caseloads of people at risk of hepatitis C and provide both specialist services to current and former people who inject drugs as well as general health services. Individuals were 15 years or older, had at least one electronic medical record of a prescription for opioid agonist therapy between January 2009 and December 2024, and contributed one test per year. Individuals recorded as a gender other than man or woman were not reported due to small sample size. Individuals included either had no previous HCV antibody test recorded in ACCESS since 2009 or had previously tested HCV antibody negative. Individual's HCV antibody tests after an HCV antibody positive test being observed were excluded from analysis.

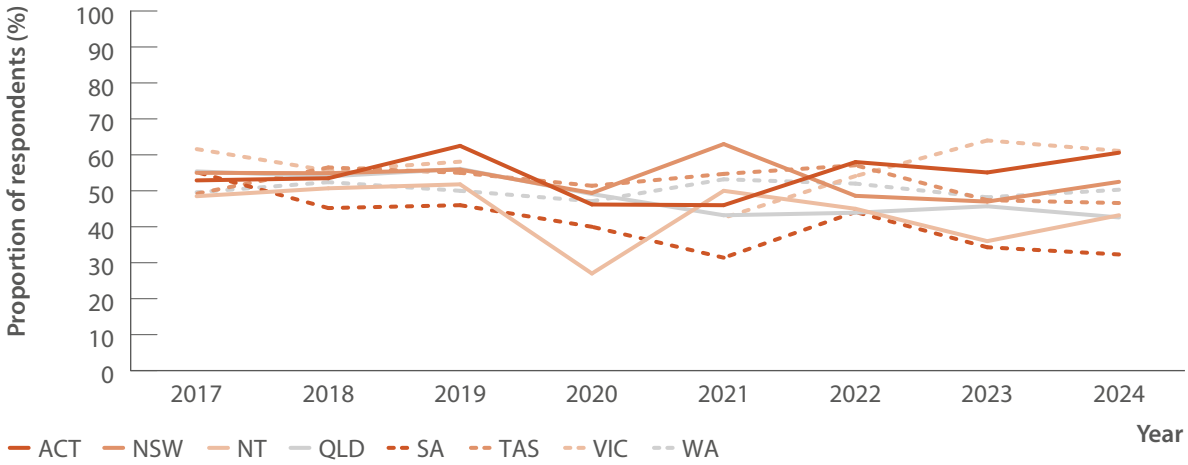
Figure 11. Number of Aboriginal and/or Torres Strait Islander people tested for HCV antibody at ACCESS sexual health or primary care clinics and proportion of HCV antibody tests positive, ACCESS, 2017–2024



Source: ACCESS.[13]

Notes: Analysis includes 19 sites: seven in NSW, six in VIC, three in QLD, two in WA and one in SA. Individuals were 15 years or older and contributed one test per year. Individuals recorded as a gender other than man or woman were not reported due to small sample size. Individuals included either had no previous HCV antibody test recorded in ACCESS since 2009 or had previously tested HCV antibody negative. Individual's HCV antibody tests after an HCV antibody positive test being observed were excluded from analysis. Two clinics included in this analysis are primary care clinics specialising in GBM, so some individuals presented in this data may also be presented in ACCESS data relating to GBM.

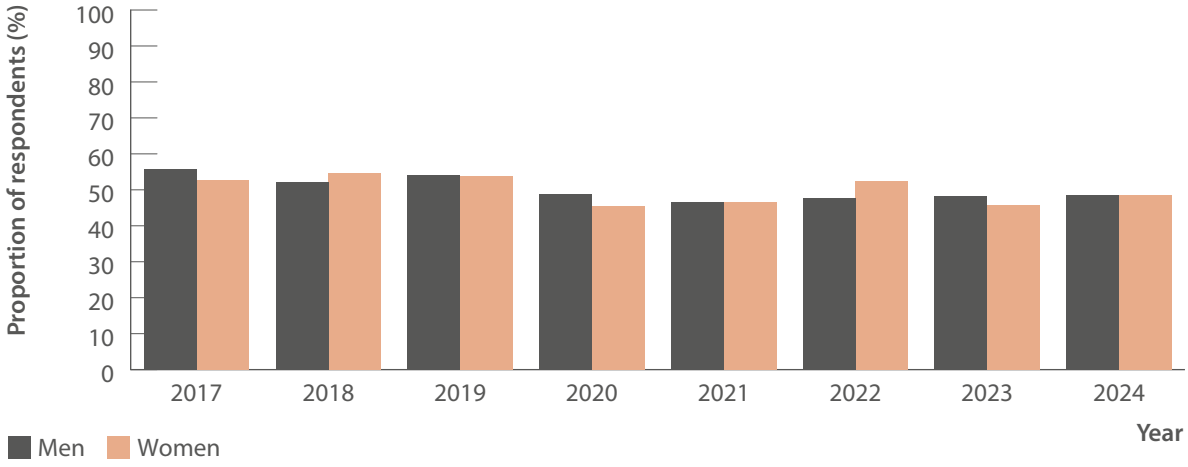
Figure 12. Proportion of Australian Needle Syringe Program Survey respondents self-reporting recent (past 12 months) hepatitis C testing by jurisdiction, 2017–2024



Source: Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 30-year National Data Report 1995–2024.[18]

Notes: No participant recruitment occurred in VIC in 2020.

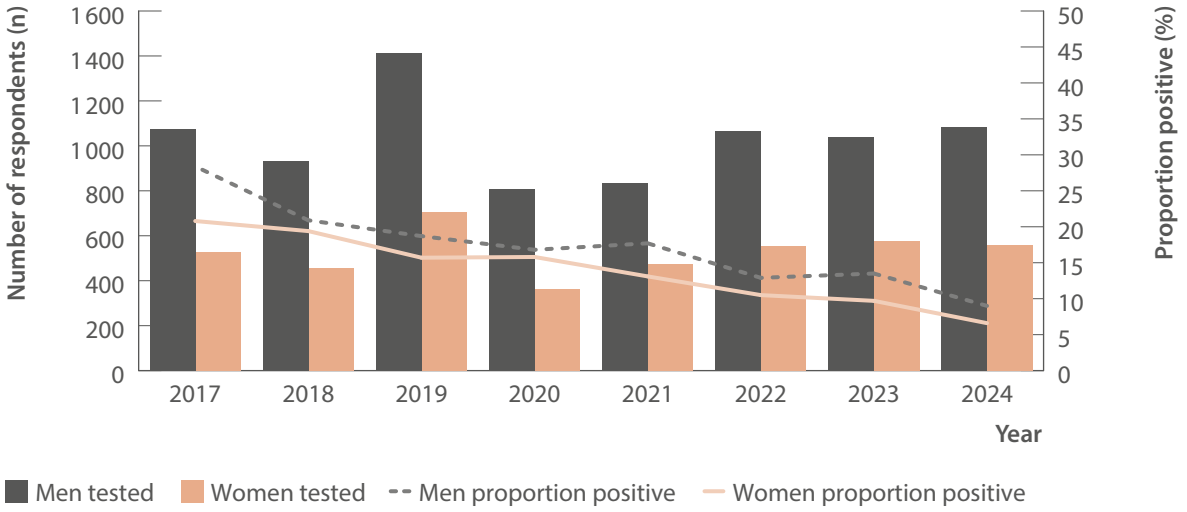
Figure 13. Proportion of Australian Needle Syringe Program Survey respondents reporting recent (past 12 months) hepatitis C testing by gender, 2017–2024



Source: Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 30-year National Data Report 1995–2024.[18]

Notes: No participant recruitment occurred in VIC in 2020.

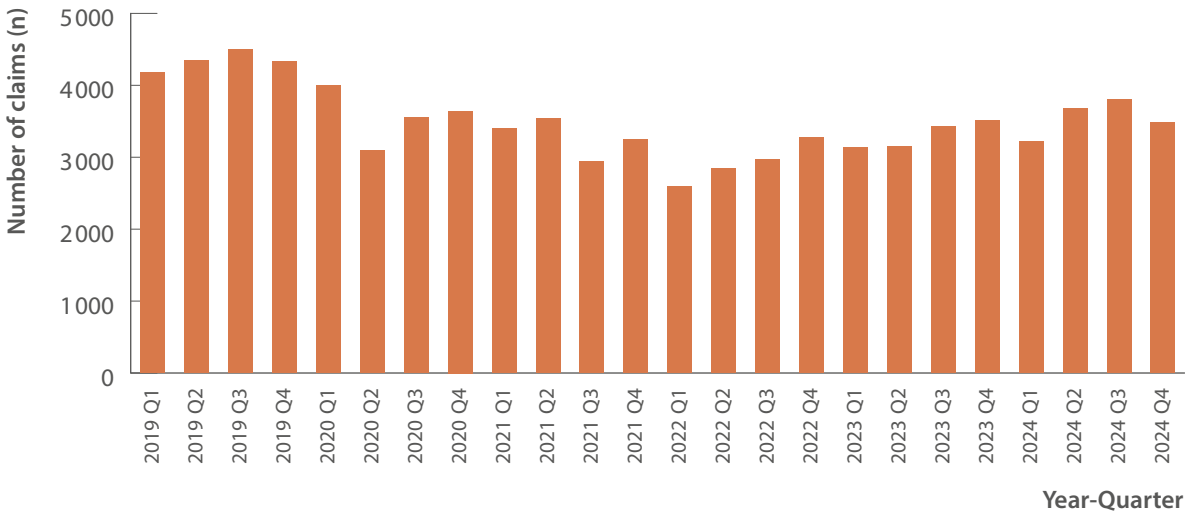
Figure 14. Number of Australian Needle Syringe Program Survey respondents tested for HCV RNA and proportion positive by gender, 2017–2024



Source: Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 30-year National Data Report 1995–2024.[18]

Notes: No participant recruitment occurred in VIC in 2020. Weighted for gender and HCV antibody status 2015–2019.

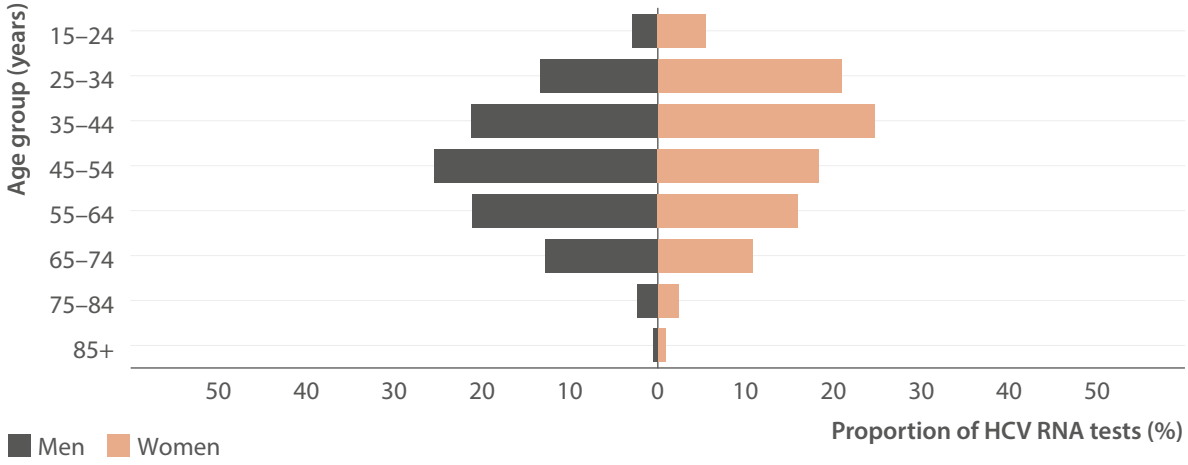
Figure 15. Number of claims to Medicare for items 69499 and 69500 (detection of HCV RNA, new infections only), 2019–2024



Source: Medicare Australia Statistics.[19]

Notes: Medicare Benefit Schedule item numbers (69499 and 69500) are used for testing to detect current hepatitis C infection which are not used for tests associated with treatment monitoring. Prison-based testing not included in Medicare Benefit Schedule data.

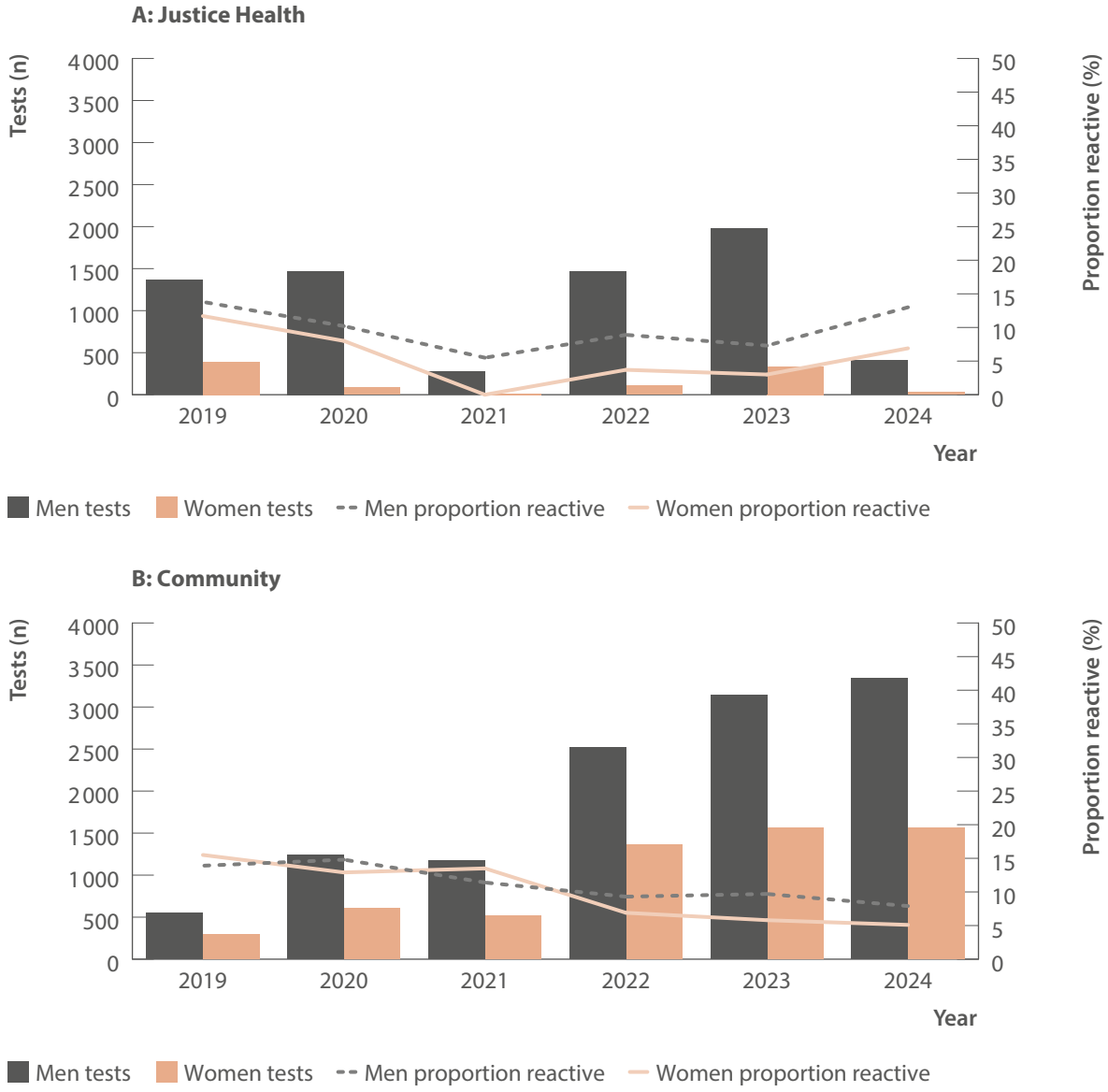
Figure 16. Proportion of claims to Medicare for items 69499 and 69500 (detection of HCV RNA, new infections only) in 2024 by age and sex



Source: Medicare Australia Statistics.[19]

Notes: Denominator for proportions is all tests in 2024: n=5 838 services among women and n=8 256 services among men; only services among those aged 15 years or older shown for brevity. Medicare Benefits Schedule item numbers (69499 and 69500) are used for testing to detect current hepatitis C infection which are not used for tests associated with treatment monitoring. Prison-based testing not included in Medicare Benefits Schedule data.

