



UNSW
Kirby Institute

**HIV, viral hepatitis
and sexually transmissible
infections in Australia
Annual surveillance
report 2024**



Hepatitis C



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HIV, viral hepatitis and sexually transmissible infections in Australia

Annual surveillance report 2024

Kirby Institute, UNSW Sydney

Prepared by:

Jonathan King
Hamish McManus
Jisoo Amy Kwon
Richard Gray
Skye McGregor

Other contributors:

- Australian Government Department of Health and Aged Care
- State/territory health departments
- Brynley Hull, Aditi Dey, National Centre for Immunisation Research and Surveillance
- Gladymar Perez Chacon, Hamish McManus, Cassandra Bull, Ela Naruka, Behzad Hajarizadeh, Htein Linn Aung, Heather Valerio, Gregory Dore, Lisa Maher, Bradley Mathers, Sue Heard, Curtis Chan, Kathy Petoumenos, Nicholas Medland, The Kirby Institute, UNSW Sydney
- Anh Nguyen, Jennifer MacLachlan, Nicole Romero, Benjamin Cowie, WHO Collaborating Centre for Viral Hepatitis, Victorian Infectious Diseases Reference Laboratory, The Doherty Institute
- Anna Wilkinson, Jason Asselin, Mark Stoové, Margaret Hellard, Burnet Institute
- Wing-Yee Lo, Australia and New Zealand Liver and Intestinal Transplant Registry
- Timothy Broady, Centre for Social Research in Health, UNSW Sydney
- Monica Lahra, WHO Collaborating Centre for STI and AMR Microbiology, NSW Health Pathology
- John Didlick, David Halliday, Hepatitis Australia

in collaboration with networks in surveillance for HIV, viral hepatitis and sexually transmissible infections

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Design il Razzo, Email: admin@ilrazzo.com.au

Kirby Institute UNSW Sydney NSW 2052

Telephone: 02 9385 0900 (International +61 2 9385 0900)

Email: info@kirby.unsw.edu.au

Hepatitis C

We recognise communities and individuals impacted by and at risk of HIV, hepatitis B and C, and sexually transmissible infections. These people and communities are crucial stakeholders in the work we do, with invaluable contributions and lived experiences. We acknowledge and affirm their crucial role in the development of this report, and public health surveillance more broadly. This report aims to ensure that ongoing and emerging public health threats and inequities are apparent, and that high quality data are available to inform appropriate public health responses to address these issues. We also acknowledge the ongoing negative impacts stigma and societal discrimination play in perpetuating inequity, and support principles of empowerment, community ownership, and partnership.

The years for comparison in this report are from 2014 to 2023. Additional years for comparison include 2015 to 2023 to highlight the effect of subsidised interferon-free direct-acting antiviral regimen availability from March 2016. Data with which to assess progress towards national and global hepatitis C elimination targets are presented in Australia's progress towards hepatitis C elimination: annual report 2024. Many indicators in the report were affected by the COVID-19-related impacts on travel and access to health care, particularly testing and treatment. These impacts are acknowledged in figures and text throughout the report.

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Abbreviations

95% CI	95% Confidence Intervals
ABS	Australian Bureau of Statistics
ACCESS	Australian Collaboration for Coordinated Enhanced Sentinel Surveillance
ANSPS	Australian Needle Syringe Program Survey
BBV	bloodborne virus
DAA	interferon-free direct-acting antiviral therapy

1 Summary data

Hepatitis C notifications

- In 2023 there were 7602 hepatitis C notifications in Australia. Over two-thirds (5458, 72%) of the notifications were among males.
- The overall hepatitis C notification rate declined by 36% over the 10-year period 2014 to 2023, from 43.9 to 28.1 per 100 000 population.
- Among the age group most likely to have acquired primary hepatitis C recently, people aged 15 to 24 years, the notification rate declined by 28% between 2014 and 2023 (from 35.5 per 100 000 in 2014 to 25.6 per 100 000 in 2023).
- In this period there was a 62% decline in the notification rate among women aged 15 to 24 years, from 25.4 to 9.7 per 100 000. Among men aged 15 to 24 years, the hepatitis C notification rate declined by 10% from 45.1 per 100 000 in 2014 to 40.6 per 100 000 in 2023.
- Between 2019 and 2023, among Aboriginal and Torres Strait Islander people aged 15 to 24 years, the hepatitis C notification rate declined by 27% from 323.1 to 236.1 per 100 000. In 2023 among people aged 15 to 24 years, the notification rate among Aboriginal and Torres Strait Islander peoples was more than ten times as high as among non-Indigenous people (236.1 and 22.4 per 100 000, respectively).

Testing

- Among people who inject drugs and attend clinics in the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance (ACCESS), the proportion who received a hepatitis C test in the past 12 months fluctuated between 46.2% and 58.7% and was 47.5% in 2023. However, a decline in the number of people attending clinics in the ACCESS network since the start of the COVID-19 pandemic may mean that overall testing numbers in this group declined from 2020.
- Data from the Australian Needle Syringe Program Survey (ANSPS) indicate that in 2023, about half (47%) of survey respondents reported a hepatitis C antibody test in the previous 12 months, a decline from 2014 to 2019 (range: 53% to 55%). Since the beginning of the COVID-19 pandemic in 2020, the proportion reporting a hepatitis C antibody test among this cohort has remained stable between 47% and 49%.
- Among participants of the Australian Hepatitis and Risk Survey in Prisons (AusHep) study, 70% of people in prison reported having ever been tested for hepatitis C (antibody or RNA), with 36% reporting undertaking a test within the previous 12 months. Among survey participants with a history of injection drug use, 88% report a previous hepatitis C test while 44% report undertaking a hepatitis C test in the previous 12 months.

Incidence, prevalence, and morbidity

- According to modelled estimates, between 2017 and 2023, the number of total incident hepatitis C infections decreased by 61% from 4470 to 1740. In the same period, among total incident infections, the proportion of reinfections increased from 30% to 52%, while the proportion of primary incident infections decreased from 70% to 48%.
- The estimated hepatitis C antibody prevalence among AusHep participants was 32% (95% CI: 29% to 35%) with variations by state and territory. Further, the estimated hepatitis C RNA prevalence was 8% (95% CI: 6% to 10%) while the hepatitis C RNA prevalence among people in prison who reported ever injecting drugs was 15% (95% CI: 12% to 19%).
- Between 2015 and 2023, among people tested at ACCESS primary care sites with high caseloads of people with a history of injection drug use, there were 177 seroconversions during 309.8 person-years at risk. Over this period, hepatitis C incidence decreased from 1.1 to 0.2 new infections per 100 person-years.
- Hepatitis C RNA prevalence, an indicator of current hepatitis C infection, among participants of the ANSPS was 12% in 2023, a decline from 51% in 2015.
- The proportion of people receiving liver transplants due to hepatitis C related cirrhosis reduced by more than 91% between 2014 and 2023 while the number of liver transplants attributed to hepatitis C-related hepatocellular carcinoma reduced by 37% in the same period.
- The estimated number of hepatitis C-related deaths (among people living with hepatitis C and people cured of hepatitis C) decreased by 26% from 720 in 2015 to 530 in 2023.
- Of the 68 890 people living with chronic hepatitis C at the end of 2023, an estimated 57 900 (84%) had been diagnosed, and 52 110 (90% of those diagnosed) had their hepatitis C diagnosis confirmed with an RNA test.
- Between 2015 and 2023, among people who were living with chronic hepatitis C as well as those who have been cured, the estimated number with hepatitis C-related cirrhosis increased by 47% (from 18 660 to 27 420). In this period, there was a 40% decrease in the estimated number of people living with hepatitis C and with associated cirrhosis, from 16 870 to 10 190.

Treatment

- According to modelled estimates, of the 73 980 people living with chronic hepatitis C at the start of 2023 (end of 2022), 5 500 people (7%) received hepatitis C treatment during 2023 and 5170 (94% of those treated) were cured. Of those who received treatment, 1910 people received treatment following reinfection with 1790 people cured of their reinfection.
- A higher proportion of people with hepatitis C related early-stage fibrosis at the start of 2023 were estimated to have received treatment in the same year (12%) compared with those with cirrhosis (9%).
- Among participants in the ANSPS in 2023 with self-reported history of chronic hepatitis C, 75% reported ever receiving hepatitis C treatment, an increase from 11% in 2015. This six-fold increase was seen among Aboriginal and Torres Strait Islander participants (10% to 68%) and non-Indigenous participants (11% to 78%).

Injecting risk behaviour

- The reuse of needles and syringes that have been used by others (receptive syringe sharing) by people who inject drugs is a major risk factor for transmission of hepatitis C. The proportion of ANSPS respondents who reported receptive syringe sharing in the past month was 19% in 2023 with the proportion reporting receptive syringe sharing almost twice as high among Aboriginal and/or Torres Strait Islander survey participants (27%) compared with non-Indigenous participants (15%).

2 Interpretation

Overall, the number of hepatitis C notifications in Australia has declined since 2016 when subsidised interferon-free direct-acting antiviral (DAA) therapy became available through the Pharmaceutical Benefits Scheme. This highly curative therapy has also resulted in a marked decline in the prevalence of people living with hepatitis C. Among people who inject drugs, a key population for hepatitis C treatment and prevention, hepatitis C RNA prevalence declined from 51% in 2015 to 12% in 2023. This major decline in prevalence is contributing to reduced community hepatitis C transmission, and a decline in the burden of disease among populations most at risk of acquiring hepatitis C in the community.