Figure 17. Number of dried blood spot tests and proportion HCV RNA reactive by (A) Justice Health and (B) community settings, NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot, 2019–2024



Source: NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot.[22]

Notes: Includes valid tests completed only. Reactive result means possible HCV RNA detection; therefore active hepatitis C infection is possible but further confirmatory testing is required. People with a reactive dried blood spot result require confirmatory testing, which may be included in testing numbers from NSW Health Pathology and/or the Australian HCV Point-of-Care Testing Program.

Three

Uptake of direct-acting antiviral treatment

Achieving hepatitis C elimination in Australia relies on strengthening and expansion of primary prevention strategies and ensuring people who are diagnosed with chronic hepatitis C access care, treatment and cure.[23,24,25] Direct-acting antivirals (DAA) for the treatment of hepatitis C have a high cure rate, are highly tolerable,[2,3] and following listing on the Pharmaceutical Benefits Scheme (PBS) in March 2016, are available at minimal cost to Medicare-eligible Australians.

Treatment uptake

The monitoring treatment uptake in Australia project provides estimates of the number of individuals initiating DAA treatment, and retreatment recorded in the PBS database since 2016. DAA treatment initiations (first treatment) by jurisdiction and provider type are described.[26] As the PBS data does not capture reason for retreatment, retreatment data from the REACH-C cohort[27,28] and a statistical technique (Random Forest machine learning model) were used to classify records in the PBS data as being retreatment for reinfection or treatment failure.[29]

The Australian Needle Syringe Program Survey provides annual self-reported hepatitis C treatment uptake among people who inject drugs attending NSPs.[18]

The National Prisons Hepatitis Network collated data from 98 prisons across eight jurisdictions on the total number of hepatitis C DAA treatment initiations (i.e., treatment courses commenced) in prison in 2024. The number of individuals who received treatment in prison in 2024 was collated from 58 prisons across NSW, VIC, ACT, TAS, and NT.[20] The PBS database provides an estimate of the total number of treatment initiations (i.e., treatment courses commenced) and the number of individuals who initiated treatment in 2024, in each state and territory.[26] To estimate the number of individuals who received treatment, individuals commencing either their first or a subsequent treatment were counted once for the calendar year. For prison data, retreatment is defined as a new treatment where an individual has a record of a previous treatment episode within their jurisdictional treatment record.

Cascades of care

ACCESS data from primary care clinics provide a hepatitis C care cascade for patients. To account for potential changes between 2016 and 2024 in uptake of hepatitis C care and treatment, two cascades are presented. The first cascade includes individuals who tested HCV RNA positive between 01 March 2016 and 31 December 2021 and reflects the status of individuals at 31 December 2021. The second cascade includes individuals who tested HCV RNA positive between 01 January 2022 and 31 December 2024 and reflects the status of individuals at 31 December 2024.[13,30]

The 2024 national hepatitis C diagnosis and care cascade is a population-level cross-sectional cascade estimated annually as part of the *HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report*.[4,9,10] Using available data, mathematical modelling, and accounting for uncertainties,

the number of people in each stage of the diagnosis and care cascade in Australia at the end of 2024 were estimated including the number of people living with chronic hepatitis C in Australia, the number and proportion of people who have been diagnosed, the number who received antiviral treatment (for primary infection and reinfection), the number cured, and the number of new infections.

Progress on increasing treatment uptake

Monitoring treatment uptake

- Between 2016 and 2024, an estimated 111 184 people living with chronic hepatitis C initiated DAA therapy (first treatment) (Figure 18).
- In 2024, 5 238 individuals initiated treatment (first treatment), and the annual number of people initiating treatment stabilised across 2023 and 2024 (Figure 18).
- Between 2016 and 2024, the cumulative total number of treatment initiations was 129 233, which included 18 049 retreatments, due to non-response to initial therapy or post-treatment reinfection. In 2024, there were 3 026 treatment initiations which were for retreatment (Figure 18).
- There were variations in uptake by jurisdiction (Figure 19) and General Practitioners prescribed the majority of DAAs in recent years (Figure 20).
- Analyses of retreatment by reason and gender highlights men have been retreated more than women and mostly for reinfection (Figure 21).

Australian Needle Syringe Program Survey

- Lifetime treatment uptake among Australian Needle Syringe Program Survey respondents continues to increase, with 79% (189/240) of men and 75% (86/114) of women in 2024 who were HCV antibody positive, self-reporting a history of hepatitis C treatment (Figure 22).

National Prisons Hepatitis Network

In previous years (data from 2019 to 2022)[31,32,33,34] the total number of treatment initiations was reported, whereas the 2023 data was the number of individuals treated.[35] In 2024, data for both treatment initiations and individuals where available, were reported.

Treatment initiations

- In 2024, a total of 3 425 hepatitis C DAA treatments (either first or subsequent treatment courses) were initiated in 98 prisons across all Australian jurisdictions. This represents 41% (3 425/8 264) of all treatments initiated nationally. The proportion of DAA treatment initiations in the prisons ranged from 9 to 70% between jurisdictions (Figure 23 and Table 1).

Progress on increasing treatment uptake (continued)

Nationally, the proportion of treatment initiations in prisons compared to in the community has increased each year, from 25% in 2019 to 41% in 2024.

Individuals treated

- In 2024, 1 455 individuals were initiated on hepatitis C DAA treatment in 58 prisons across NSW, VIC, ACT, TAS, and NT. This represents 33% (1 455/4 422) of all individuals receiving at least one hepatitis C treatment episode in 2024, in prisons, in these jurisdictions. The proportion of individuals initiated on treatment in the prisons compared to in the community ranged from 9 to 42% between jurisdictions (Table 1).
- Among 1 455 individuals treated in 2024, in prisons, in these jurisdictions, 511 (35%) had previously been treated in prison (any treatment in any previous year).

The commencement of treatment for hepatitis C within prisons across jurisdictions is highly dependent on hepatitis C testing activities and the number of new diagnoses. The proportion of people with chronic hepatitis C treated in prison will also vary by the prevalence of infection in the community and among prison entrants, incidence of new infections, prevalence of risk factors, the size of the population of people in prison, and the number of people previously treated in prison or the community.

Cascades of care

ACCESS

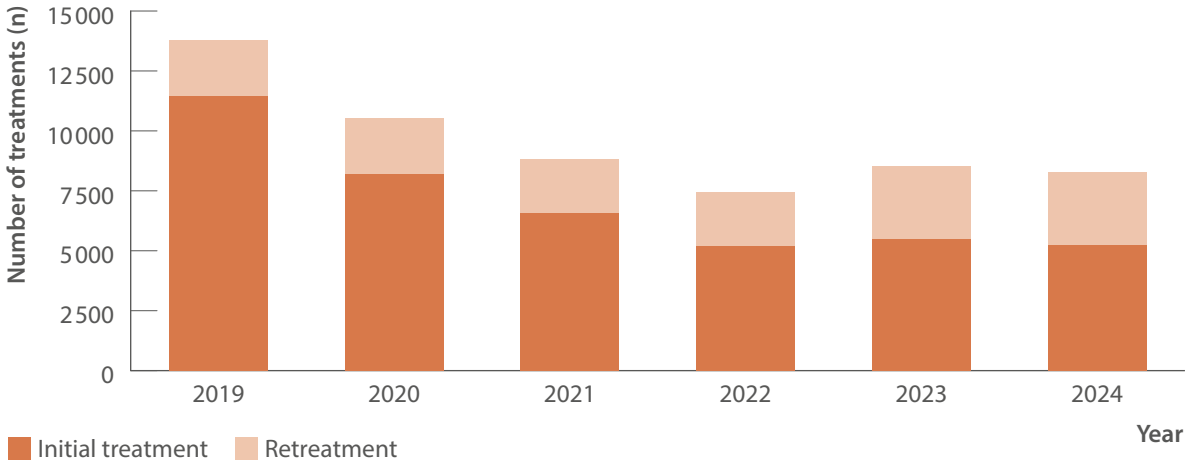
- At the end of 2021, half of individuals (51%, 2 210/4 319) who had tested HCV RNA positive at ACCESS primary care clinics between 2016 and 2021 had initiated treatment (Figure 24).
- At the end of 2024, over two thirds of individuals (68%, 678/998) who had tested HCV RNA positive at ACCESS primary care clinics between 2022 and 2024 had initiated treatment (Figure 24).

National hepatitis C diagnosis and care cascade

- The hepatitis C diagnosis and care cascade modelling estimated that at the end of 2024, 62 880 people were living with hepatitis C. During 2024, 5 240 people received DAA treatment for primary infection, and mathematical modelling estimated 1 860 received treatment for reinfection (Figure 25).

Monitoring treatment uptake

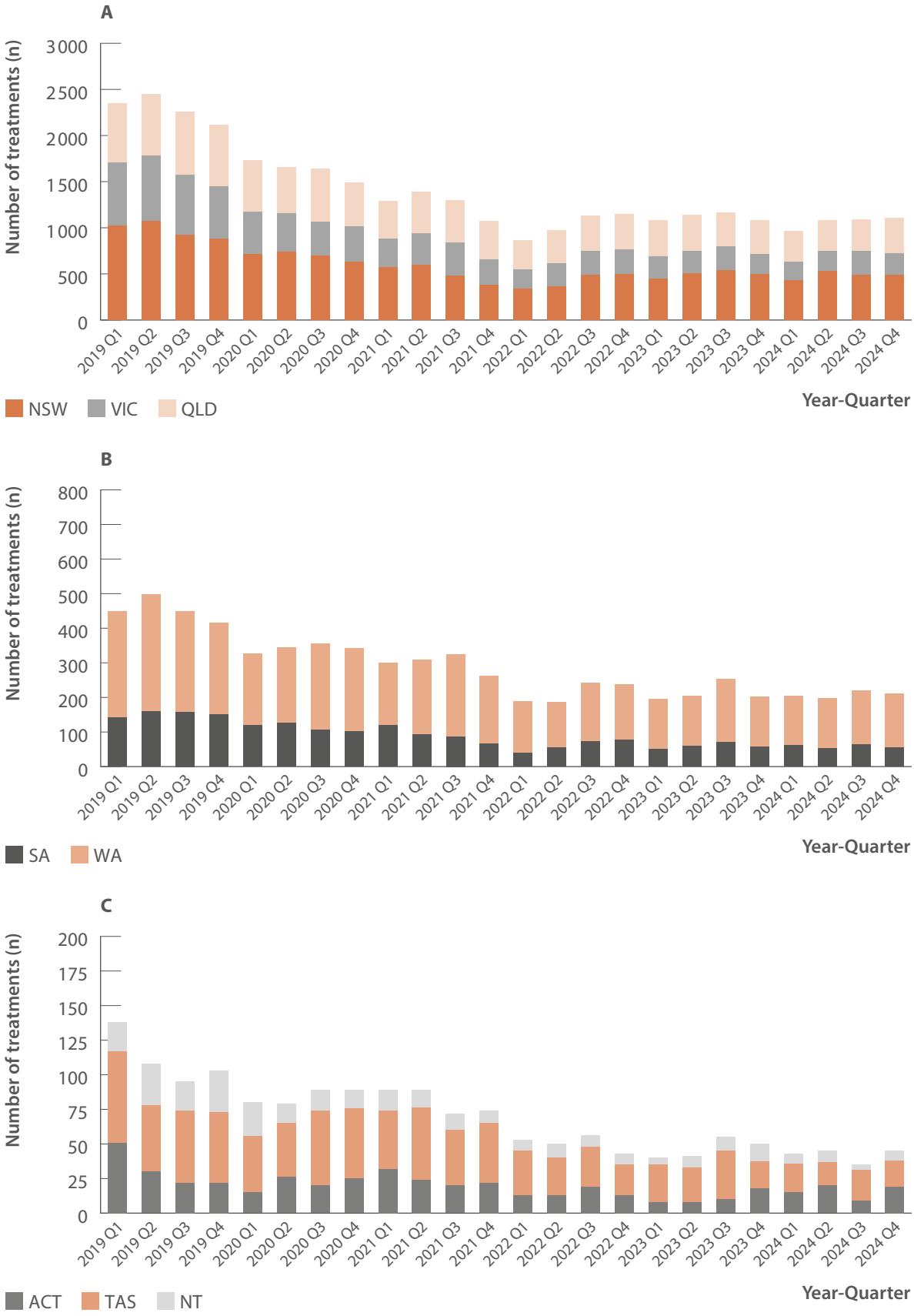
Figure 18. Total estimated DAA treatment initiations (including retreatment), PBS database, 2019–2024



Source: Monitoring hepatitis C treatment uptake in Australia.[26]

Notes: Treatment numbers may vary from previous or future reports due to refinements made to the PBS data between releases. Between 2016 and 2024, an estimated 111 184 people living with hepatitis C initiated treatment (first treatment). The cumulative total of treatment initiations between 2016 and 2024 was 129 233, which included 18 049 retreatments, with data from 2019 shown for brevity.

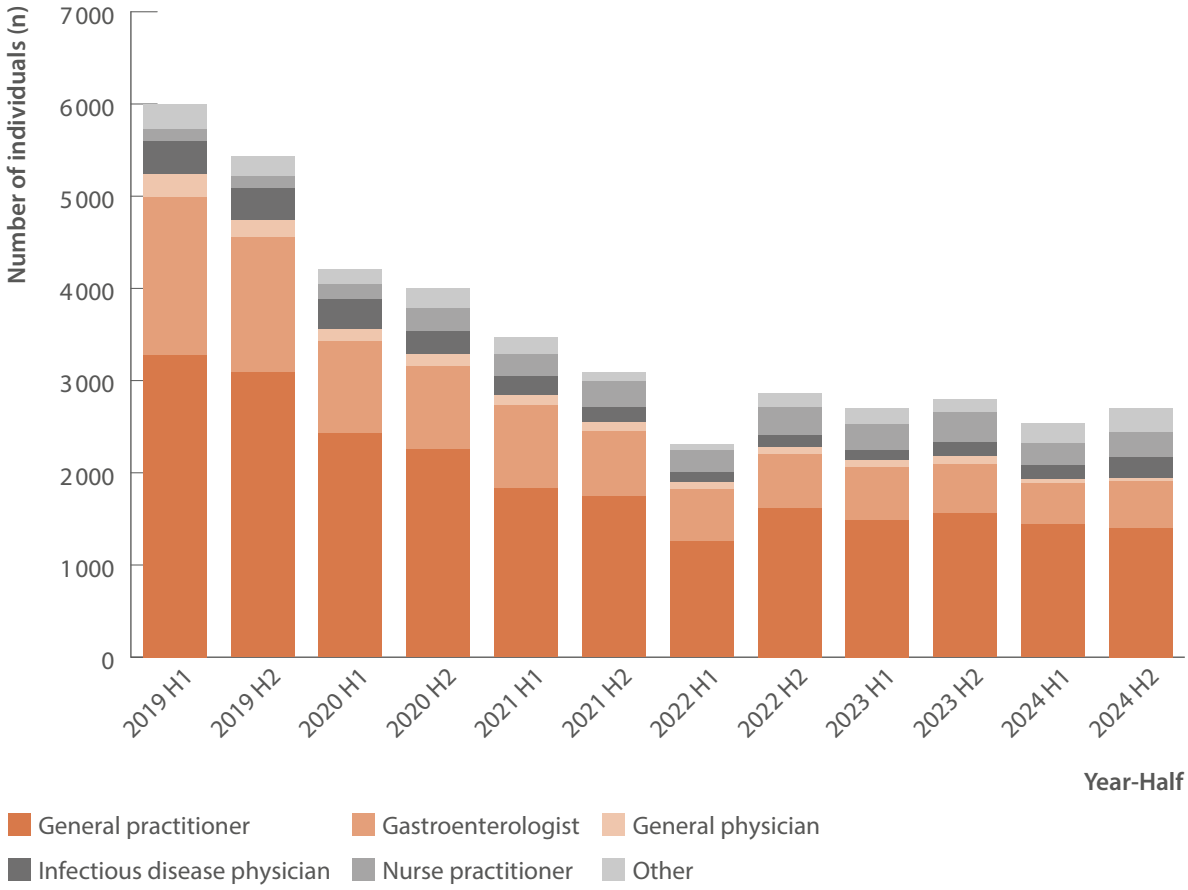
Figure 19. Estimated number of DAA treatment initiations by jurisdiction, PBS database, 2019–2024



Source: Monitoring hepatitis C treatment uptake in Australia.[26]

Notes: Treatment numbers may vary from previous or future reports due to refinements made to the PBS data between releases.

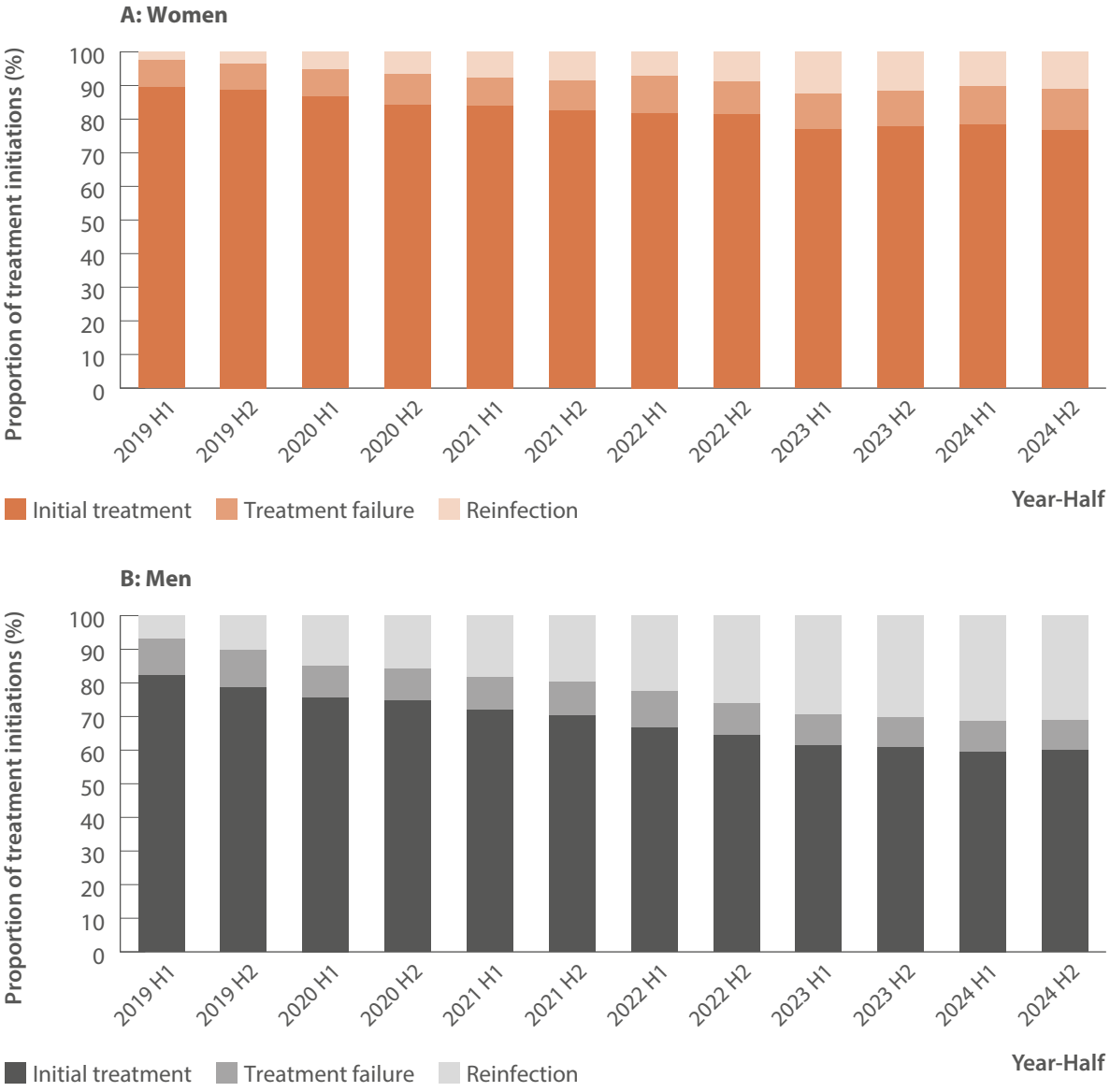
Figure 20. Estimated number of individuals initiating DAA treatment (initial treatment only) by prescriber type, PBS database, 2019–2024



Source: Monitoring hepatitis C treatment uptake in Australia.[26]

Notes: Treatment numbers may vary from previous or future reports due to refinements made to the PBS data between releases.

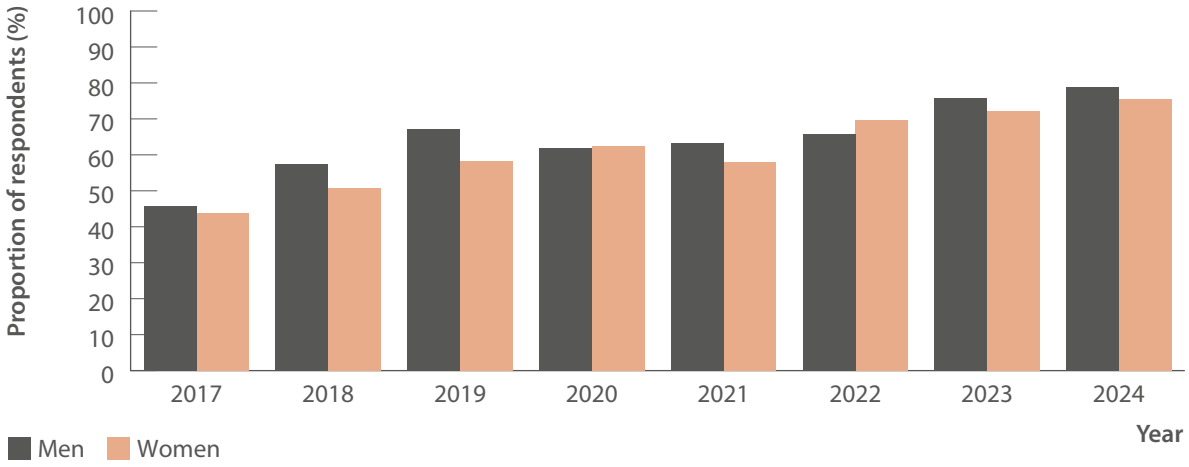
Figure 21. Estimated proportion of DAA treatment and retreatment initiations by gender, PBS database, 2019–2024



Source: Monitoring hepatitis C treatment uptake in Australia.[26]

Notes: Treatment numbers may vary from previous or future reports due to refinements made to the PBS data between releases.

Figure 22. Proportion of Australian Needle Syringe Program Survey respondents who tested HCV antibody positive, self-reporting lifetime history of hepatitis C treatment by gender, 2017–2024



Source: Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 30-year National Data Report 1995–2024.[18]

Notes: Includes respondents who tested HCV antibody positive and excludes those self-reporting spontaneous hepatitis C clearance. No participant recruitment occurred in VIC in 2020.

Figure 23. Number and proportion of DAA treatment initiations in prison versus in the community by jurisdiction, National Prisons Hepatitis Network and PBS database, 2024

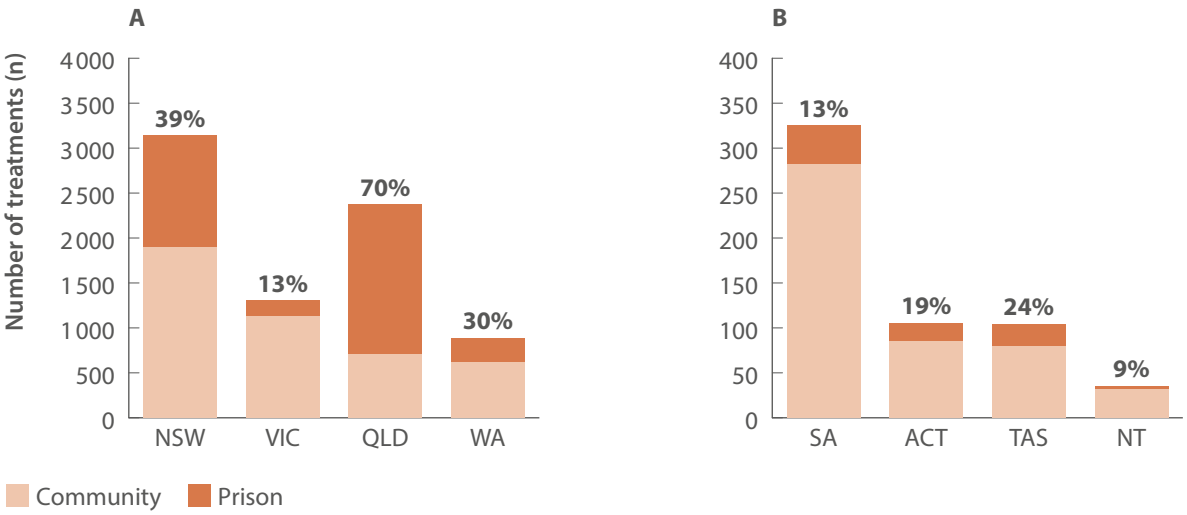


Table 1. Number of individuals who received DAA treatment and DAA treatment initiations in prison versus in the community, nationally and by jurisdiction, National Prisons Hepatitis Network and PBS database, 2024

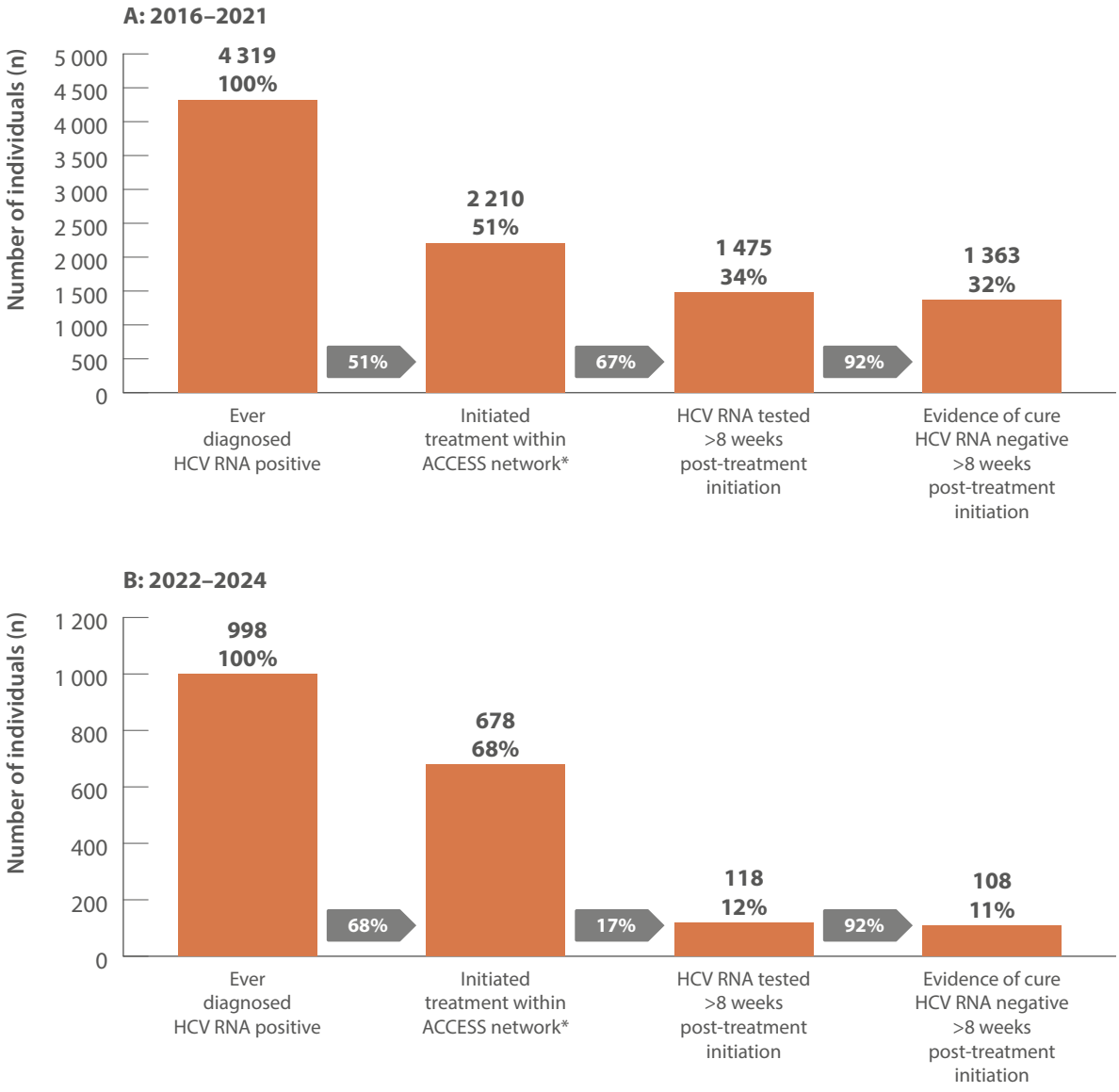
	National	NSW	VIC	QLD	WA	SA	ACT	TAS	NT
2024									
Number of prisons*	102	39†	14‡	14	17	911	6	26	2
Treatment initiations									
Number of DAA treatment initiations in prisons	3 425	1 239	167	1 664	264	43	20	25	3
Number of DAA treatment initiations (PBS database)	8 264	3 139	1 300	2 371	885	325	105	104	35
Individuals treated									
Number of individuals who received DAA treatment in prison	1 455	1 239	168	-	-	-	20	25	3
Number of individuals who received DAA treatment (PBS database)	7 823	2 973	1 223	2 249	848	304	92	101	33

Source: State and Territory justice health authorities via the National Prisons Hepatitis Network.[20] Monitoring treatment uptake in Australia.[26]

Notes: *Number of adult prisons in the jurisdiction. †Data were collected from 36 prisons. ‡Data were collected from 13 prisons. The proportion of treatment initiations in prisons nationally was calculated using the total number of treatment initiations (i.e., treatment courses) reported by jurisdictional hepatitis services as a proportion of all treatments derived from the PBS database. 'Community' treatment initiations are therefore defined as all treatment initiations in the PBS database minus all treatments reported by jurisdictional prison hepatitis services. For individuals who received treatment, individuals were counted once per year and treatment may be first treatment or retreatment.