Among people who inject drugs participating in the Australian Needle Syringe Program Survey and with a history of living with hepatitis C, the proportion who also report receiving treatment in their lifetime increasing from 11% in 2015 to 75% in 2023, the highest proportion on record. Strategies are needed to further raise awareness among the wider community and health sector about the need for testing and availability of highly curative hepatitis C treatments to eliminate hepatitis C as a public health threat by 2030, in line with Australian Government and World Health Organization targets. Although 105 960 people have received highly curative DAA therapies, the number of people initiating therapy each year has steeply declined since 2016. Efforts must be redoubled to support all people with chronic hepatitis C to achieve a cure through DAA therapy.

Hepatitis C notification rates remain more than six times as high among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous people, suggesting an increase in the at-risk population and/or less effective implementation of harm reduction. Given the high proportion of hepatitis C notifications without a reported Aboriginal and Torres Strait Islander status, the actual hepatitis C-related burden of disease among Aboriginal and Torres Strait Islander peoples may be even higher. Better capture of Aboriginal and Torres Strait Islander status among notifications data is required to better measure the true impact of hepatitis C on Aboriginal and Torres Strait Islander communities.

Results from the Australian Needle Syringe Program survey show that Aboriginal and Torres Strait Islander peoples were more than twice as likely as non-Indigenous people to report recent receptive syringe sharing in 2023. This gap highlights the need for culturally appropriate prevention efforts co-designed with Aboriginal and Torres Strait Islander peoples. Further, there is hyper-incarceration of Aboriginal and Torres Strait Islander peoples where access to evidence-based harm-reduction strategies is substantially limited. Therefore, there is a need to expand harm reduction strategies in prison settings, including the implementation of needle and syringe programs, ensuring they are culturally safe, appropriate, and co-designed with Aboriginal and Torres Strait Islander communities both inside and outside prison environments.

3 Hepatitis C notifications

This section focuses on people notified with hepatitis C in Australia, including newly acquired hepatitis C notifications (evidence of hepatitis C acquisition within two years before diagnosis) and unspecified hepatitis C notifications (cases that do not meet any of the criteria for a newly acquired case, acquired hepatitis C more than 24 months before diagnosis or for cases of unknown duration).

There were 7602 hepatitis C notifications in Australia in 2023. In 2023, 5458 (72%) hepatitis C notifications were among males, 3564 (47%) were among people aged 25 to 44 years, and 4246 (56%) were among people residing in major cities. By Aboriginal and Torres Strait Islander status, 1499 (20%) notifications occurred among Aboriginal and Torres Strait Islander peoples, 3793 (50%) were among non-Indigenous people, and 2310 (30%) were among people for whom Aboriginal and Torres Strait Islander status was not reported. Aboriginal and Torres Strait Islander peoples comprise an estimated 3.9% of the Australian population ⁽¹⁾ meaning that these notifications reflect a disproportionately high burden of disease (Table 1).

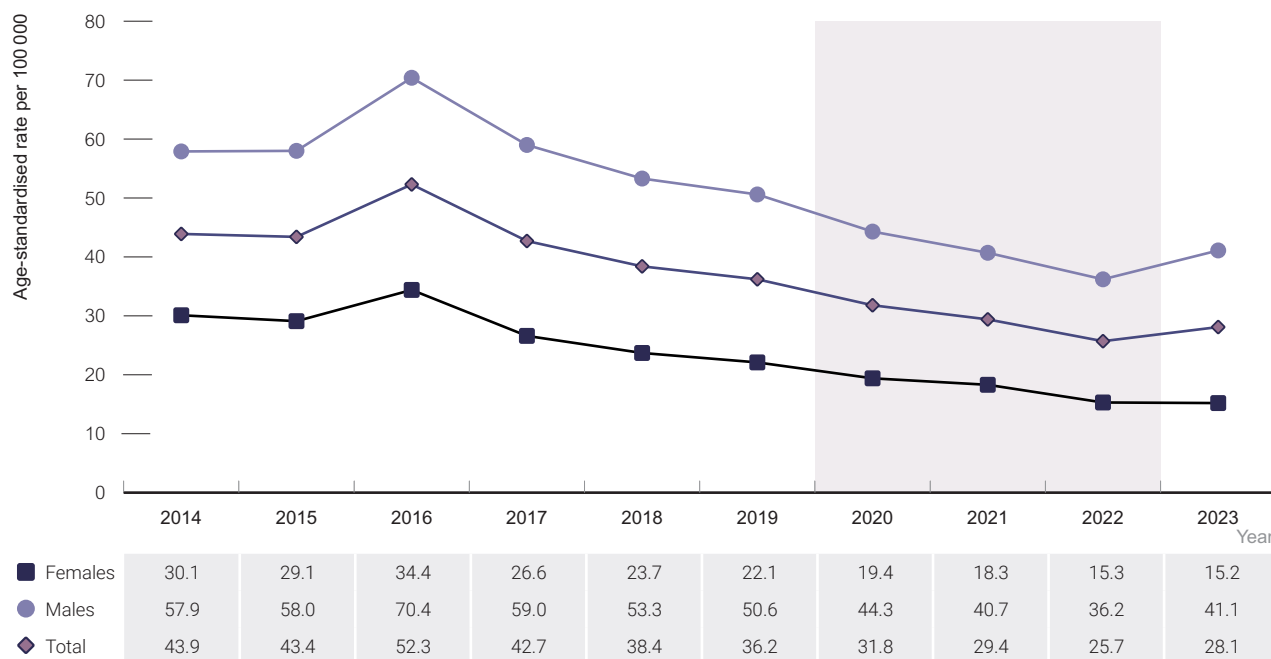
Table 1 Characteristics of new hepatitis C notifications, 2014 – 2023

Characteristic	Year of diagnosis									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total cases	10 244	10 285	12 601	10 438	9 553	9 165	8 065	7 532	6 766	7 602
Gender										
Female	3 530	3 466	4 200	3 292	2 998	2 833	2 499	2 384	2 064	2 111
Male	6 699	6 790	8 374	7 120	6 528	6 302	5 549	5 131	4 695	5 458
Not reported	15	29	27	26	27	30	17	17	7	33
Age group										
0–14	41	43	36	32	37	49	66	36	30	32
15–24	1 113	1 165	1 167	1 118	951	1 082	952	778	677	874
25–34	2 634	2 633	2 855	2 484	2 192	2 157	1 957	1 822	1 528	1 969
35–44	2 591	2 518	3 176	2 541	2 387	2 128	1 841	1 685	1 492	1 595
45–54	2 192	2 115	2 745	2 218	1 969	1 791	1 516	1 403	1 250	1 309
55–64	1 365	1 464	2 098	1 612	1 489	1 412	1 248	1 201	1 135	1 088
65+	305	344	523	432	526	546	484	607	654	733
Not reported	3	3	1	1	2	0	1	0	0	2
Aboriginal and Torres Strait Islander status										
Aboriginal and/or Torres Strait Islander	1 255	1 292	1 522	1 558	1 462	1 536	1 308	1 399	1 178	1 499
Non-Indigenous	4 649	4 666	5 704	5 181	5 208	4 782	3 859	3 825	3 394	3 793
Not reported	4 340	4 327	5 375	3 699	2 883	2 847	2 898	2 308	2 194	2 310
Area of residence										
Major cities	6 185	6 158	7 495	6 053	5 479	5 130	4 558	4 255	3 939	4 246
Regional	3 352	3 432	4 201	3 569	3 061	3 037	2 668	2 622	2 233	2 620
Remote	255	257	263	237	228	196	158	183	141	171
Not reported	452	438	642	579	785	802	681	472	453	565
State/Territory										
ACT	178	189	184	141	140	133	139	107	98	110
NSW	3 276	3 264	5 046	3 948	3 603	3 319	2 968	2 534	2 475	2 570
NT	180	200	194	151	147	133	104	105	77	97
QLD	2 520	2 511	2 750	2 354	2 139	2 379	2 170	2 091	1 773	2 236
SA	565	533	544	482	430	357	295	238	219	267
TAS	230	264	257	231	188	169	137	176	113	114
VIC	2 160	2 193	2 402	1 931	1 898	1 691	1 330	1 271	1 210	1 290
WA	1 135	1 131	1 224	1 200	1 008	984	922	1 010	801	918

Source: Australian National Notifiable Disease Surveillance System.

There was a 36% decrease in the notification rate of hepatitis C, from 43.9 per 100 000 population in 2014, to 28.1 per 100 000 in 2023 (Figure 1). Notification rates have been decreasing among both males and females since 2014 despite an increase in 2016. The increase in 2016 likely reflected the increase in testing associated with government-funded interferon-free direct-acting antiviral (DAA) treatments becoming available on the PBS in March 2016 ⁽²⁾. In 2016, there was a rapid uptake of treatment and cure among people living with hepatitis C, which coincides with a steady reduction in notification rates.

Figure 1 Hepatitis C notification rate per 100 000 population by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System.



What does this mean?