Cascades of care

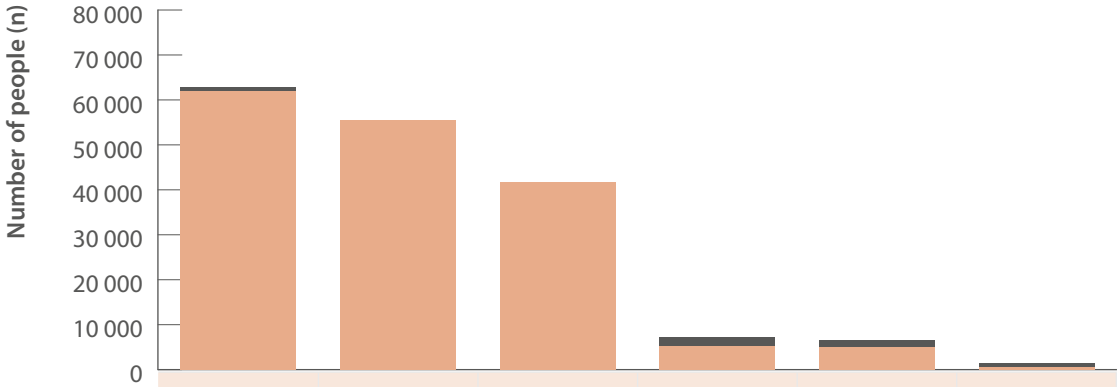
Figure 24. Hepatitis C treatment cascade at ACCESS primary care clinics: number of individuals hepatitis C diagnosed, number and proportion of individuals who initiated treatment, and tested for HCV RNA post-treatment initiation, (A) 2016–2021 and (B) 2022–2024



Source: ACCESS.[13] Updated from Traeger et al., *PLoS One* 2020.[30]

Notes: Cascade includes individuals attending ACCESS primary care clinics (same primary care clinics as other ACCESS sections in report) with evidence of a consult recorded in ACCESS before 2016. Figure A is restricted to individuals who were diagnosed HCV RNA positive between 01 March 2016 and 31 December 2021 and reflects the status of individuals on 31 December 2021. Figure B is restricted to individuals who were diagnosed HCV RNA positive between 01 January 2022 and 31 December 2024 and reflects the status of individuals on 31 December 2024. *Treatment initiation was indicated by the presence of an electronic medical record of a prescription of DAA therapy recorded at an ACCESS clinic. Individuals were assumed to have progressed through preceding cascade stages if evidence of reaching a subsequent stage was present.

Figure 25. The 2024 hepatitis C diagnosis and care cascade, HIV, viral hepatitis and sexually transmissible infections in Australia, Annual Surveillance Report



	Living with hepatitis C at the end of 2024	Diagnosed with hepatitis C	HCV RNA confirmed hepatitis C	Received treatment (DAA) during 2024	Cured	New infections
Primary infection	62 030			5 240	4 290	540
Reinfection	850			1 860	1 750	840
Total (primary and reinfection)	62 880	55 610	41 710	7 100	6 670	1 380

Source: Updated by Kirby Institute, from the *HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report 2024*.[4,9,10]

Notes: Numbers in the cascade rounded for clarity. The care cascade was estimated using mathematical modelling; mathematical modelling uses available data from observational research studies and administrative datasets to derive estimates like the population prevalence of hepatitis C, accounting for uncertainties. Living with hepatitis C is the estimated number of individuals in the overall population who had detectable HCV RNA in 2024; diagnosed with hepatitis C infection is the estimated number of individuals living with chronic hepatitis C in 2024 who have been previously diagnosed (HCV antibody positive or HCV RNA); HCV RNA confirmed hepatitis C is the estimated number of individuals who are confirmed with hepatitis C from HCV RNA testing; received DAA treatment is the observed number of individuals who received initial treatment in 2024 and a modelled estimate of individuals who received treatment for reinfection; and cured is the estimated number of treated individuals who achieved undetectable HCV RNA post-treatment in 2024.

Four

Hepatitis C-attributable morbidity: transplantations

Reducing hepatitis C-related mortality is a key goal of global and national hepatitis C elimination targets. Given the elevated risk of hepatocellular carcinoma among people with cirrhosis, even after hepatitis C cure, morbidity and mortality remain important outcomes to monitor.

People with cirrhosis who are cured through DAA therapy have a very low risk of progression to liver failure but remain at risk (albeit reduced compared to those not cured) of hepatocellular carcinoma. Due to this, observed declines in cases of hepatocellular carcinoma are likely to be delayed. Further, for people with hepatitis C-related hepatocellular carcinoma who achieve cure, improved liver function post cure may allow curative treatments for hepatocellular carcinoma other than liver transplantation. However, reductions in the incidence of hepatitis C-related liver failure and subsequent liver transplants due to liver failure are useful indicators in monitoring long-term outcomes achievable though hepatitis C elimination efforts.

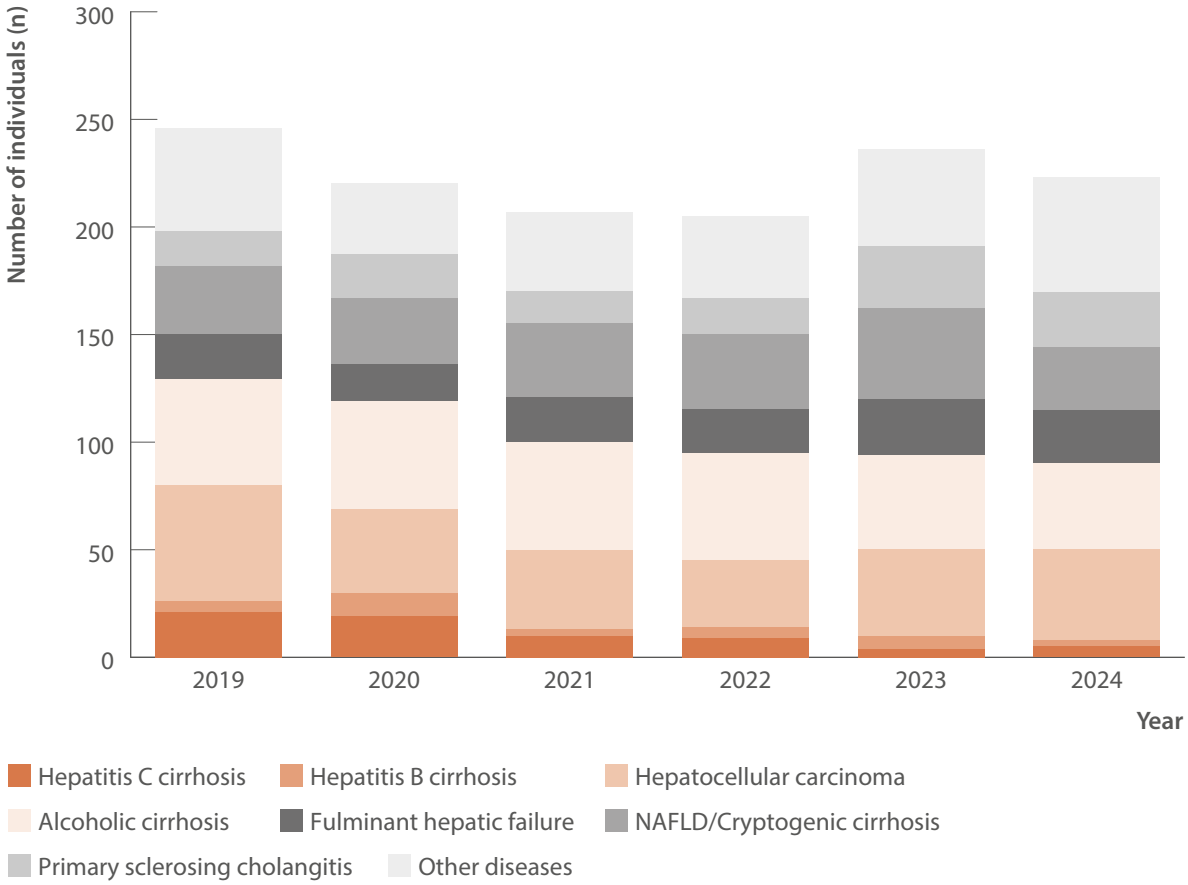
No national registry collates data on morbidity and mortality outcomes among people diagnosed with hepatitis C. However, the Australia and New Zealand Liver and Intestinal Transplant Registry collates data on the primary diagnosis of liver transplant recipients.

Progress on reducing hepatitis-C attributable morbidity: transplantations

- The number of individuals who were recipients of a liver transplant and had a primary diagnosis of hepatitis C cirrhosis declined in the past six years; in 2024 of the 223 transplants among adults, five were for hepatitis C-related cirrhosis (Figure 26).

Data on mortality, morbidity, and other outcomes related to hepatitis C in Australia are scarce, a gap that requires urgent action. Monitoring the long-term outcomes of those living with hepatitis C and the effect of primary and secondary prevention on mortality and morbidity is crucial for evaluating strategies to eliminate hepatitis C.

Figure 26. Number of Australian adult liver transplant recipients by primary diagnosis and year of first transplant, Australia and New Zealand Liver and Intestinal Transplant Registry, 2019–2024



Source: Australia and New Zealand Liver and Intestinal Transplant Registry.[36]

Notes: Australian transplant recipients only. Adults defined as 16 years or older. NAFLD: non-alcoholic fatty liver disease.

Five

Stigma and discrimination experienced by people living with hepatitis C

Stigma is a significant barrier to testing, diagnosis, and treatment for hepatitis C, and is therefore important to address if progress in these areas is to be achieved. Understanding how and where hepatitis C-related stigma is both expressed and experienced can provide context to other indicators, such as any lack of progress in testing, treatment uptake, and maintained engagement with healthcare services across populations of people living with or at risk of hepatitis C, among specific groups, or within particularly settings. Shame, fear, experiences of discrimination, and concerns about privacy can all contribute to individuals not disclosing their engagement in risk practices (e.g., injecting drug use) and therefore not being offered hepatitis C testing. A lack of access to acceptable and stigma-free testing then flows on to individuals not receiving timely diagnosis and treatment.

Standardised monitoring of stigma related to hepatitis C and injecting drug use has been undertaken in Australia since 2016, with measures developed and implemented as part of the Stigma Indicators Monitoring Project.[37] Indicators of experienced stigma were included in surveys of people who inject drugs and people diagnosed with hepatitis C (between 2016 and 2023) and indicators of expressed stigma were included in surveys of the general public (between 2017 and 2024) and healthcare workers (between 2018 and 2024).

Progress on reducing stigma

Stigma Indicators Monitoring Project

In 2024, the Stigma Indicators Monitoring Project surveyed a national sample of the Australian public (N=1 555) and a national sample of healthcare workers (N=1 000).

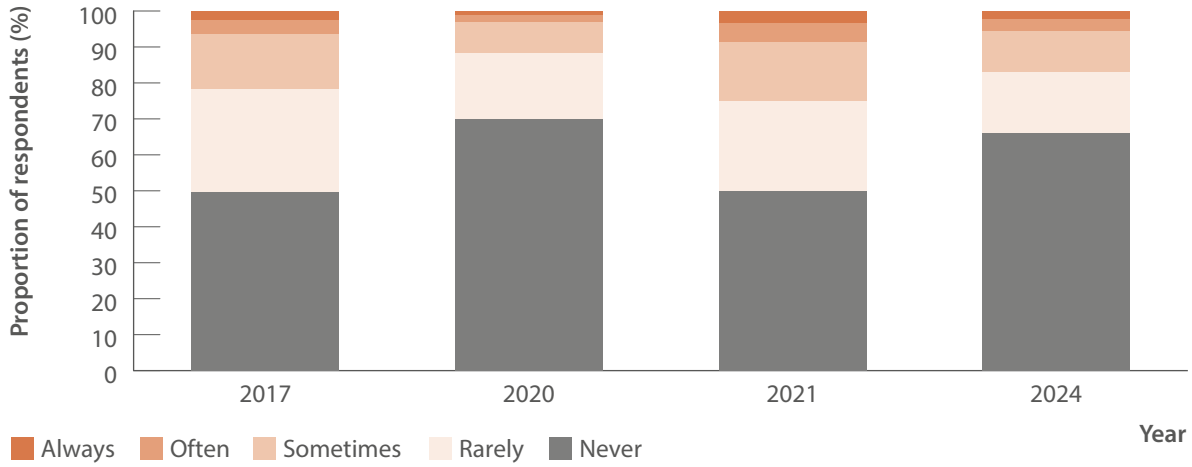
- Over one-third of the general public sample surveyed in 2024 (34%, 529/1 555) reported that they would behave negatively towards other people because of their hepatitis C (Figure 27).
- Among this same sample of the public, two-thirds (63%, 981/1 555) reported that they would behave negatively towards other people because of their injecting drug use (Figure 28).
- By comparison, healthcare workers were less likely to report expressed stigma towards people living with hepatitis C. In 2024, 27% (272/1 000) of healthcare workers reported that they would behave negatively towards other people because of their hepatitis C (Figure 29).
- Approximately half (53%, 530/1 000) of healthcare workers reported that they would behave negatively towards other people because of their injecting drug use (Figure 30).

Progress on reducing stigma (continued)

The results of this monitoring highlight the need to invest in initiatives to reduce stigma towards people living with hepatitis C and people who inject drugs, including a focus on healthcare settings. This is further exemplified when considered alongside results presented in the 2024 report that indicate no significant changes in experiences of stigma among these groups.[35] There is some evidence in the literature regarding positive short-term effects of stigma intervention initiatives,[38,39,40] however, these effects tend to attenuate over time. Further research is needed to identify effective means of positively influencing attitudes towards people living with hepatitis C and people who inject drugs and how to more widely increase public support for reducing stigma. A notable limitation of many reported intervention initiatives is their focus on individual attitudes and interpersonal stigma. While these are valuable approaches, there is a need to address existing institutional policies and structures that can create environments that enable stigma. Tackling stigma across individual, interpersonal, organisational, and structural levels is vital to reducing obstacles to accessing healthcare and improving the impact of initiatives aimed at eliminating hepatitis C.

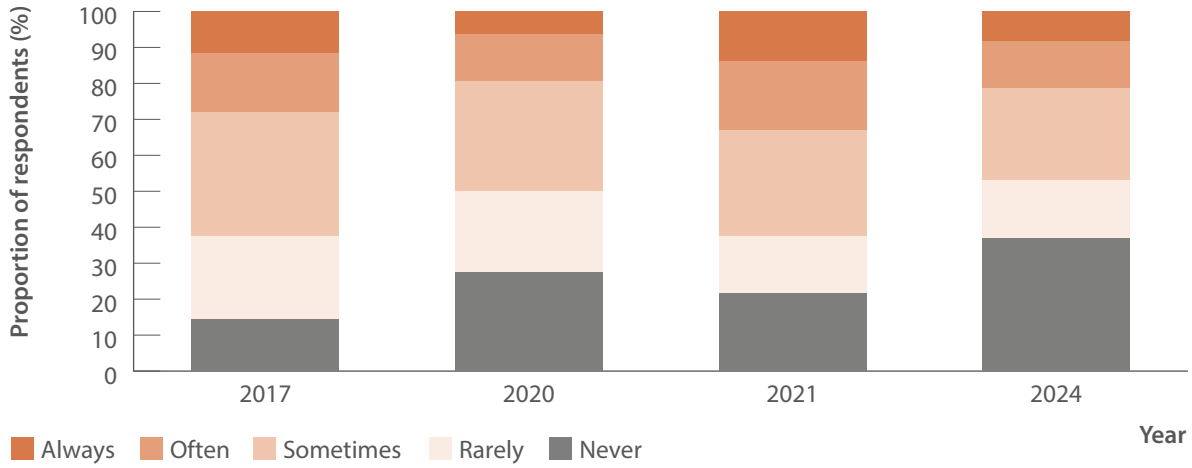
Regular monitoring of stigmatising experiences among people who inject drugs and people living with hepatitis C (including those who do not inject drugs) is required, within healthcare settings and more widely, as is continued monitoring of expressed stigma towards these groups by the general public and healthcare workers. Measuring stigma from these varied perspectives is necessary to understand any changes in experiences and effects of stigma over time, as well as the impact of any interventions to reduce stigma. There is therefore a need for ongoing investment into a range of complementary approaches to reducing stigma at interpersonal, institutional, and structural levels in health care and more broadly.