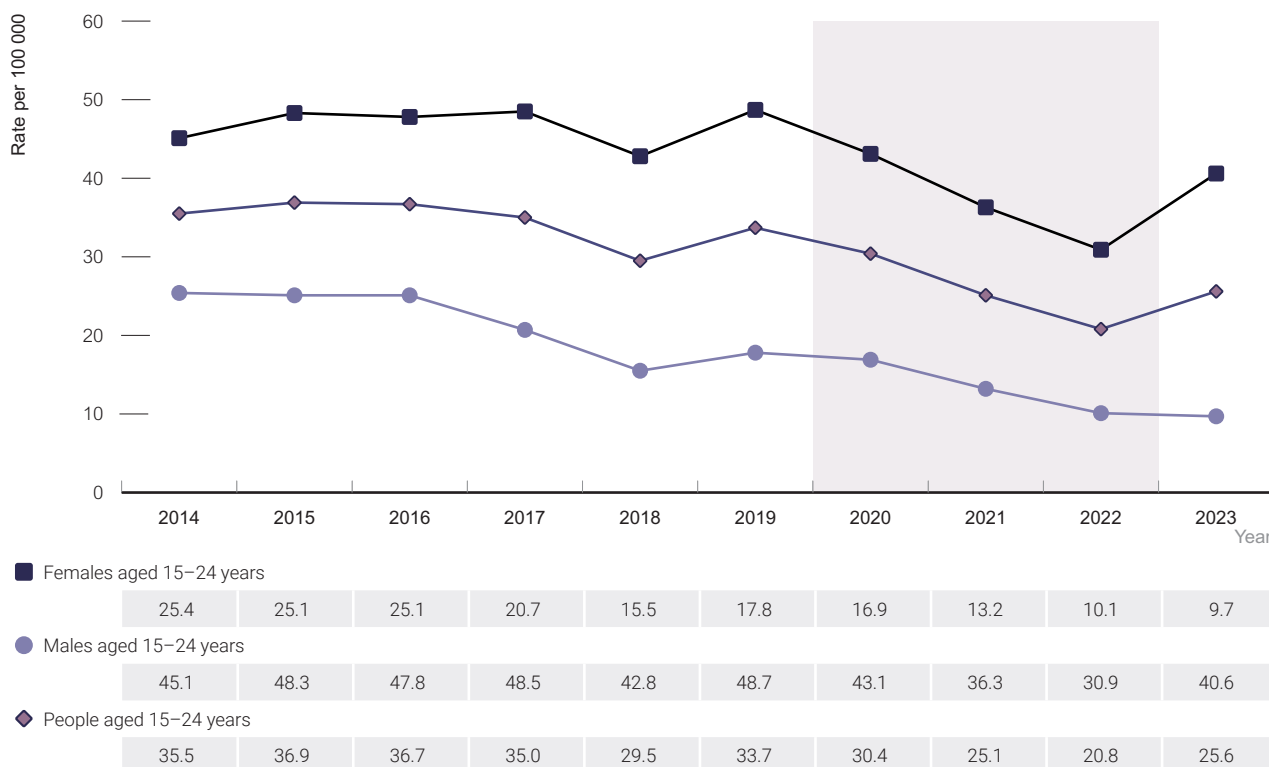
The number of new hepatitis diagnoses has reduced since 2016.

Hepatitis C notification rates declined among all age groups between 2014 and 2023 apart from among those aged 65 years and older, for whom the notification rate increased by 82%, from 8.7 to 15.8 per 100 000. The greatest decline in the notification rate was recorded among those aged 35 to 44 years (by 46%, from 78.0 to 42.2 per 100 000). Greater declines were seen among women compared with men. For detailed breakdown of notification rates by age and sex, please see the [Kirby Institute data site](#).

Compared with older age-groups, most primary hepatitis C infections among those aged 15 to 24 years are more recently acquired⁽³⁾. Therefore, trends in the rate of notifications among those aged 15–24 years are used here as a proxy for trends in the overall incidence of hepatitis C infection. There was a 28% decline in the notification rate among this group between 2014 and 2023 from 35.5 to 25.6 per 100 000. The notification rate among females declined by 62% from 25.4 per 100 000 in 2014 to 9.7 per 100 000 in 2023.

By comparison, the rate among males declined to a lesser extent (10%), from 45.1 per 100 000 in 2014 to 40.6 per 100 000 in 2023 (Figure 2). The greater decline in the notification rate among women compared with men in the same age group is possibly attributed to an increase in prison testing.

Figure 2 Hepatitis C notification rate per 100 000 population among people aged 15 to 24 years by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System.

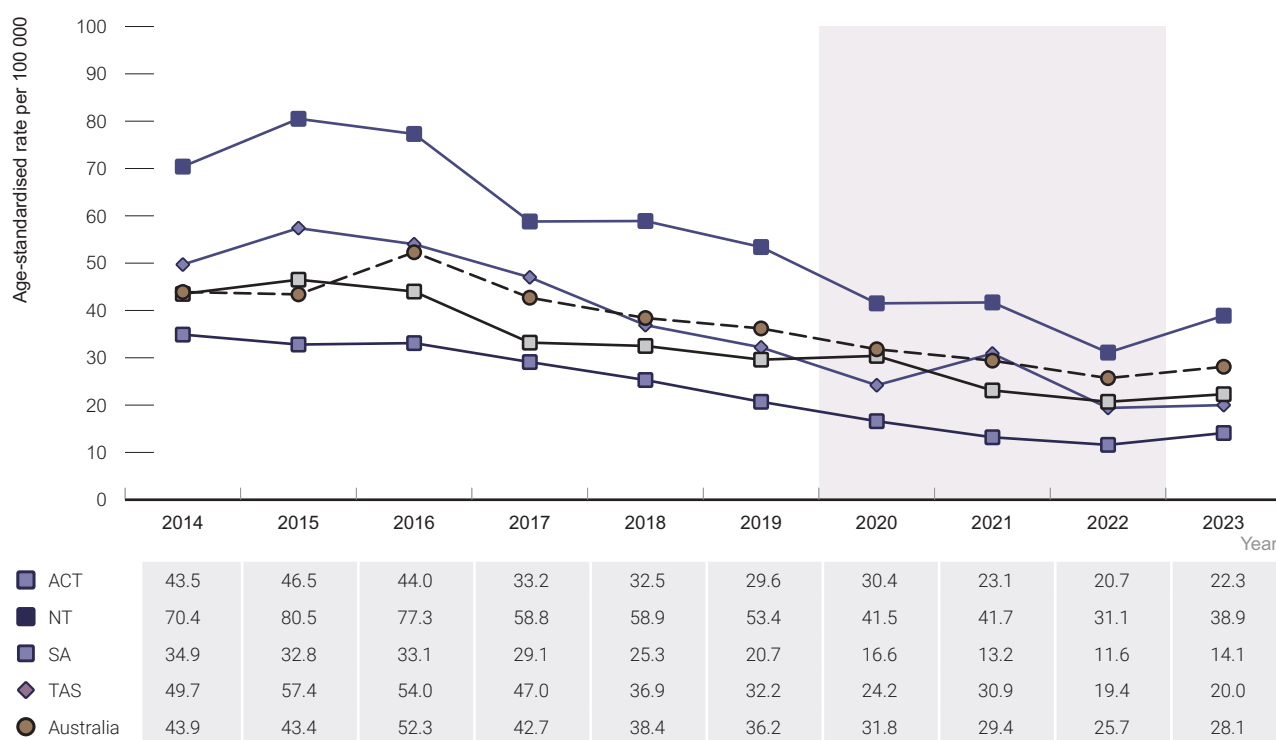
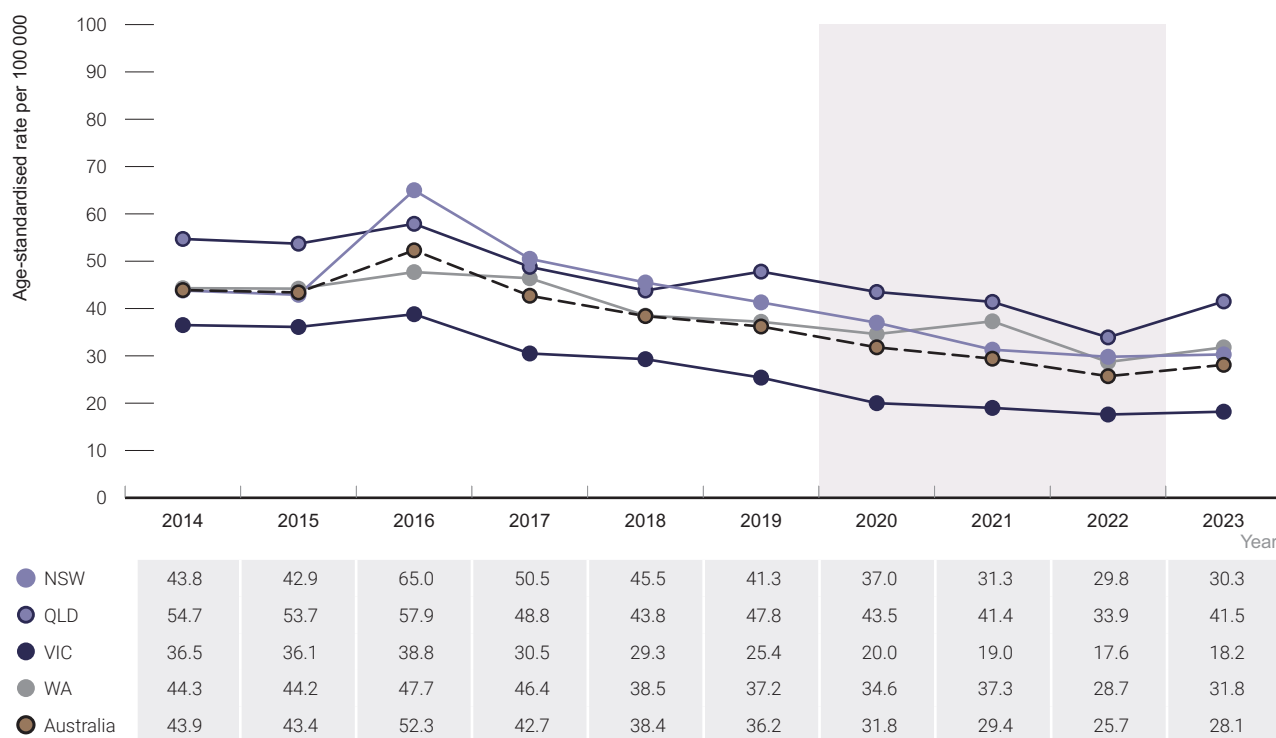


What does this mean?

The number of new hepatitis C diagnoses among young people has declined since 2014.

In 2023, hepatitis C notification rates were highest in Queensland at 41.5 per 100 000, followed by the Northern Territory at 38.9 per 100 000, and Western Australia at 31.8 per 100 000 (Figure 3). Between 2014 and 2023, all states and territories saw a reduction in notification rates, ranging from a 59% reduction in South Australia, to a 24% reduction in Queensland.

Figure 3 Hepatitis C notification rate per 100 000 population by state/territory, 2014 – 2023

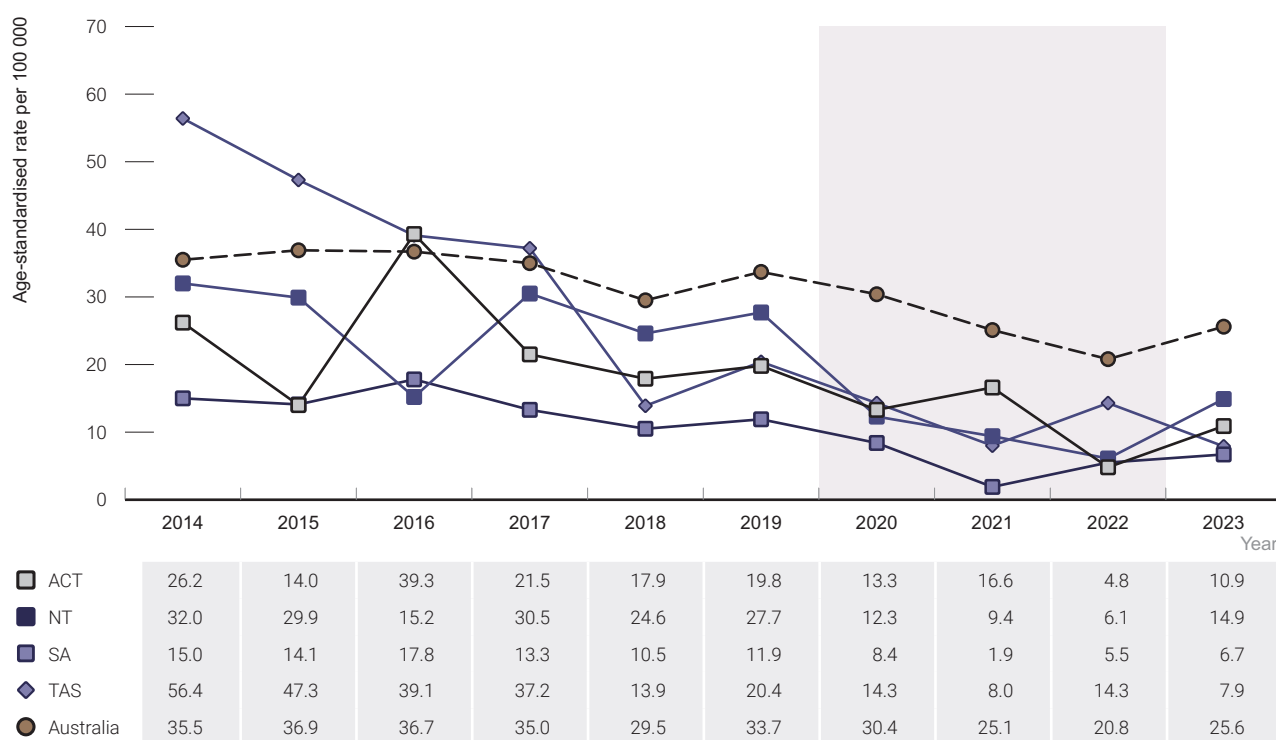
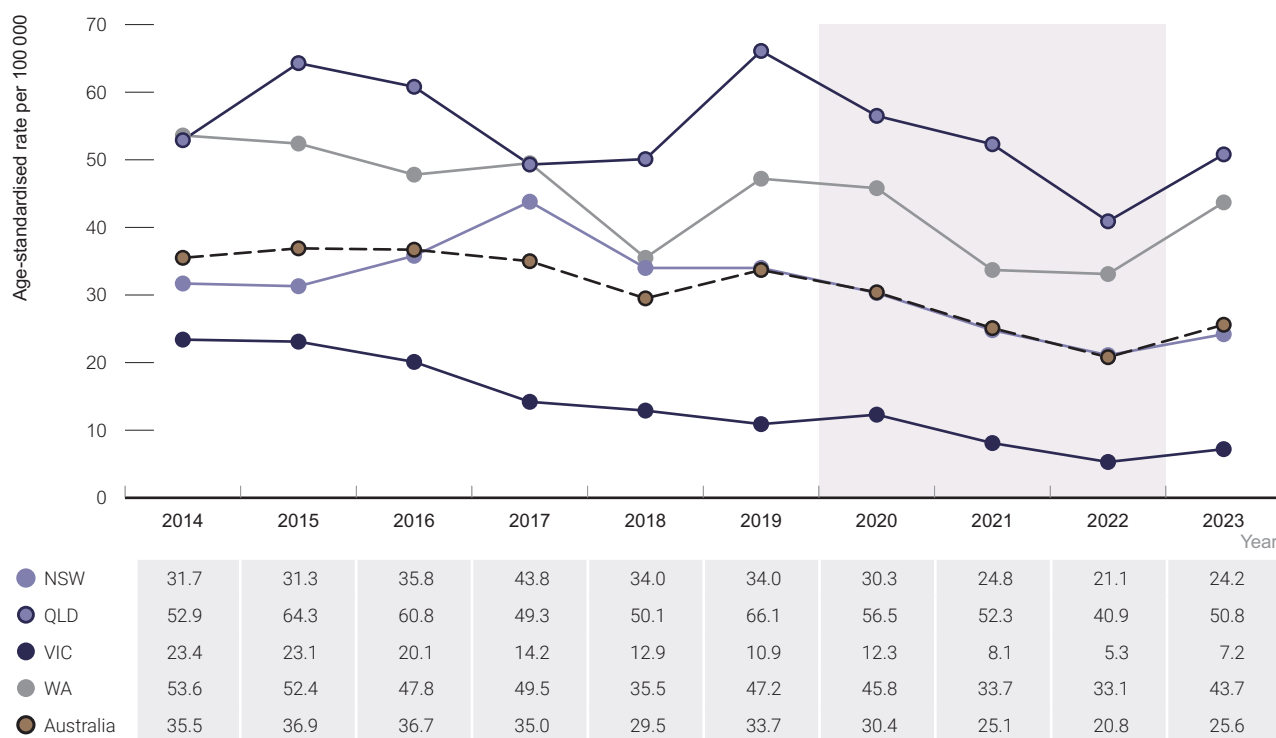


Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System.

Hepatitis C notification rates among people aged 15 to 24 years declined in every state and territory between 2014 and 2023. In this period, the largest declines were seen in Tasmania (86%) and Victoria (69%) (Figure 4).

Figure 4 Hepatitis C notification rate per 100 000 population among people 15 to 24 years of age, by state/territory, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System.

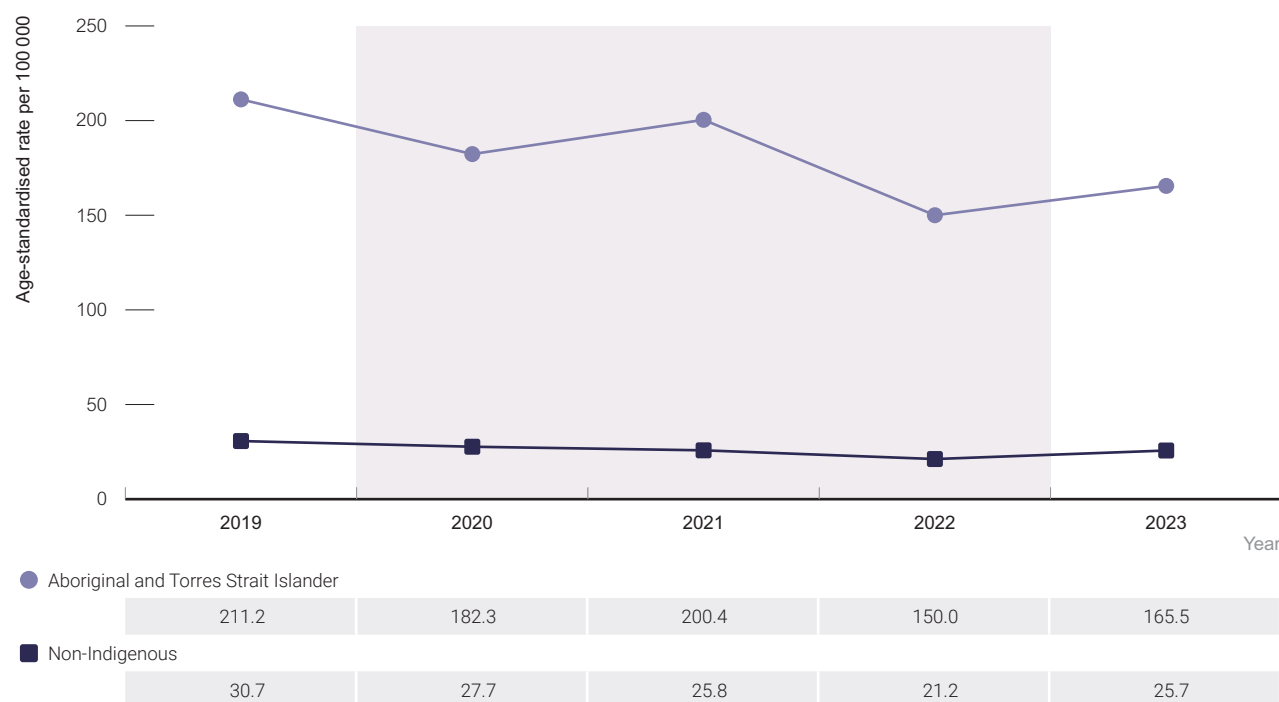
Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander notification rates for hepatitis C are based on data from five jurisdictions (the Northern Territory, Queensland, South Australia, Tasmania, and Western Australia) where Aboriginal and Torres Strait Islander status was $\geq 50\%$ complete for all hepatitis C notifications for each of the five years (2019 – 2023).