Figure 27. Reports of negative behaviour towards other people because of their hepatitis C by the general public, 2017–2024



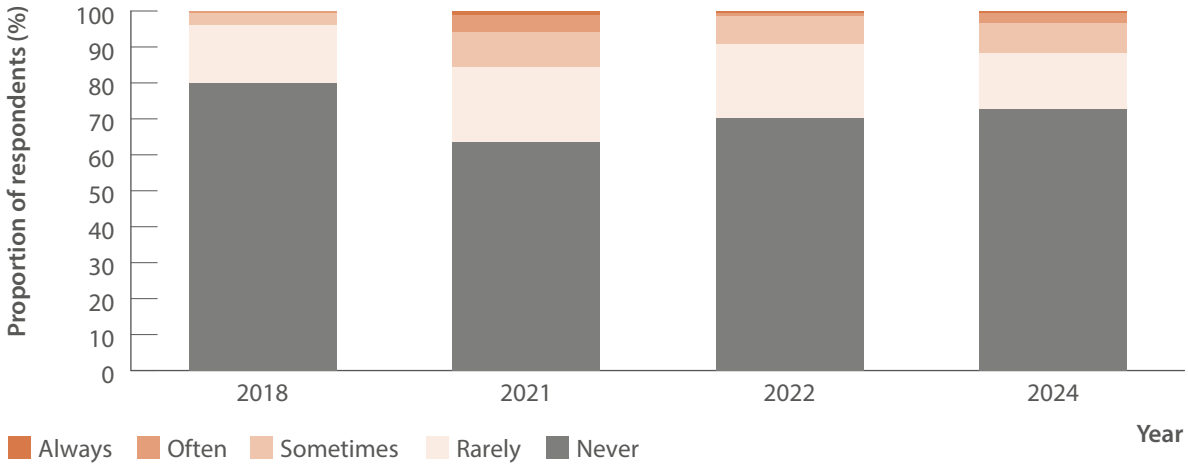
Source: Stigma Indicators Monitoring Project.[41]

Figure 28. Reports of negative behaviour towards other people because of their injecting drug use by the general public, 2017–2024



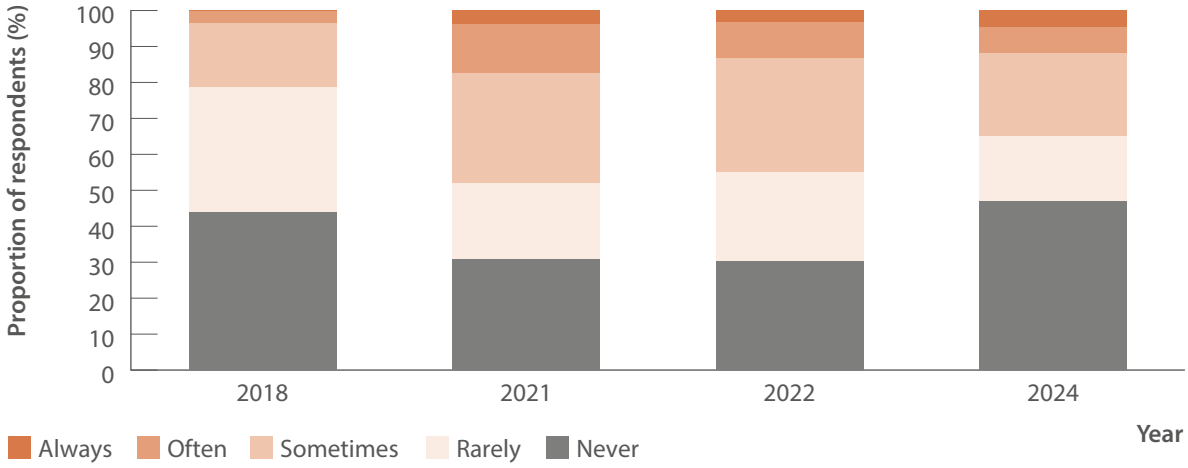
Source: Stigma Indicators Monitoring Project.[41]

Figure 29. Reports of negative behaviour towards other people because of their hepatitis C by healthcare workers, 2018–2024



Source: Stigma Indicators Monitoring Project.[42]

Figure 30. Reports of negative behaviour towards other people because of their injecting drug use by healthcare workers, 2018–2024



Source: Stigma Indicators Monitoring Project.[42]

Six

Primary prevention

Key actions for preventing the transmission of hepatitis C include a focus on reducing receptive sharing of needles, syringes, and injecting equipment. Measuring the availability and distribution of sterile injecting equipment and monitoring the injecting behaviours of people who inject drugs provide important indicators for assessment of hepatitis C prevention efforts.

The Needle Syringe Program National Minimum Data Collection reports annually on needles and syringes distributed in community settings nationally, providing an overview of activity to prevent re-use of needles and syringes, as well as estimates of coverage and people who inject drugs population size.[43] Despite new hepatitis C infections occurring in Australia's prisons,[44,45,46] no regulated needle and syringe distribution programs currently operate in Australian custodial settings.

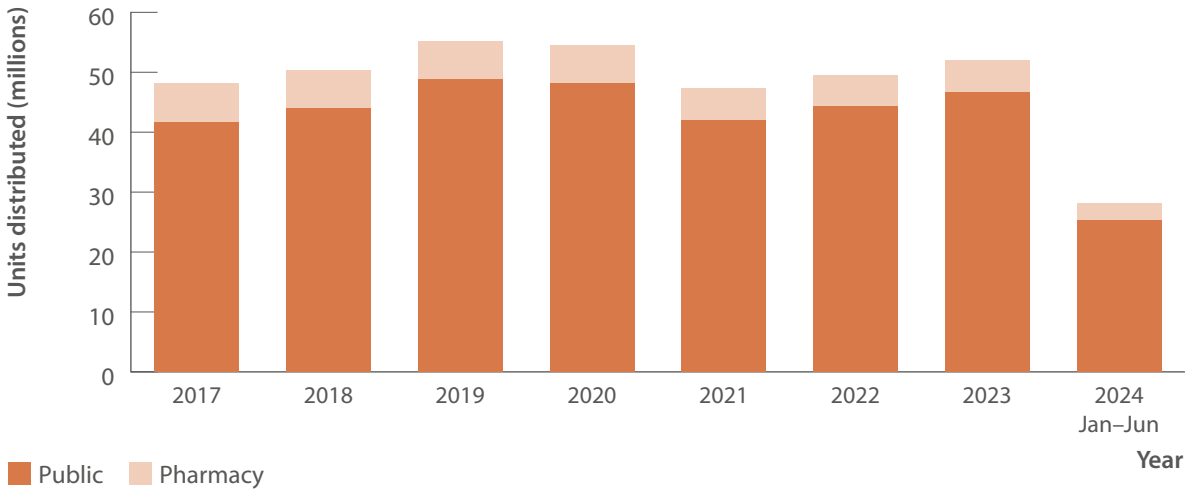
The annual Australian Needle Syringe Program Survey[18] and the Illicit Drug Reporting System ask participants about episodes of recent receptive sharing.[47]

The GBQ+ Community Periodic Survey provides national estimates on injecting drug use among GBQ+ men and non-binary people and gives specific insights into injecting drug use among GBQ+ men and non-binary people by HIV status.[48,49]

Progress on prevention of hepatitis C acquisition

- The number of needles and syringes distributed in Australia is generally stable; in 2023 (the latest complete year of data) an increase in the number of needles and syringes distributed compared to 2022 was recorded with approximately 46 million units distributed through the public sector (Figure 31).
- Among respondents in the Australian Needle Syringe Program Survey who injected in the past month, approximately one in five reported past month receptive sharing of needles and syringes at least once and this proportion has remained stable between 2017 and 2024 (Figure 32).
- The Illicit Drug Reporting System has shown a stable trend between 2019 and 2024 in the receptive and distributive sharing of needles and syringes with borrowing of needles reported by 5% of respondents and lending needles reported by 9% of respondents in 2024 (Figure 33).
- Data from the GBQ+ Community Periodic Survey show that injecting drug use was more prevalent among participants living with HIV than HIV-negative participants, with little change in the prevalence of self-reported injecting between 2019 and 2024 (Figure 34).

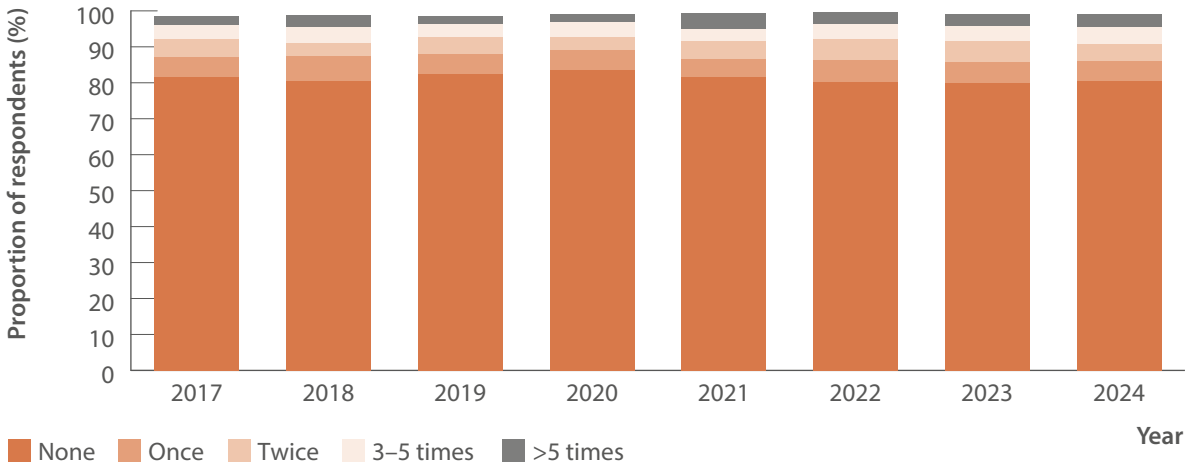
Figure 31. Number of needle and syringe units distributed by public and pharmacy sector, Needle Syringe Program National Minimum Data Collection, 2017–June 2024



Source: Needle Syringe Program National Minimum Data Collection: National Data Report 2024.[43]

Notes: July–December 2024 data not available at the time of reporting.

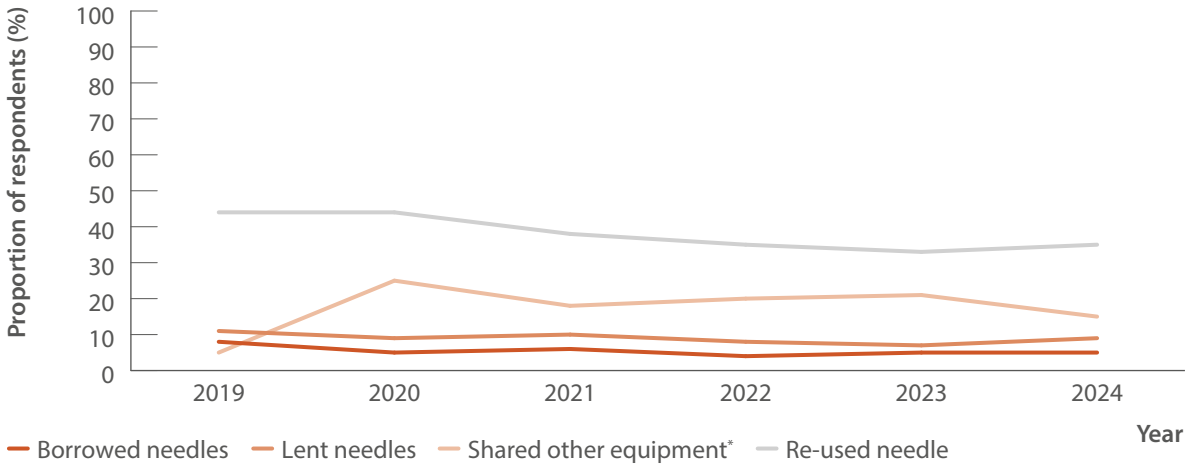
Figure 32. Proportion of Australian Needle Syringe Program Survey respondents reporting re-use of someone else's needles and syringes in the past month, 2017–2024



Source: Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 30-year National Data Report 1995–2024.[18]

Notes: Not reported not included. Injection risk behaviour variables are presented among those who injected in the previous month, not the entire sample. For 2017 to 2024, sample size was (in order): 2 314, 2 452, 2 333, 1 173, 1 259, 1 581, 1 748, and 1 588.

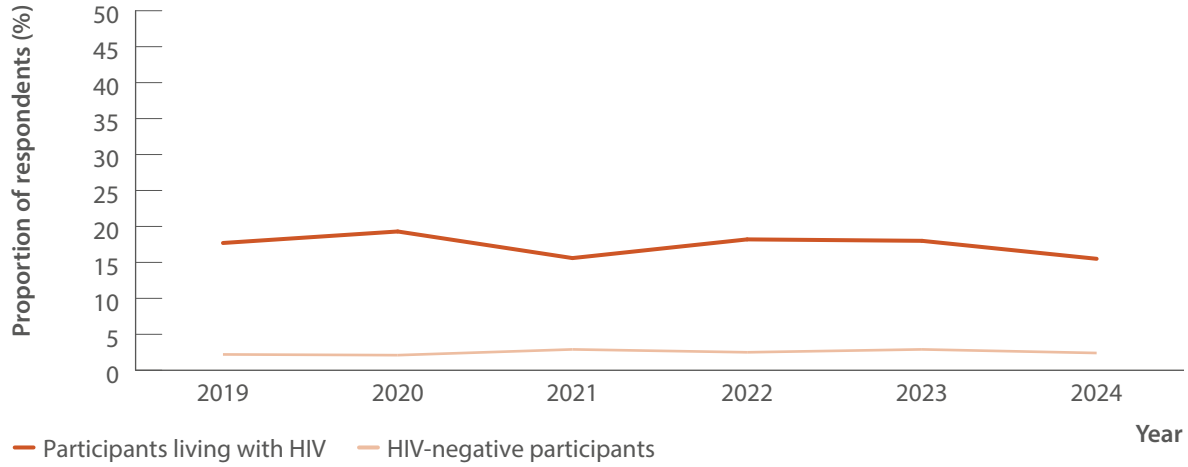
Figure 33. Proportion of respondents reporting borrowing and lending of needles, sharing of injecting equipment, and re-use of needles in the past month, national, Illicit Drug Reporting System, 2019–2024



Source: Australian Drug Trends 2024: key findings from the National Illicit Drug Reporting System (IDRS) Interviews.[47]

Notes: *Includes spoons, water, tourniquets, and filters. Lent (distributive) needles' is where someone used a needle after them. Borrowed (receptive) needles' is using a needle after someone else.

Figure 34. Proportion of participants who reported any drug injection in the six months prior to the survey by HIV status, national, GBQ+ Community Periodic Survey, 2019–2024



Source: Annual Report of Trends in Behaviour 2024: HIV and STIs in Australia.[48,49]

Notes: Unadjusted data.

Seven

Health equity mapping

To help achieve Australia's hepatitis C elimination targets, it is important to ensure that treatment uptake is high in all jurisdictions and there is equity in access to treatment between regions, including metropolitan, rural, and regional Australia.

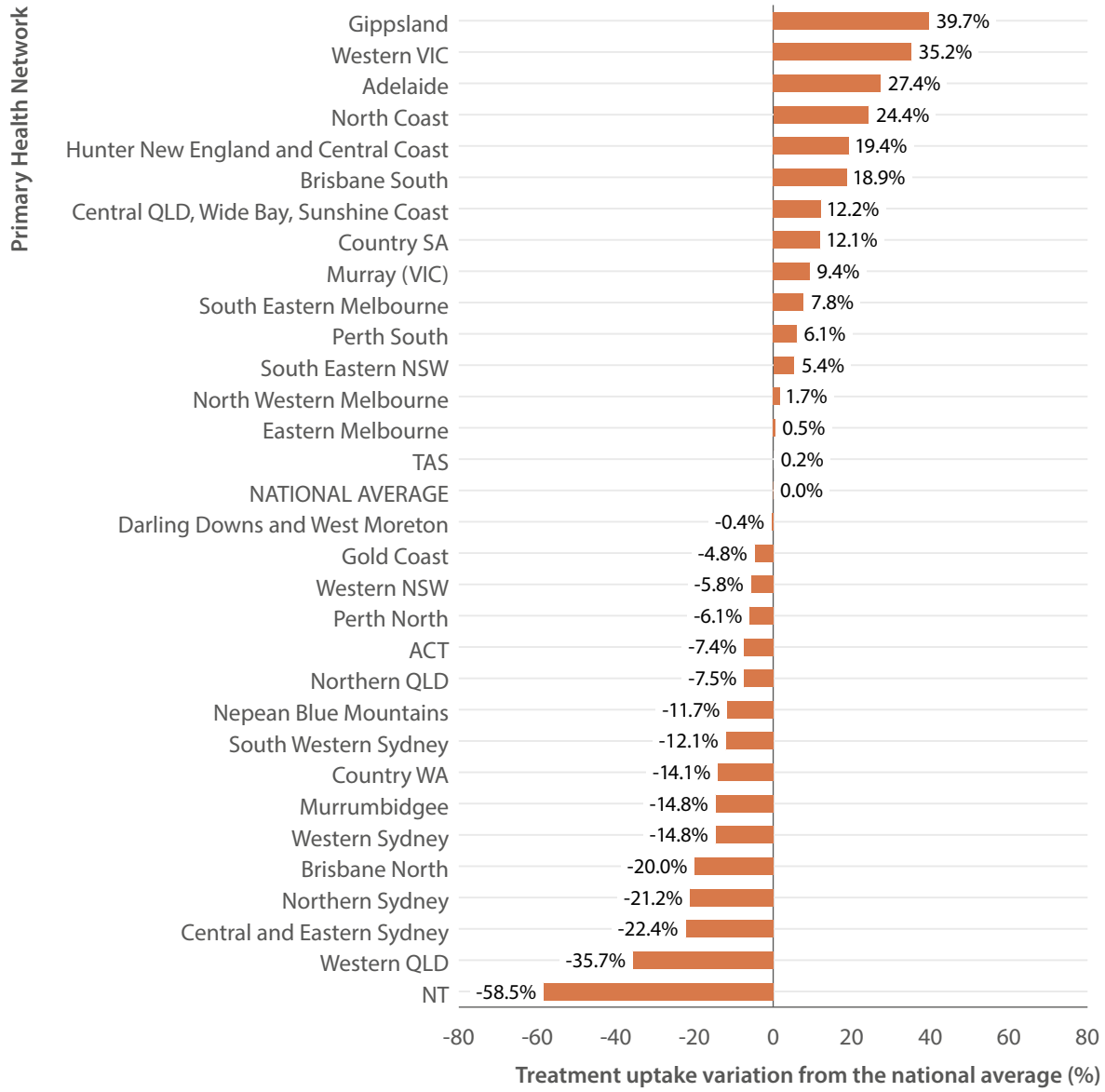
The following data were collected and reported by the Viral Hepatitis Mapping Project, WHO Collaborating Centre for Viral Hepatitis at the Doherty Institute, funded by the Australian Government Department of Health, Disability and Ageing. These data provide detail on hepatitis C prevalence, management, and treatment uptake by Primary Health Networks (PHNs) compared to the national average, giving insight into geographic diversity in these outcomes.[50]

Estimated variation in treatment uptake is limited by the underlying source data for estimating the number of people living with hepatitis C according to geographic region. Duplication of notifications and movement of individuals to other regions following diagnosis may lead to overestimation of prevalence, and therefore underestimation of treatment uptake in some regions.

Progress towards equity

- Treatment uptake at June 2024 was estimated to be highest in the Gippsland, Western VIC, Adelaide, North Coast, and Hunter New England and Central Coast PHNs. The lowest estimated treatment uptake was seen in NT, Western QLD, Central and Eastern Sydney, and Northern Sydney (Figures 35 and 36).

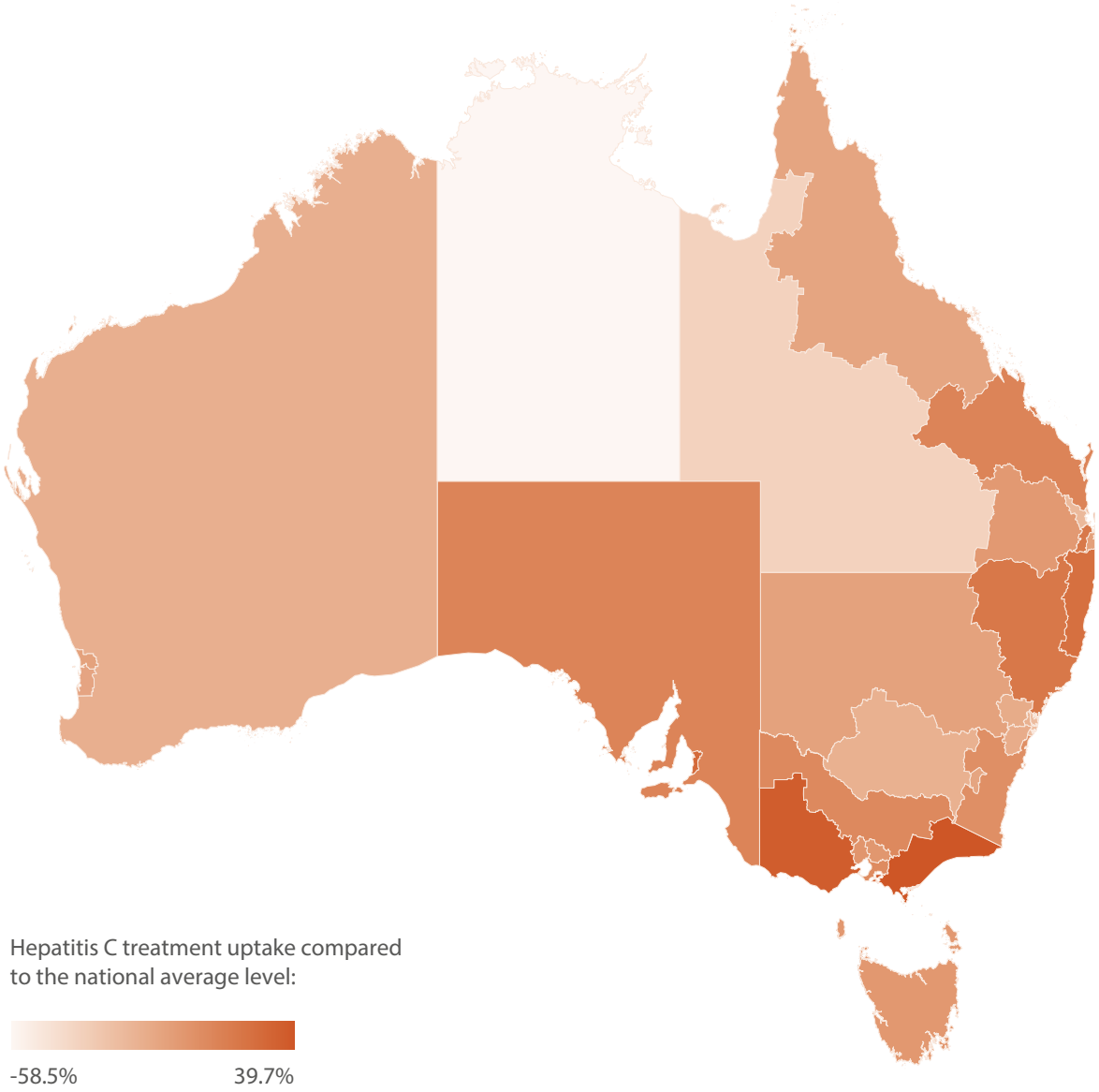
Figure 35. Hepatitis C treatment uptake variation compared to the national average by PHN, March 2016–June 2024



Source: The National Viral Hepatitis Mapping Project (WHO Collaborating Centre for Viral Hepatitis, The Doherty Institute).[50]

Notes: Hepatitis C treatment uptake variation estimates based on treatment (PBS) data sourced from Medicare statistics and hepatitis C notifications according to geographic region.

Figure 36. Geographic variation in hepatitis C treatment uptake, March 2016–June 2024



Source: The National Viral Hepatitis Mapping Project (WHO Collaborating Centre for Viral Hepatitis, The Doherty Institute).[50]

Notes: Hepatitis C treatment uptake variation estimates based on treatment data (PBS database) sourced from Medicare statistics and hepatitis C notifications according to geographic region.

Eight

Modelling

Mathematical models are useful tools for identifying factors influencing the likelihood of Australia eliminating hepatitis C as a public health threat. Over the past decade, several models have highlighted the cost-effectiveness and feasibility of hepatitis C treatment and elimination. There is ongoing work in this area, in particular focussing on the coverage of interventions required to ensure Australia meets its elimination targets (e.g., increased testing), the cost-effectiveness of these interventions, how funds can be spent optimally to achieve elimination, and modelling and mapping to identify if key regions or sub-populations are being left behind in the elimination response.

Progress towards elimination

Modelling from the Kirby Institute showed Australia has made substantial progress in expanding access to DAA therapy since their broad implementation in 2016. Current national estimates indicate that approximately 66% of people eligible for treatment and living with hepatitis C have initiated therapy since 2015. This reflects a significant achievement in terms of treatment reach and health-system responsiveness. This figure represents initial treatment only and does not account for retreatments among those who may have been reinfected or who did not achieve sustained virological response. Retreatment estimates and their contribution to overall treatment coverage will be incorporated into next year's report. The modelling estimates that hepatitis C incidence and treatment coverage goals would be met under all three treatment scenarios (optimistic, intermediate, and pessimistic). In an optimistic scenario, annual treatment numbers increase and are maintained at 6 548 each year from 2025 onwards, meeting the goal by 2028. In an intermediate scenario (considered a realistic treatment uptake) annual treatment numbers are maintained at 2024 levels: 5 238 each year from 2025 onwards, with the goal met by 2029. In a pessimistic scenario, annual treatment numbers decline and are maintained at 3 929 each year from 2025 onwards, meeting the goal by 2030. However, under pessimistic, intermediate, and optimistic scenarios, the goal of 65% reduction in deaths would not be met by 2030. There was an estimated 565 liver-related deaths occurring in 2024 compared to 728 in 2015, including both viraemic and cured population (Figure 37 and Table 2).

This model produces estimates of the number of people living with hepatitis C and the resulting time trends by first producing a specific estimate for the year 2015. The number of people living with hepatitis C at the end of 2015 was first estimated using observed cumulative notifications, estimated spontaneous clearance, mortality and migration rates, and an estimate for the percentage undiagnosed. In addition, the model mortality rates are calibrated to match empirical data from the NSW linkage study to best reflect the number of cases of decompensated cirrhosis, hepatocellular carcinoma, and liver-related death.

Progress towards elimination (continued)

The resulting model estimates are compared to available measured data to ensure they are valid and as accurate as possible. This process is repeated annually and can result in changes to the model estimates from year to year due to the availability of new data and information.

A mathematical model developed by the Burnet Institute was used to simulate the hepatitis C epidemic in Australia. The model disaggregates the Australian adult population into mutually exclusive groups based on risk factors, infection status, and care cascade status.

The model was calibrated to national and subpopulation-level estimates from the Australian Bureau of Statistics,[51,52] the Kirby Institute[18,43,53,54,55,56] and published Australian studies.[6,45,57] The model was fitted to historical data from 2000 to 2024 and used to project trends from 2025 to 2030, complementing existing knowledge by estimating the distribution of prevalence across different risk groups. The model provides estimates of the number and proportion of people living with chronic hepatitis C within two groups: people with recent injecting drug use, and people who have never injected drugs and people who have injected drugs but not in the past 12 months. The population disaggregation in the model was based on estimates from the Needle Syringe Program National Minimum Data Collection,[43] which reported that 72 984 people in Australia injected drugs regularly in 2023/24. As with any population-size estimates, there is uncertainty around this figure, which may lead to differences between model outputs and other published estimates. Credible intervals (CrI) are reported with numbers and proportions and represent a range where a value probably lies, given the observed data.

- In 2015, an estimated 34 000 (95% CrI: 30 000–37 000) people with recent injecting drug use (in the past 12 months), including Aboriginal and Torres Strait Islander people who inject drugs and people in prison who inject drugs, were living with chronic hepatitis C in Australia (Figure 38).
- People who inject drugs represented 23% (95% CrI: 19%–26%) of all people living with chronic hepatitis C in 2015 (Figure 39).
- By 2025, the proportion of people living with chronic hepatitis C who inject drugs had decreased by two-thirds to 7% (95% CrI: 5%–11%) and is projected to decline further to 6% (95% CrI: 3%–12%) by 2030, assuming current testing, treatment, and prevention trends continue (Figure 39).

Among people with recent injecting drug use, major progress has been achieved in reducing the number living with hepatitis C. But continued and expanded efforts are needed to prevent progress from stalling or regressing.

More effort is required to understand the demographics of people living with hepatitis C who have never injected drugs or who have injected drugs but not in the past 12 months, and to improve their engagement in care.

Figure 37. Annual change in people living with chronic hepatitis C, hepatitis C incidence (all), treatment coverage, and liver-related deaths (viraemic and cured) in Australia 2030 (2010–2030) with WHO HCV elimination targets (dotted lines: Panel B: - - 80% and - - 90% reductions in incidence, Panel C: - - 80% eligible treated, and Panel D: - - 65% reduction in deaths)