Around a half (49%) of Aboriginal and Torres Strait Islander peoples reside in these jurisdictions so it is important to note that the notification rates are not necessarily nationally representative. Incomplete information on Aboriginal and Torres Strait Islander status can underestimate the true extent of these infections among Aboriginal and Torres Strait Islander peoples and notification rates may not reflect national trends. The 2021 Census data from the Australian Bureau of Statistics recorded a larger than expected increase in the number of people self-identifying as Aboriginal and/or Torres Strait Islander. This increase was unlikely due to demographic changes (such as from births, death or migration). Because of this change, trends in hepatitis C notification rates between 2019 and 2023 should be interpreted with caution. Further details can be found on the [ABS website](#).

Based on the data from these five jurisdictions, the hepatitis C notification rate among Aboriginal and Torres Strait Islander peoples declined by 22% between 2019 and 2023 from 211.2 to 165.5 per 100 000 (Figure 6). In 2023, the age-standardised hepatitis C notification rate was more than six times as high among Aboriginal and Torres Strait Islander peoples (165.5 per 100 000) compared with non-Indigenous people (25.7 per 100 000).

Figure 5 Hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2019 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System. Includes jurisdictions in which Indigenous status was reported for $\geq 50\%$ of notifications for each year Northern Territory, Queensland, South Australia, Tasmania, and Western Australia).

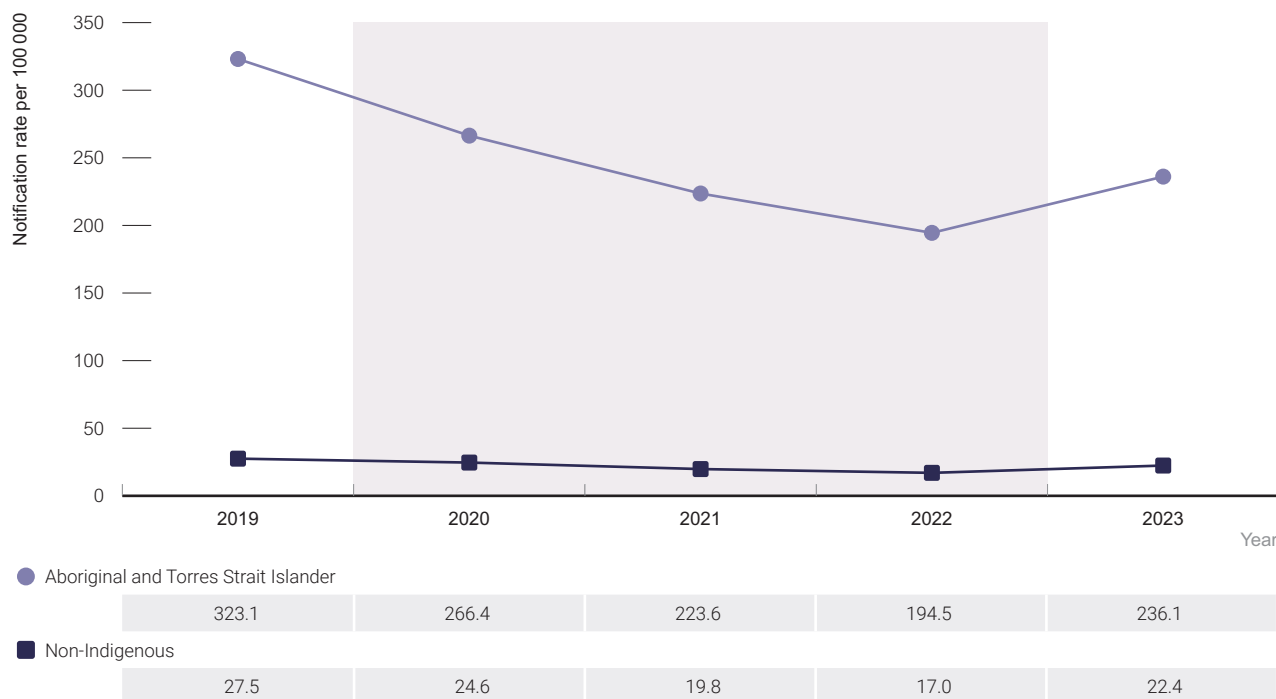


What does this mean?

The rate of new diagnoses among Aboriginal and Torres Strait Islander peoples has declined since 2019 but remains higher than among non-Indigenous people.

Between 2019 and 2023, among Aboriginal and Torres Strait Islander people aged 15 to 24 years, the hepatitis C notification rate declined by 27% from 323.1 to 236.1 per 100 000. In the same period, among non-Indigenous people aged 15 to 24 years, the notification rate declined by 18% from 27.5 per 100 000 to 22.4 per 100 000. The hepatitis notification rate among Aboriginal and Torres Strait Islander peoples aged 15 to 24 years was more than ten times as high as among non-Indigenous people aged 15 to 24 years (236.1 vs 22.4 per 100 000) (Figure 6).

Figure 6 Hepatitis C notification rate among people aged 15 to 24 years by Aboriginal and Torres Strait Islander status per 100 000 population, 2019 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for $\geq 50\%$ of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In Western Australia, the hepatitis C notification rate in 2023 was more than 12 times as high among Aboriginal and Torres Strait Islander peoples than among non-Indigenous people (267.4 and 21.1 per 100 000, respectively). Also, in 2023, the hepatitis C notification rate in Queensland and South Australia, almost six times as high among Aboriginal and Torres Strait Islander peoples as among non-Indigenous people.

In Queensland, South Australia, and Tasmania, the hepatitis C notification rate declined between 2019 and 2023 among Aboriginal and Torres Strait Islander peoples. In the Northern Territory and Western Australia, the hepatitis C notification rate among Aboriginal and Torres Strait Islander peoples fluctuated in the same period, compared with declines among non-Indigenous people in every reported state and territory (Figure 7). See *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024* for further detail ⁽⁴⁾.

Figure 7 Hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and state/territory, 2019 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Disease Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Northern Territory, Queensland, South Australia, Tasmania, and Western Australia).

4 Hepatitis C testing

Sentinel surveillance of hepatitis C testing is conducted by the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance (ACCESS) and includes general primary care sites specialising in the health of people who inject drugs, sexual health clinics, and primary care clinics specialising in the health of gay and bisexual men and other men who have sex with men. According to Medicare data, national Hepatitis C testing rates showed a decline between 2019 and 2021 as a consequence of the COVID-19 pandemic related restrictions ⁽⁵⁾.

Among people who inject drugs attending one of the sexual health clinics in ACCESS, the proportion who received a hepatitis C test in the past 12 months fluctuated between 2014 and 2023 and was 47.5% in 2023 (Figure 8). Over the same period, the number of hepatitis tests undertaken by people who inject drugs attending one of the sexual health clinics in ACCESS increased between 2014 (559 people tested) and 2018 (845 people tested), and then declined between 2018 and 2023 (578 people tested) (Figure 8). A decline in the number of ACCESS clinic attendees since the start of the pandemic mean that the number of people tested has have reduced since 2020. Trends over time should be interpreted with caution (Figure 8).

Figure 8 Number and proportion of people who inject drugs attending a sexual health clinic in the ACCESS network who had a hepatitis C test in the past 12 months, 2014 – 2023

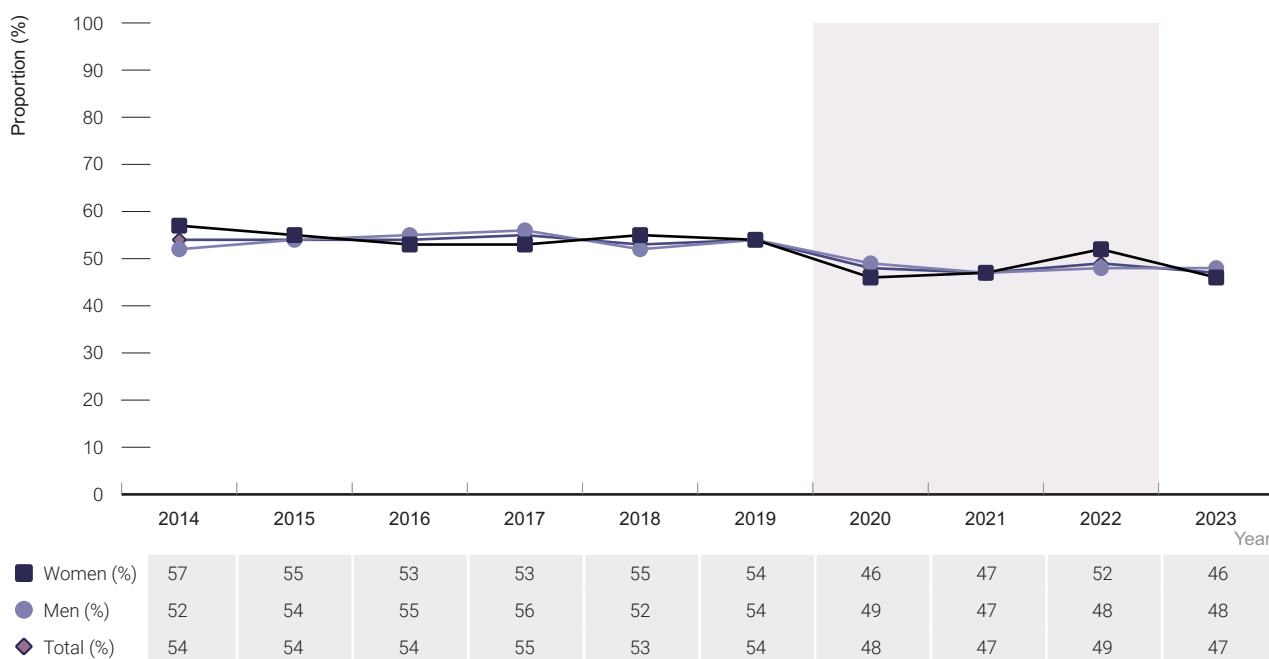


Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Of clinics enrolled in ACCESS, injection drug use status could be identified for analysis only among Sexual Health Clinics.

Source: ACCESS; see [Methodology](#) for detail.

Data from the annual Australian Needle Syringe Program Surveys (ANSPS) provide insights into the demographic characteristics and risk behaviours of laboratory confirmed and self-reported bloodborne virus prevalence, including hepatitis C prevalence, among people who inject drugs attending needle and syringe programs throughout Australia. Prior to the start of the COVID-19 pandemic, the overall proportion of ANSPS respondents reporting a hepatitis C test in the previous 12 months fluctuated between 53% and 55%. Between 2020 and 2023 the proportion tested was lower compared to previous years but remained stable between 47% and 49% (47% overall in 2023; 48% among men and 46% among women) (Figure 9).

Figure 9 Proportion of people who inject drugs attending needle and syringe programs who reported a hepatitis C antibody test in the past 12 months by sex, 2014 – 2023

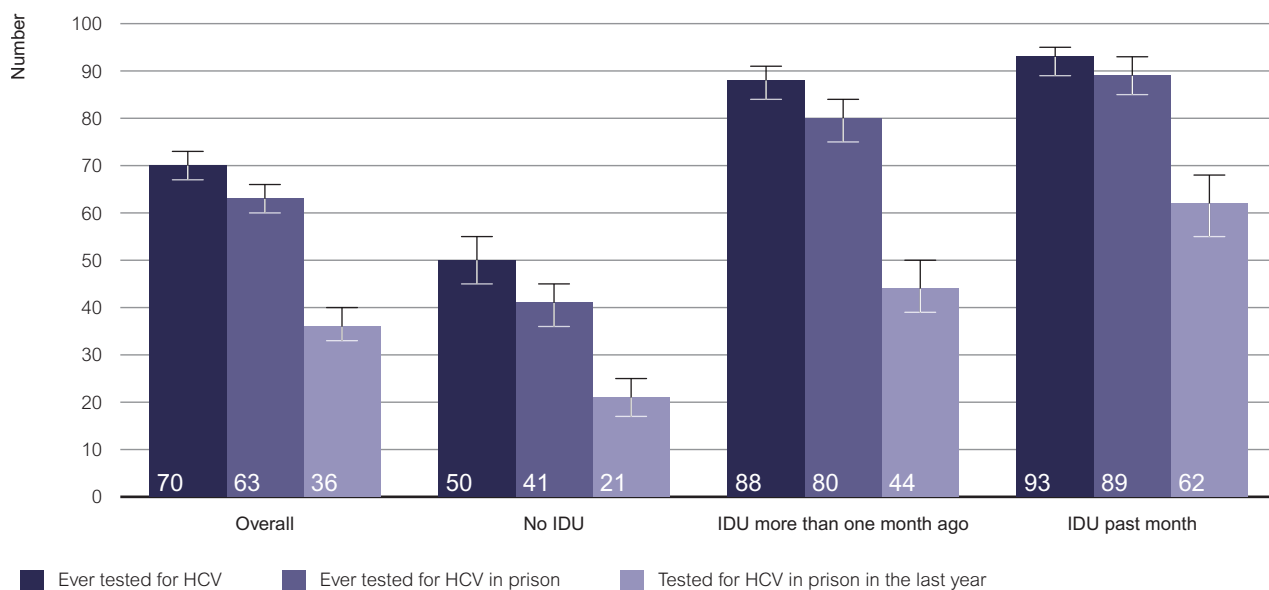


Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian Needle Syringe Program Survey; see [Methodology](#) for detail.

This report includes for the first time, data from the [Australian Hepatitis and Risk Survey in Prisons \(AusHep\) study](#), a repeat cross-sectional bio-behavioural survey of people in prison in every state and territory ⁽⁶⁾. The first round of the survey was conducted from April 2022 until June 2023. In this first round, an estimated 70% of participants had ever been tested for HCV (any test), including 63% who had ever been tested in prison, and 36% who were tested in prison in the past year (Figure 10). By injection drug use history status, those reporting injection drug use in the past month had a higher proportion of ever being tested for hepatitis C (93%) than those who reported injection drug longer than one month ago (88%), or those with no history of injection drug use (50%). Similarly, those reporting injection drug use in the past month had a higher proportion of being tested for hepatitis C in prison (89%) than those who reported injection drug use longer than one month ago (80%), or those with no history of injection drug use (41%). Further, those reporting injection drug use in the past month had a higher proportion of being tested for hepatitis C in prison in the past month (62%) than those who reported injection drug use at least one month ago (44%), or those with no history of injection drug use (21%) (Figure 10).

Figure 10 Self-reported history of HCV testing among people in prison by injection drug use status, 2023



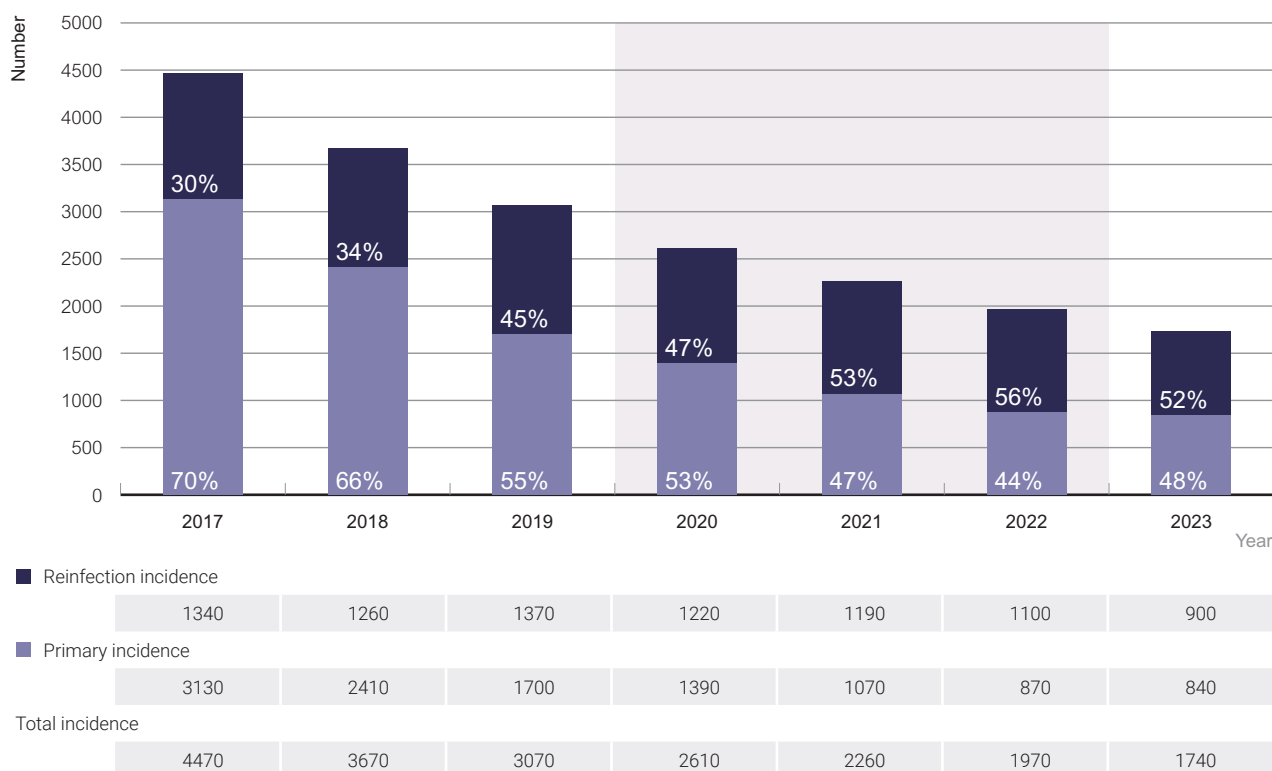
Note: IDU = injection drug use.

Source: Australian Hepatitis and Risk Survey in Prisons Study.

5 Hepatitis C incidence

Hepatitis C incidence reflects new transmissions and serves as a key indicator for monitoring the effectiveness of prevention programs and progress towards national and global hepatitis C targets. In the absence of empirical data, mathematical modelling is used to estimate national hepatitis C incidence. Between 2017 and 2023, the total estimated number of new hepatitis C infections declined by 61%, from 4470 to 1740 (Figure 11). During this period, the proportion of reinfections among total incident cases increased from 30% to 52%, while the proportion of primary infections decreased from 70% to 48%.

Figure 11 Estimated hepatitis C incidence by reinfection status, 2017 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.



What does this mean?

The estimates number of new infections every year is steadily declining, but a increasing proportion of new infections are among people becoming reinfected with hepatitis C.