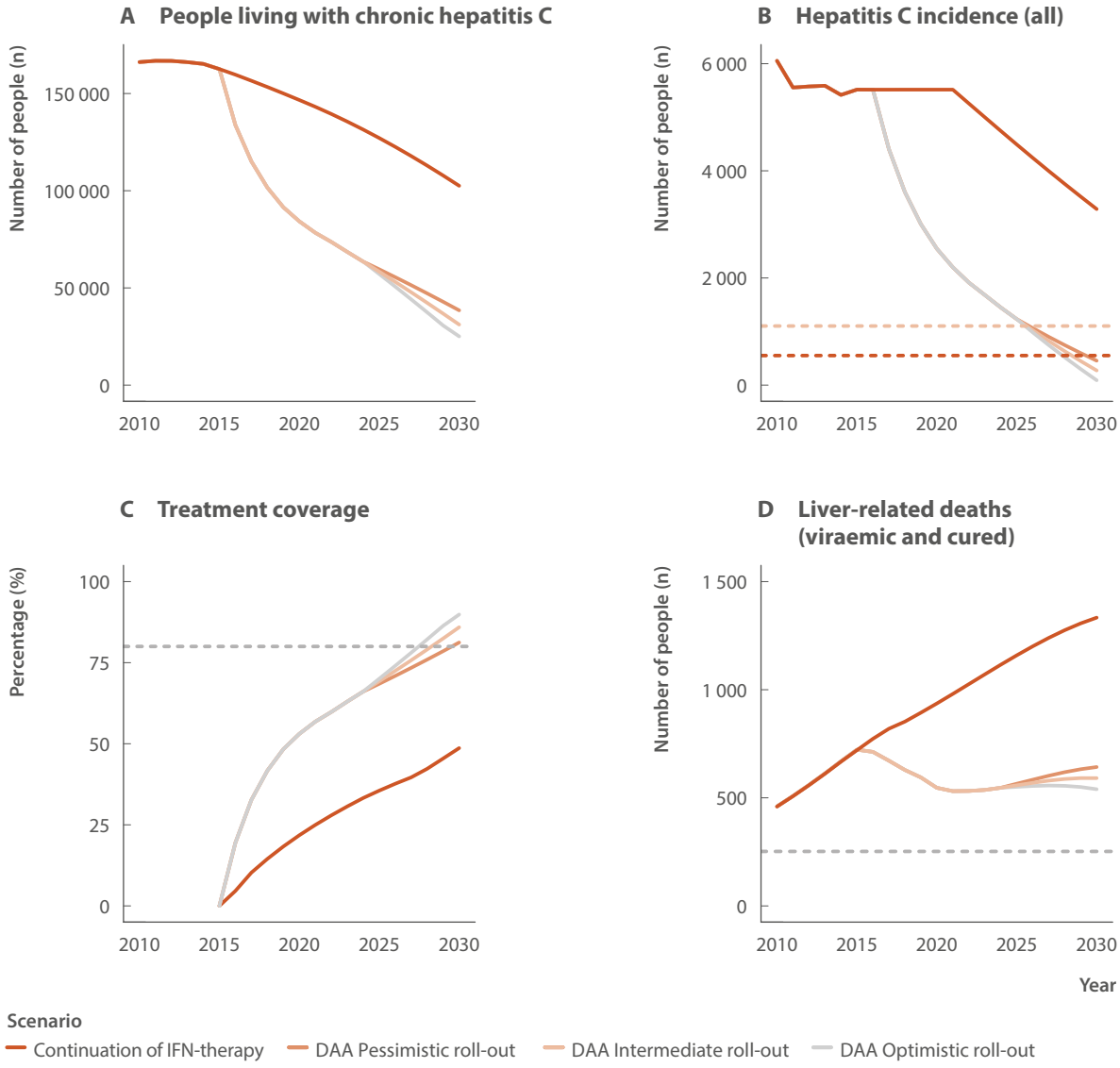


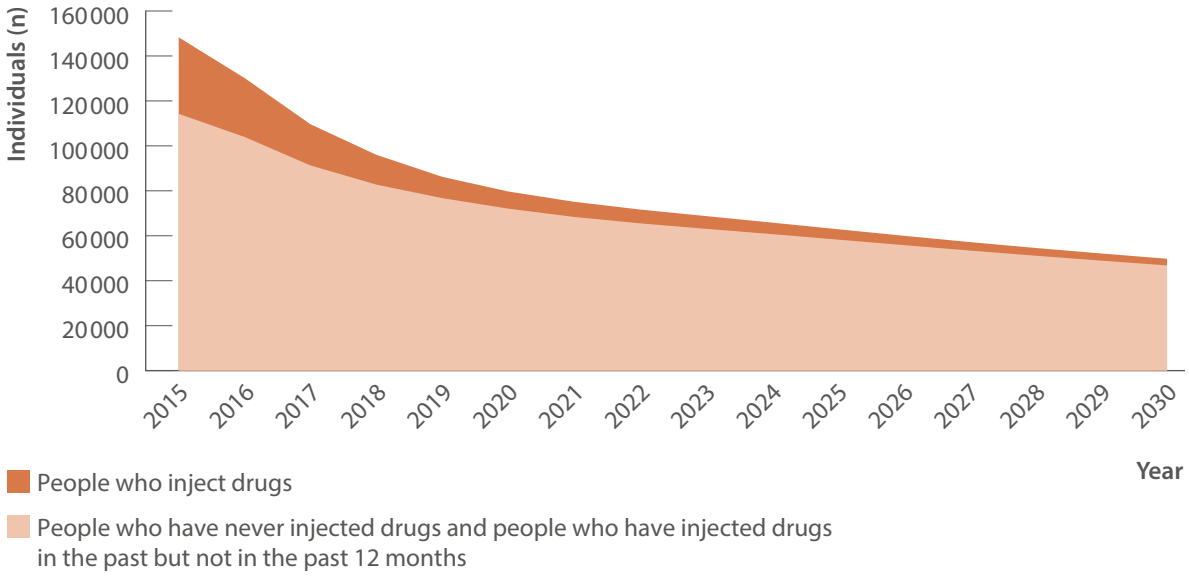
Table 2. Scenarios for the annual number of people in Australia receiving DAA

Treatment roll-out scenarios	2021	2022	2023	2024	Post-2025
Pessimistic roll-out	6 563	5 175	5 499	5 238	3 929
Intermediate roll-out	6 563	5 175	5 499	5 238	5 238
Optimistic roll-out	6 563	5 175	5 499	5 238	6 548

Source: Updated from Kwon et al., *J Viral Hepat* 2019[9] and Kwon et al., *PLoS One* 2021.[10]

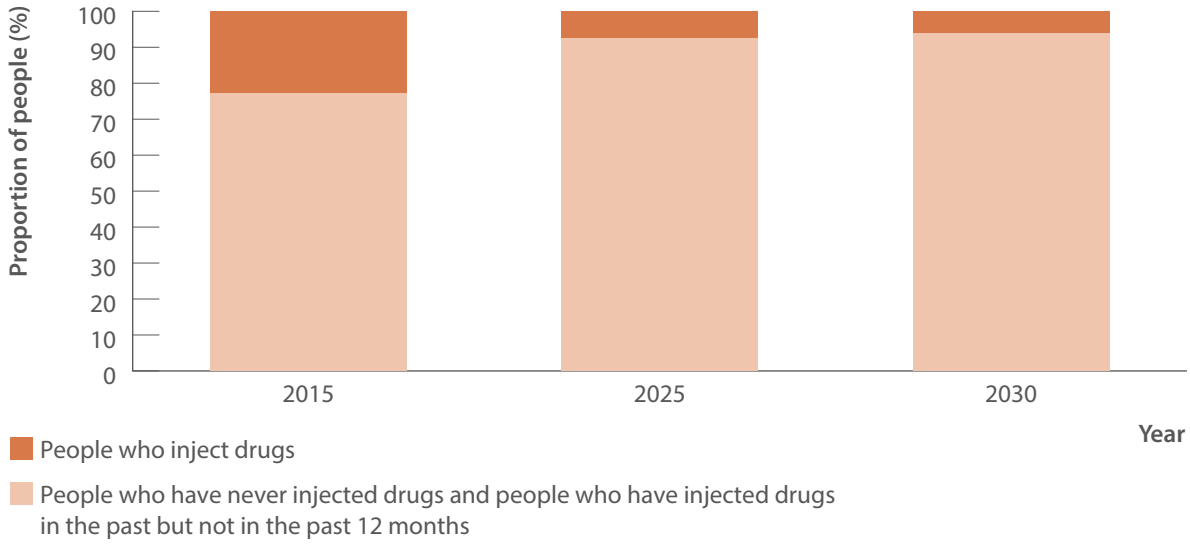
Notes: The assumed pessimistic roll-out scenario corresponds to 25% less people being treated with DAA therapy than 2024, an intermediate roll-out scenario corresponds to the annual number treated equalling the number in 2024, and an optimistic scenario where the annual number treated increased 25% more than the 2024 level. The annual number of people treated for all three scenarios in the earlier years is as follows: 2015 (interferon plus DAA): 4 720; 2016: 33 458; 2017: 21 249; 2018: 15 355; 2019: 11 433; and 2020: 8 215.

Figure 38. Estimated number of people living with chronic hepatitis C by injecting drug use status, 2015–2030



Source: Personal communication, Farah Houdroge and Nick Scott (Burnet Institute).

Figure 39. Estimated proportion of people living with chronic hepatitis C by injecting drug use status, 2015, 2025, and 2030



Source: Personal communication, Farah Houdroge and Nick Scott (Burnet Institute).

Methods

This report brings together national data sources to assess Australia's progress towards eliminating hepatitis C. Some data were not included due to unavailability at the time of reporting; future reports will aim to provide the most comprehensive picture possible.

Notifications of hepatitis C

Hepatitis C notifications were acquired from the National Notifiable Diseases Surveillance System[4,11] with details and notification requirements, procedures, and case definitions available from the Australian Government Department of Health, Disability and Ageing.[58] Notifications are also reported annually in the *HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report*.[4]

Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Sexually Transmissible Infections and Blood Borne Viruses (ACCESS)

ACCESS was established to monitor STI and BBV testing and test outcomes among priority populations.[13,14,15] ACCESS focusses on recruiting sites that serve priority populations, including people who inject drugs and GBM living with HIV. ACCESS collates data on consultations, hepatitis C testing and test outcomes from participating sites. Please note that the data included in this report may differ to that presented in previous or subsequent reports due to the availability of expanded data and associated enhancement of analytical, linkage, and processing methods.

Record linkage

Individuals' electronic medical records were linked between sites using a linkage code and probabilistic matching so that consultation, testing and test outcome data account for individuals attending more than one ACCESS site.

Sites

ACCESS includes primary care clinics that provide specialist health services to people who inject drugs, such as NSP, opioid agonist therapy, and hepatitis C testing and treatment. ACCESS sites include both specialist and general health services, and publicly-funded sexual health centres, where attendees may be people currently injecting, people who previously injected drugs, or people who have never injected drugs. Also, a subset of clinics participating in ACCESS that had data available for this report, had high completion of the Aboriginal and Torres Strait Islander status of individuals in their patient management systems (of unique individuals who attended included clinics 2014–2024 for a consultation (N=538 044), 3% of people had no Aboriginal and Torres Strait Islander status recorded (missing), 7% were recorded as 'not stated', 87% were neither Aboriginal nor Torres Strait Islander people, and 3% were Aboriginal and Torres Strait Islander people. When restricted to individuals contributing one test per year, data from the ACCESS sites can be used to describe trends in test uptake (tests conducted divided by consultations) and positivity (positive tests divided by tests conducted).

Data from 46 sites in total were used and stratified into primary care clinics that specialise in the health of people who inject drugs as well as providing general primary care (20 sites; one site has three health services counted as one site and one site has eight health services counted as one site), primary care clinics specialising in the health of GBM (12 sites), and sexual health clinics (14 sites). Nineteen clinics were used for analysis of hepatitis C testing among Aboriginal and Torres Strait Islander people, including 11 sexual health clinics, five primary care clinics, and three primary care clinics specialising in the health of GBM; seven of the sexual health clinics, two of the primary care clinics specialising in the health of GBM, and one primary care clinic were included in the analysis of hepatitis C testing among GBM living with HIV.

Primary care clinics included 16 in VIC, two in NSW, one in WA, and one in QLD; of these clinics seven had onsite NSPs and all 19 clinics had opioid agonist therapy providers at the time of reporting. Primary care clinics specialising in the health of GBM included four in NSW, three in VIC, three in WA, one in SA, and one in QLD. Sexual health clinics included seven in NSW, three in QLD, one in VIC, one in SA, one in WA, and one in TAS. Sexual health and primary care clinics included for analysis of Aboriginal and Torres Strait Islander people were seven in NSW, six in VIC, three in QLD, two in WA, and one in SA. ACCESS continues to expand and refine its system; therefore, future reports will include data from additional sites.

Sex, gender, and variations of sex characteristics in ACCESS data

The journey toward trans-affirming data collection in the reporting of BBVs in Australia has been long and challenging. Though we have come a long way, the availability and recording of information on sex recorded at birth, gender, and sex characteristics in electronic medical records is inconsistent and may not fully align with the Australian Bureau of Statistics Standard.[59]

These limitations can lead to inaccuracies and misclassification, particularly affecting trans women, trans men and non-binary people.

ACCESS is committed to improving the quality and inclusivity of data collected from participating clinics to better represent the diversity of communities impacted within its network.

In 2026, ACCESS will be undertaking a data review and consultation to identify strategies to better identify trans communities within the BBV reporting framework.

Gay, bisexual, and other men who have sex with men

Individuals classified as GBM were males who:

- were recorded as gay or bisexual in an ACCESS clinic's patient management system, or
- had ever had a rectal swab for chlamydia or gonorrhoea at an ACCESS clinic.[(60)]

Note that at the GBM clinics, only a small proportion of individuals could be classified on recorded sexuality alone, meaning that classification of individuals as GBM at these clinics is based largely on STI testing history criteria within the algorithm.

Gay, bisexual, and other men who have sex with men living with HIV

Individuals defined in ACCESS as GBM living with HIV:

- had a positive HIV diagnostic test result recorded at an ACCESS clinic, or
- had an HIV viral load test result in an ACCESS clinic's patient management system, and
- were defined as GBM using the algorithm outlined above.

HIV status could only be determined if a history of HIV diagnostic or viral load testing was recorded at a site within the ACCESS network.

Incidence definition

Individuals were included in the incidence estimate if they were HCV antibody negative and HCV RNA negative or HCV antibody negative and HCV RNA testing was not performed during their first testing episode recorded by ACCESS from 2009 (at risk for primary infection). Time-at-risk was defined as the cumulative time between everyone's first negative test (HCV antibody) and last test (HCV antibody and/or HCV RNA). Time-at-risk was assigned to the calendar year in which it occurred for annual incidence estimates.

Incident hepatitis C cases were defined as:

- acute infection (HCV antibody negative and HCV RNA positive after an HCV antibody negative),
- antibody seroconversion (HCV antibody positive after an HCV antibody negative), or
- HCV RNA positive after an HCV antibody negative in the absence of an HCV antibody test.

Date for incident infection was assigned as the midpoint between the positive test (HCV antibody or HCV RNA) and prior HCV antibody negative test. Only individuals' first incident infection recorded in ACCESS were included in analyses.

Consults

To account for the effects of the COVID-19 pandemic on consultation data, consultations that were associated with a SARS-CoV-2 pathology test request were excluded.

Test uptake

Annual test uptake was defined as number of individuals tested divided by number of individuals who attended a consultation, with individuals only counted once a year. Clinic attendances included in-person and telehealth consultations.

Proportion positive

Annual positivity was defined as number of individuals tested positive divided by number of individuals tested, with individuals only counted once a year. Individual's HCV antibody tests after an HCV antibody positive test being observed were excluded from analysis.

Treatment

Treatment initiation was inferred by presence of an electronic medical record prescription for hepatitis C treatment stored in patient management systems of participating clinics.

Australian Needle Syringe Program Survey

The Australian Needle Syringe Program Survey, led by Professor Lisa Maher, provides serial point prevalence estimates of HIV and HCV antibody prevalence, HCV RNA prevalence, and monitors sexual and injecting behaviour among people who inject drugs in Australia. The Australian Needle Syringe Program Survey is conducted annually at more than 50 NSP services over a one-to-two-week period in October each year. Participants complete a brief self-administered questionnaire and provide a capillary blood sample which is subsequently tested for HIV and HCV antibodies and HCV RNA. The Australian Needle Syringe Program Survey National Data Report is published annually, including full details of the methodology.[18]

Medicare claims for HCV RNA testing

Data tables of Medicare claims are available through Medicare Australia Statistics.[19]

National Prisons Hepatitis Network

Data on HCV antibody and HCV RNA testing, test positivity, total treatment initiations, and individuals initiated on DAA treatment in 2024 in Australia's prisons were collated by the National Prisons Hepatitis Network from prison-based hepatitis services[20] and the Australian HCV Point-of-Care Testing Program (Kirby Institute).[21]

Treatment initiations were defined as the total number of treatment episodes in 2024, and individuals may contribute more than one episode in 2024. Individuals treated was defined as the number of unique individuals that initiated a treatment episode in 2024. DAA retreatment of individuals was defined as a hepatitis C treatment being initiated in 2024 where a previous record of an in-prison treatment was held.

For some jurisdictions, there were differences in the number and type of prisons included in data collection. For instance, in NSW, data were included from 36 public prisons; data from three private prisons were not included, whereas for VIC, HCV antibody and HCV RNA testing data were not included from one public prison.

Australian Capital Territory

Hepatitis C testing data were obtained from pathology results in patients' medical records via the Digital Health Record.

Data on hepatitis C therapies (DAA) were entered by clinical staff, reviewable from electronic medical records and auditable from pharmacy and the Digital Health Record.

New South Wales

Treatment data (DAA) were collected via the pharmacy dispatch records of when medications were dispatched to prison centres. The data corresponding to HCV antibody and HCV RNA testing numbers were obtained by using a software script-generated data extraction from existing pathology results in Justice Health electronic Health System (JHeHS) for the period of interest. Point-of-care testing data were obtained from the Australian HCV Point-of-Care Testing Program.

Northern Territory

Hepatitis C testing data were provided by Territory Pathology who provide the pathology services to the NT Prisons. Treatment data (DAA) were obtained through the Viral Hepatitis Service's hepatitis C clinical database that records treatment initiations. Accuracy and completeness of data were dependent on the quality of the data recorded by the clinicians. For Darwin Correctional Centre, data were confirmed by pharmacy records.

Queensland

Venepuncture based hepatitis C testing data were obtained from AUSLAB which is an integrated laboratory information system incorporating pathology, clinical measurements, forensics and public health laboratories. It provides real-time results which are uploaded by the pathology laboratories. Point-of-care testing data were obtained from the Australian HCV Point-of-Care Testing Program. Treatment data (DAA) were obtained directly from Prisoner Health Services in each facility as part of the Hepatitis C Prison Treatment Communication Tool coordinated by the HCV Hub at West Moreton Public Health Unit.