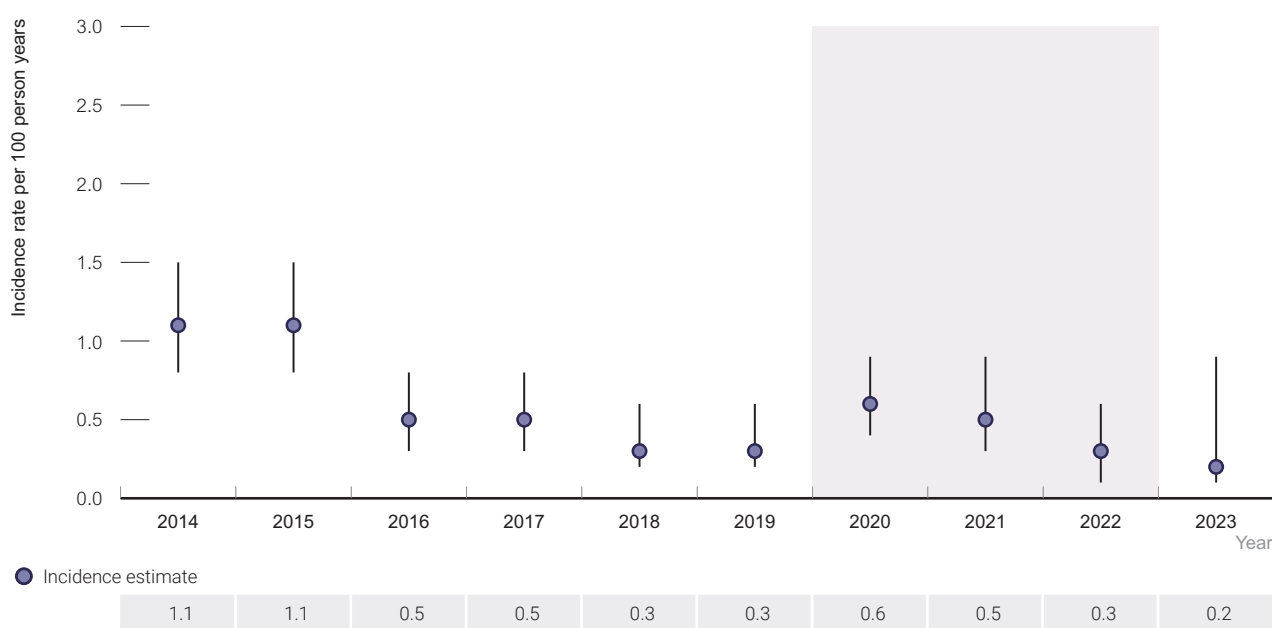
Hepatitis C incidence estimates for priority populations are calculated using sentinel surveillance data from the ACCESS network are presented below.

For the years 2014 – 2023, among 11 427 people attending on of 16 ACCESS primary care site with high caseloads of people with a history of injection drug use were hepatitis C antibody negative and had at least one repeat test, there were 177 seroconversions during 309.8 person-years at risk. Among this population, between 2014 and 2023, the hepatitis C incidence declined from 1.1 to 0.2 new infections per 100 person-years. (Figure 12).

For the years 2014 – 2023, among 9157 HIV positive gay and bisexual men attending one of 23 ACCESS primary care sites or sexual health clinics who had at least one repeat hepatitis C test, regardless of injection drug use, there were 246 seroconversions during 490.3 person-years at risk. Among this population, between 2014 and 2023, the hepatitis C incidence declined from 0.9 to 0.3 new infections per 100 person-years (Figure 13).

Overlapping confidence intervals between years mean that the differences in incidence rates are not statistically significant and trends should be interpreted with caution.

Figure 12 Incidence of hepatitis C infection at ACCESS primary care clinics, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

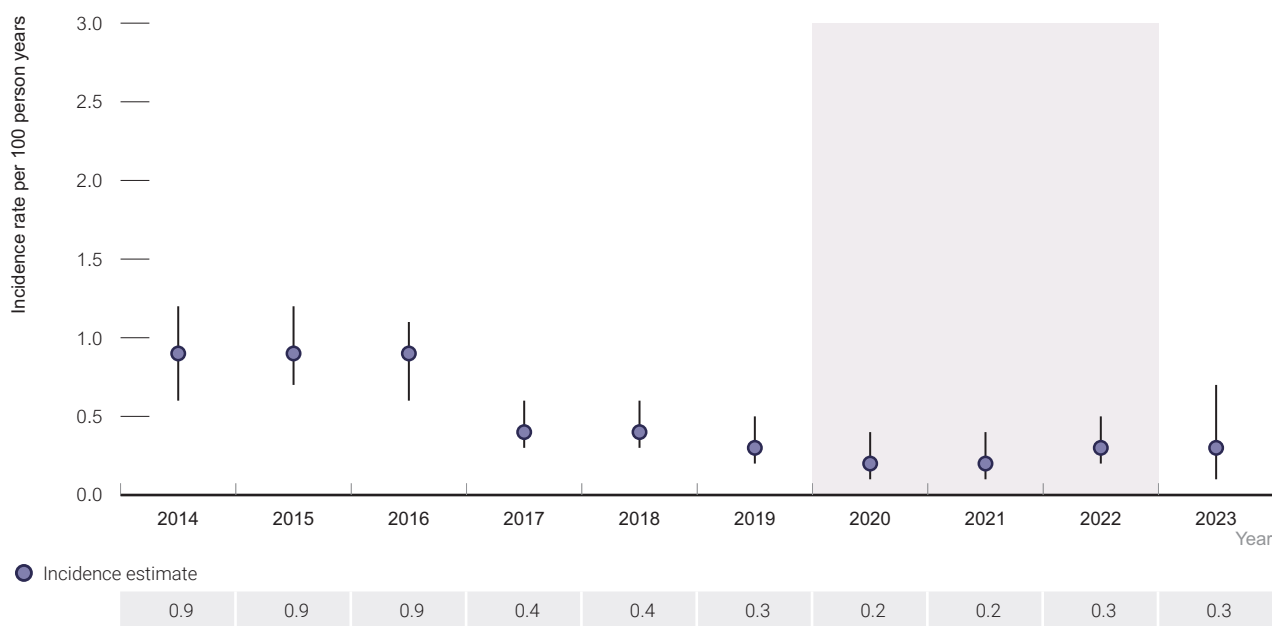
Source: ACCESS; see [Methodology](#) for detail.



What does this mean?

The number of new hepatitis C infections among people attending ACCESS primary care clinics has declined considerably since 2014.

Figure 13 Incidence of hepatitis C infection among HIV-positive gay and bisexual men attending ACCESS sexual health and primary care clinics, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: ACCESS; see [Methodology](#) for detail.



What does this mean?

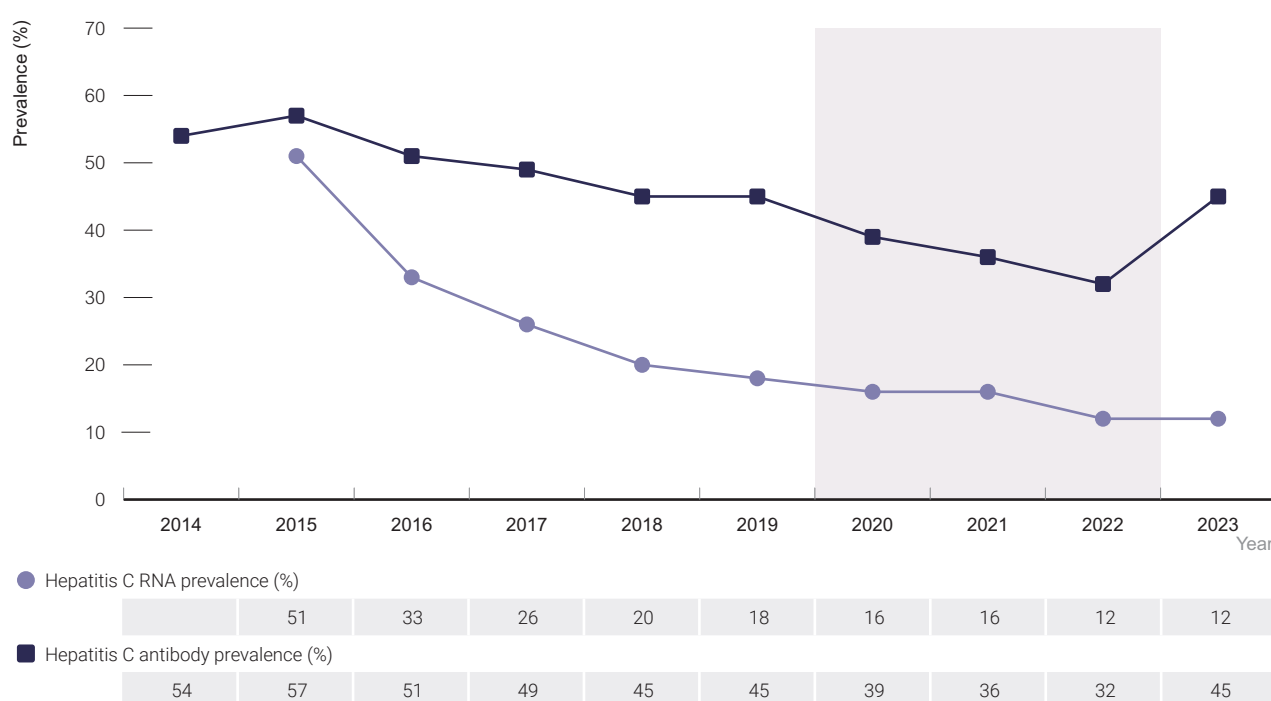
The number of new hepatitis C infections among gay and bisexual men attending ACCESS sexual health and primary care clinics has declined considerably since 2014.

6 Hepatitis C prevalence

Australia's hepatitis C epidemic affects many people across differing age groups and sociodemographic backgrounds. Key populations include people with a history of injecting drugs, people with a history of incarceration, and people from high-prevalence countries (where the prevalence of hepatitis C is higher than 3.5%). Among ANSPS participants, hepatitis C antibody prevalence declined steadily from 57% in 2015 to 32% in 2022 but then increased to 45% in 2023 (Figure 14). The increase in hepatitis C antibody prevalence in 2023 likely relates to a change in antibody testing methodology used in the 2023 round of the ANSPS however HCV antibody prevalence in 2023 remained lower than in the pre-DAA era (see the *ANSPS National Data Report 2019-2023* for more information on the change in assay).