South Australia

Hepatitis C testing data were obtained from the contracted pathology provider (SA Pathology Service) and the Australian HCV Point-of-Care Testing Program. Paper-based health records were used in prisons; the number of treatment initiations (DAA) was based on records of pharmacy prescriptions filled.

Tasmania

Hepatitis C testing data were obtained from Pathology Services, Royal Hobart Hospital. Hepatitis C Treatment Program data were collected from dispensing records maintained by the Correctional Primary Health Service Pharmacy.

Victoria

Data were sourced from the Department of Justice and Community Safety (Victorian Government). For 12 men's prisons, pathology data were sourced from the patient management system (JCare) and point-of-care testing data were sourced from St Vincent's Hospital Statewide Hepatitis Program. Treatment data (DAA) for 12 men's prisons were collected from dispensing records of the pharmacy database maintained by St Vincent's Hospital Melbourne. Testing and treatment data for one women's prison were collected from the patient management system (JCare).

Western Australia

Hepatitis C testing data were obtained through the contracted pathology provider. The number of treatment initiations (DAA) was based on pharmacy prescriptions filled, cross-checked against prisoner data recorded on the WA Department of Justice electronic patient health record.

NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot

The study methods have been described previously.[22] Briefly, the NSW HIV and Hepatitis C Dried Blood Spot Pilot is an interventional cohort study of people testing for HIV antibody and/or HCV RNA from dried blood spot samples in NSW, Australia. Participants at risk of HIV/hepatitis C participated in testing via: 1) self-registration online with a dried blood spot collection kit delivered and returned by conventional postal service; or 2) assisted dried blood spot sample collection at one of 36 community health sites (including drug treatment and harm minimisation services) and select NSW prisons. Participants received results by text message (HIV antibody/HCV RNA not detected) or a healthcare provider (HIV antibody/HCV RNA detected).

Monitoring hepatitis C treatment uptake in Australia

The methods for the estimations have been described in detail elsewhere.[26] In brief, the total PBS data of DAA dispensation for all individuals who initiated treatment between March 2016 and December 2024 in Australia were used to estimate the number of treatment initiations, number of individuals initiating DAA treatment, and for all subgroup analyses of DAA uptake. Prescriber speciality was based on the prescriber derived major speciality codes recorded by the PBS. In this coding system, medical trainees (i.e., registrars) are also considered as specialists. The proportion of treatment initiations by prescriber type between 2019 and 2021 should be interpreted cautiously given the increasing number of unidentified prescriber type in these years. Jurisdictions are based on the patient residence at the time of treatment prescription.

Hepatitis C cascade of diagnosis and care

The estimates for the hepatitis C cascade of diagnosis and care are published annually in the *HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report,*[4] with methods associated with the updated cascade described in detail.

Modelling the Australian response to hepatitis C

Methods associated with the Kirby Institute's modelling have been previously published.[4,9,10]

The hepatitis C cascade estimates and outputs from the hepatitis C model are reviewed annually to ensure they are consistent with available epidemiological data. This includes updating parameter values and input data from clinical studies as results become available. This can lead to major changes in the estimates for the number of hepatitis C and hepatitis C-related liver disease burden and mortality. Observational studies were used for both model inputs and model calibration, in particular the Australian Needle Syringe Program Survey, the ETHOS Engage study, and the SEARCH study (emergency department screening) have reported hepatitis C treatment coverage of greater than 80% in NSW.[61,62,63,64] Model estimates can differ from observed studies; discrepancies may be due to an overestimate of the number of people living with hepatitis C in Australia. Two plausible reasons for this overestimation are: 1) a substantial number of duplicate hepatitis C notifications due to interstate movement, and 2) the possibility of false-positive notifications in

low-prevalence settings. The percentage of notifications that are interstate duplicates and the proportion that are false positive is currently unknown. However, a study in QLD is investigating the proportion of notifications that are false positives, and the model may be revised accordingly in future analyses.

Reinfection and retreatment

The model has incorporated reinfection and retreatment, by distinguishing individuals who are cured and subsequently reinfected. Based on a recent study,[65] the reinfection incidence rate among people who inject drugs who were cured with DAA therapy between 2015 and 2021 was 9.5 per 100 person-years. Given that very few reinfections occur among those with cirrhosis, the model assumed that most reinfections occur in the F0–F2 stage of the disease and have distributed the retreated population across disease stages using data from the ETHOS study. The model was then calibrated with retreatment data from the PHASE study, which examined reinfection-related retreatment using PBS data (updated from Carson et al.).[29]

Australia and New Zealand Liver and Intestinal Transplant Registry

The primary diagnosis at the first liver transplant of each adult patient (aged 16 years or older) who underwent a transplant at one of the five Australian liver transplant centres were sourced from the Australia and New Zealand Liver and Intestinal Transplant Registry.

Stigma Indicators Monitoring Project

For more information about the development of the stigma indicator, see Broady et al.[37]

Survey of the Australian general public

In 2017, the Stigma Indicator was included in the Australian Survey of Social Attitudes (a postal survey of a representative sample of the Australian population; N=1 001). In 2020, the Stigma Indicator was included in an online survey of Australian adults, recruited via paid social media advertising (N=2 010). In 2021 and 2024, the Stigma Indicator was included in online surveys of the Australian public, with recruitment facilitated by a paid research panel and demographic quotas implemented to enhance representativeness with the wider Australian population (N=1 555–2 251).[41]

Survey of Australian healthcare workers

In 2018, the Stigma Indicator was included in an online survey of Australian healthcare workers, recruited via paid social media advertising (N=551). Between 2021 and 2024, the Stigma Indicator was included in online surveys of Australian healthcare workers, with recruitment facilitated by a paid research panel (N=907–1 993).[42]

Needle Syringe Program National Minimum Data Collection

The Needle Syringe Program National Minimum Data Collection, led by Professor Lisa Maher, provides data from all Australian jurisdictions incorporating the following three components: needle syringe program service type and location, non-identifiable client occasions of service, and needle syringe distribution. The Needle Syringe Program National Minimum Data Collection National Data Report is published annually, with full details of methods included.[43]

Illicit Drug Reporting System

The Illicit Drug Reporting System publishes an annual report, with full details of methods included.[47]

GBQ+ Community Periodic Survey

The GBQ+ Community Periodic Survey is a repeated, cross-sectional survey of GBQ+ men and non-binary people conducted using time-location sampling at gay venues, events, and clinics, supplemented by online recruitment. The Centre for Social Research in Health (University of New South Wales) conducts the survey in seven Australian states and territories, with community-based recruitment focussed on metropolitan areas. Its methods are described in detail elsewhere.[48,49]

Viral Hepatitis Mapping Project

Details of the Viral Hepatitis Mapping Project are published in full elsewhere.[50]

Burnet Institute mathematical modelling

The Burnet Institute modelling is an expansion of an existing hepatitis C model[25,66] with population groups disaggregated by age (18–64 years and 65+ years) and stratified by injecting drug use status, Aboriginal and Torres Strait Islander status, and incarceration. Population estimates were taken from the Australian Bureau of Statistics[51,52] and the Needle Syringe Program National Minimum Data Collection: National Data Reports.[43]

The model is initialised in the year 2000 with 155 000 people living with chronic hepatitis C, which provided the best fit to prevalence and incidence trends from 2015 onwards. Transmission among people who inject drugs in the community and in prison is explicitly modelled to fit population-specific hepatitis C incidence and prevalence.[6,18,45,53,54,55,56,57] People infected with acute hepatitis C have a probability of developing chronic infection, which progresses from F0 (no fibrosis) to F4 (cirrhosis), leading to decompensated cirrhosis and hepatocellular carcinoma (liver cancer), and possibly a liver transplant.

Infected individuals can be undiagnosed and in care or lost to care, diagnosed HCV antibody positive, diagnosed HCV RNA positive, in treatment or cured; and have a probability of becoming lost-to-follow-up at any stage, with rates of progression through the care cascade differing by population group.

Acknowledgements

This report was funded by the EC Australia Partnership with support from the Burnet Institute Strategic Investment Scheme.

Consultation with community

The following organisations are thanked for their generous contributions during consultation processes:

ASHM
Health Equity Matters
Australian Injecting and Illicit Drug Users League (AIVL)
Hepatitis Australia
Liver Foundation

Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Sexually Transmissible Infections and Blood Borne Viruses

As a national surveillance system, ACCESS receives core funding from the Australian Government Department of Health, Disability and Ageing. The Burnet Institute gratefully acknowledges the contribution to this work of the Victorian Operational Infrastructure Support Program.

ACCESS is a collaboration between the Burnet Institute, Kirby Institute, and NRL Quality, and we gratefully acknowledge the role of all collaborating institutions and individuals.

GRHANITE™ developers in the Health and Biomedical Informatics Centre at the University of Melbourne provide systems, software, and support to ACCESS.

Members of the Burnet Institute surveillance group who contributed to the data collection, processing, analysis, and reporting in preparation of this report were (in alphabetical order): Jason Asselin, Nyssa Watson, Carol El-Hayek, Long Nguyen, Thi Nguyen, Victoria Polkinghorne, and Michael Traeger. Margaret Hellard and Mark Stoové made additional contributions to interpretation and reporting of the results.

We gratefully acknowledge the contribution of the members of the ACCESS Executive Committee (in alphabetical order): Jason Asselin, Burnet Institute; Allison Carter, Kirby Institute; Htein Linn Aung, Kirby Institute; Wayne Dimech, NRL Quality; Basil Donovan, Kirby Institute; Rebecca Guy, Kirby Institute; Margaret Hellard, Burnet Institute; and Mark Stoové, Burnet Institute.

We gratefully acknowledge the contribution of the ACCESS Advisory Committee members and the contribution of clinicians and practitioners at participating clinics. The sites that contributed data to this report were (in alphabetical order):

Adelaide Sexual Health, Anglesea Medical Centre, Ballarat Community Health, Barwon Health's Drug and Alcohol Service, Bendigo Community Health, Blue Mountains District ANZAC Memorial Hospital Sexual Health Clinic, Burwood Road GP, Caroline Springs Medical Centre, cohealth (eight sites), Centre Clinic, Clinic 229; Grafton Sexual Health, Clinic 33; Coffs Harbour Sexual Health Clinic, Dandenong SuperClinic, Deen Clinic, EACH, East Sydney Doctors, Fountain Street General Practice, Gold Coast Sexual Health Service, GP on Beaufort, Holdsworth House, Kardinia Health, Lismore Sexual Health Service and Tweed Valley Sexual Health Services (Clinic 145), Lygon Court Medical Clinic, Kings Park Medical Centre, M Clinic, Macleay Street Medical Practice, Medeco Medical Centre Inala, MediClinic Clayton, Melbourne Sexual Health Centre, Murrumbidgee Local Health District (Bega Community Health Service, Goulburn Community Health Centre, Narooma Community Health Centre, Queanbeyan Community Health Centre), Nepean Hospital Sexual Health Clinic, North Richmond Community Health, Northside Clinic, O'Brien Street Medical Clinic, Prahran Market Clinic, RPA Sexual Health, Sexual Health Quarters, Sexual Health Services Tasmania, South Wangaratta Medical Centre, Stonewall Medical Centre, Sydney Sexual Health Centre, Taylor Square Private Clinic, Townsville Sexual Health Centre, View Street Medical, Western Local Health District (Bourke Community Health Centre, Dubbo Community Health Centre Sexual Health Service, Lightning Ridge Community Health Centre, Kite Street Community Health Centre), Western Regional Drug and Alcohol Centre, and Yarram and District Health Service.

Australian Needle Syringe Program Survey

The Australian Needle Syringe Program Survey would like to acknowledge the many people who assist each year in the development and conduct of the Australian Needle Syringe Program Survey, particularly the clients, staff, and managers at participating NSP services. The Australian Needle Syringe Program Survey also appreciates the dedication and vision of the founding members of the project and in particular the late Dr Margaret MacDonald who was responsible for the development and conduct of the Australian Needle Syringe Program Survey from 1995 until 2003. Special thanks go to Associate Professor Philip Cunningham OAM, Chief Research Officer, Mr Mitchell Starr, Senior Hospital Scientist, Mr Andrew Kelly, Research Assistant, and Ms Shannen Butterly, Research Assistant at the NSW State Reference Laboratory for HIV at St Vincent's Hospital and St Vincent's Centre for Applied Medical Research, Sydney. We also appreciate the assistance provided by Ms Rachel McCleave from the Kirby Institute.

In 2024, the project received guidance and input from the following members of the Australian Needle Syringe Program Survey National Advisory Group: Mr Phillip Hull (ACT); Ms Kate Jennings (NSW); Ms Susannah O'Brien (NT); Ms Kate Kelly (SA); Ms Myf Briggs (TAS); Mr Rob Biviano (VIC); Ms Carla Gorton (QLD); Ms Ele Morrison (Australian Injecting and Illicit Drug Users League); and Ms Sue Heard, Dr Bradley Mathers and Professor Lisa Maher (Kirby Institute). The Australian Needle Syringe Program Survey would particularly like to thank Ms Jude Bevan (WA) for chairing the National Advisory Group. The Australian Needle Syringe Program Survey is funded by the Australian Government Department of Health, Disability and Ageing.

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Holly Beasley (Senior Project Officer BBV, WA Department of Justice)
WA tertiary hospital hepatology services
Prison clinical staff from Justice Health and Wellbeing Services, WA Department of Justice

NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot

The NSW HIV and Hepatitis C Dried Blood Spot Testing Pilot acknowledge the data providers and contributors, including NSW Health, Local Health Districts, Justice Health, and primary and specialist clinics for their ongoing support and timely data submissions.

Australia and New Zealand Liver and Intestinal Transplant Registry

Michael Fink (Director) and Wing-Yee Lo (Manager), Victorian Liver Transplant Unit, Austin Health

Australian Liver Transplant Units:

Simone Strasser, Australian National Liver Transplant Unit, Royal Prince Alfred Hospital
Peter Hodgkinson, QLD Liver Transplant Service, Princess Alexandra Hospital
John Chen, SA Liver Transplant Unit, Flinders Medical Centre
Robert Jones, VIC Liver Transplant Unit, Austin Health
Luc Delriviere, WA Liver Transplantation Service, Sir Charles Gairdner Hospital

Stigma Indicators Monitoring Project

The Stigma Indicators Monitoring Project is funded by the Australian Government Department of Health, Disability and Ageing. The project team would like to thank study participants for their valuable contribution to the research and each of the organisations who assisted with participant recruitment.

Needle Syringe Program National Minimum Data Collection

The Needle Syringe Program National Minimum Data Collection project is grateful for support and input from the following members of the Reference Group in 2024: Philip Hull (ACT); Kate Jennings (NSW); Susannah O'Brien (NT); Carla Gorton (QLD); Kate Kelly (SA); Myf Briggs (TAS); Kris Drew and Rob Biviano (VIC); Jude Bevan (WA); Ele Morrison (Australian Injecting and Illicit Drug Users League); Sione Crawford (Harm Reduction Victoria) and Mary Harrod (NSW Users and AIDS Association). The Needle Syringe Program National Minimum Data Collection also appreciates the valuable assistance provided by Steve Farrugia (ACT), Benet Brogan (QLD), Michelle Rutter (SA), Rob Knight (VIC), Hollie Chester (WA), and Needle Syringe Program attendees and staff and managers at Needle Syringe Program services. The Needle Syringe Program National Minimum Data Collection is funded by the Australian Government Department of Health, Disability and Ageing.

GBQ+ Community Periodic Survey

The GBQ+ Community Periodic Surveys are funded by state and territory health departments, the Australian Government Department of Health, Disability and Ageing, and the National Health and Medical Research Council (GNT2002625).

Project team

Martin Holt, Benjamin Bavinton, Timothy Broady, Curtis Chan, James MacGibbon, Anthony KJ Smith, and Limin Mao.

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