By comparison, greater declines have been seen in hepatitis C RNA prevalence, reflecting the reduced level of current infection among people with hepatitis C antibodies since the widespread availability of DAA therapy ⁽⁷⁾. Hepatitis C RNA prevalence declined from 51% in 2015 to 12% in 2022 and 2023 (Figure 14).

Figure 14 Hepatitis C antibody and RNA prevalence among people attending needle and syringe programs, 2014 – 2023



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. RNA testing commenced 2015. Data is weighted for gender and HCV Ab status from 2015-2019. Data from 2020 onwards are not weighted.

Source: Australian Needle Syringe Program Survey; see [Methodology](#) for detail.

According to data from the first round of the AusHep Study, the estimated hepatitis C antibody prevalence among participants was 32% (95% CI: 29% to 35%) with variations by state and territory. Further, the estimated hepatitis C RNA prevalence was 8% (95% CI: 6% to 10%) while the hepatitis C RNA prevalence among participants who reported ever injecting drugs was 15% (95% CI: 12% to 19%). Breakdowns by of prevalence estimates by state and territory can be found on the AusHep dashboard.

7 Hepatitis C morbidity and mortality

In lieu of empirical mortality and morbidity data, estimates based on mathematical modelling ^(8,9), incorporating the impact of hepatitis C treatment, are presented below with 105 940 people living with chronic hepatitis C treated with DAA since 2015. At the start of 2023, an estimated 45 930 people living with chronic hepatitis C had early to moderate fibrosis (stages F0–F2), 16 400 had severe fibrosis (stage F3), 11 650 had hepatitis C-related cirrhosis (stage F4) (see Figure 21).

Among people who were living with chronic hepatitis C as well as those who have been cured, the estimated number of new cases of hepatitis C-related decompensated cirrhosis declined by 33% from 550 in 2015 to 370 in 2023 (Figure 15). The estimated number of new cases of hepatitis C-related hepatocellular carcinoma declined by 21% between 2015 and 2023 from 420 to 330. The estimated number of hepatitis C related deaths (including viraemic and cured cases) declined by 26% from 720 in 2015 to 530 in 2023 (Figure 15).

Figure 15 Estimated number of incident cases of hepatitis C-related decompensated cirrhosis, hepatocellular carcinoma, and deaths, 2014 – 2023

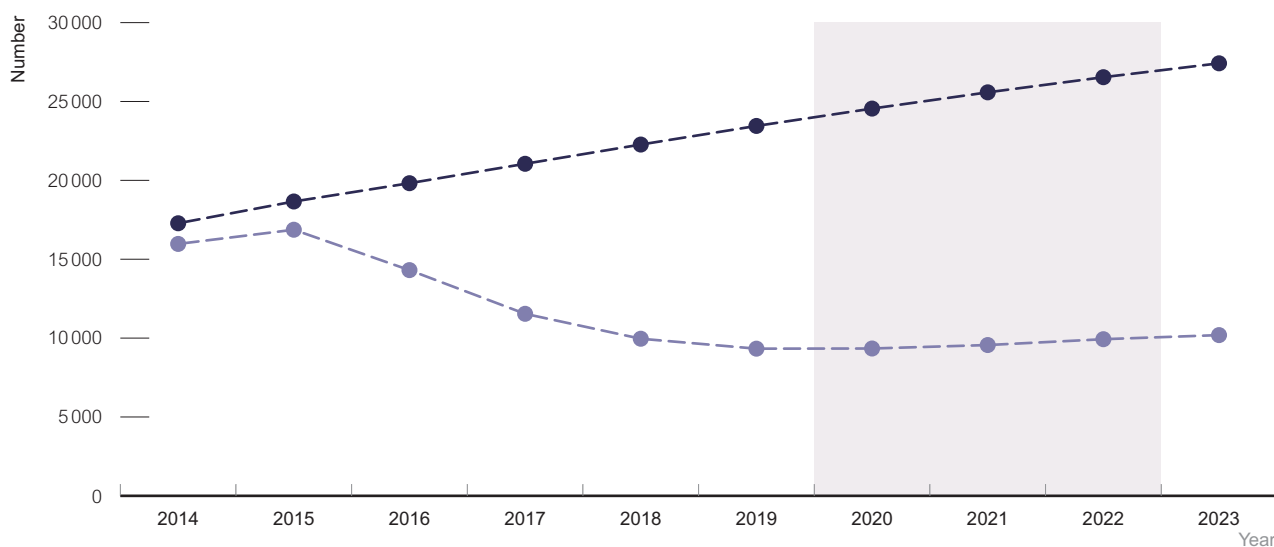


Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Includes people with chronic hepatitis C infection and those who have been cured of infection but still have hepatitis C-related severe fibrosis or cirrhosis.

Source: See [Methodology](#) for detail.

People who have been cured of chronic hepatitis C are included as they may still develop morbidity after being cured. Among people who were living with chronic hepatitis C as well as those who have been cured, between 2015 and 2023, the estimated number with hepatitis C-related cirrhosis increased by 47% (from 18 660 to 27 420) (Figure 16). The estimated number of people living with chronic hepatitis C who had hepatitis C-related cirrhosis declined by 40% between 2015 and 2023 from 16 870 to 10 190 (Figure 16).

Figure 16 Estimated number of people with hepatitis C-related cirrhosis, 2014 – 2023



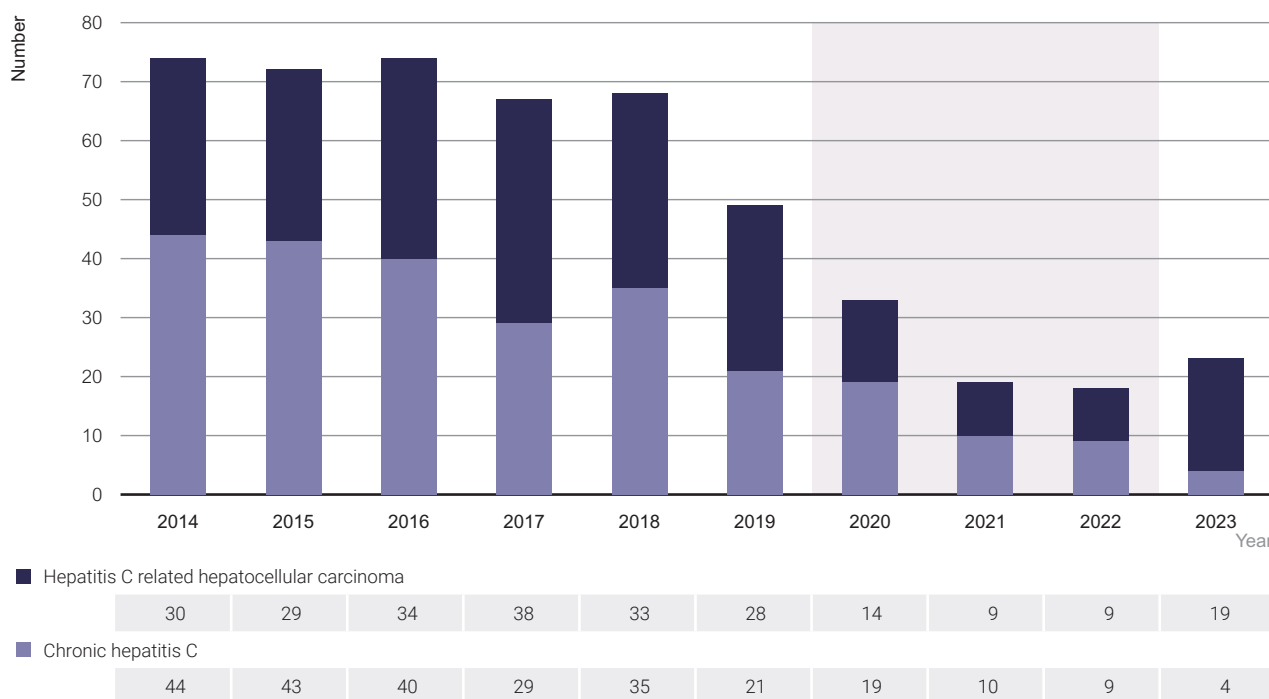
■ Cirrhosis - people living with chronic hepatitis C	15 970	16 870	14 310	11 540	9 960	9 330	9 340	9 560	9 930	10 190
■ Cirrhosis - people living with chronic hepatitis C and those who have been cured	17 280	18 660	19 820	21 050	22 270	23 450	24 550	25 580	26 540	27 420

Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: See [Methodology](#) for detail.

There is no comprehensive registry of advanced illness related to hepatitis C in Australia. One indicator of the extent of illness caused by hepatitis C is the number of liver transplants due to chronic infection. Of the 236 liver transplants in 2023, 23 (10%) were attributable to chronic hepatitis C infection or hepatitis C related hepatocellular carcinoma. The number of people having liver transplants in Australia due to hepatitis C related cirrhosis reduced by 91% between 2014 and 2023 from 44 (23% of all liver transplants) to 4 (2% of all transplants). The number of liver transplants attributed to hepatitis C-related hepatocellular carcinoma has reduced by 37% from 30 (14% of all liver transplants) in 2014 to 19 (8% of all liver transplants) in 2023 (Figure 17). Many factors influence the selection of candidates for transplant, and the numbers may not necessarily reflect the overall morbidity and mortality attributable to individual causes of liver disease but suggest a major impact of direct-acting antiviral therapy. For detailed information relating to chronic hepatitis C among liver transplant patients, please see the [Kirby Institute data site](#).

Figure 17 Number of liver transplants due to chronic hepatitis C and hepatitis C related hepatocellular carcinoma, 2014 – 2023



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Only includes people aged 16 years and over.

Source: Australian and New Zealand liver Transplant Registry; see [Methodology](#) for detail.

8 Hepatitis C diagnosis and care cascade

Methods used to generate cascade estimates are regularly revised to reflect the best and most current research available. Therefore, the following estimates may differ to same-year estimates presented in previous reporting.

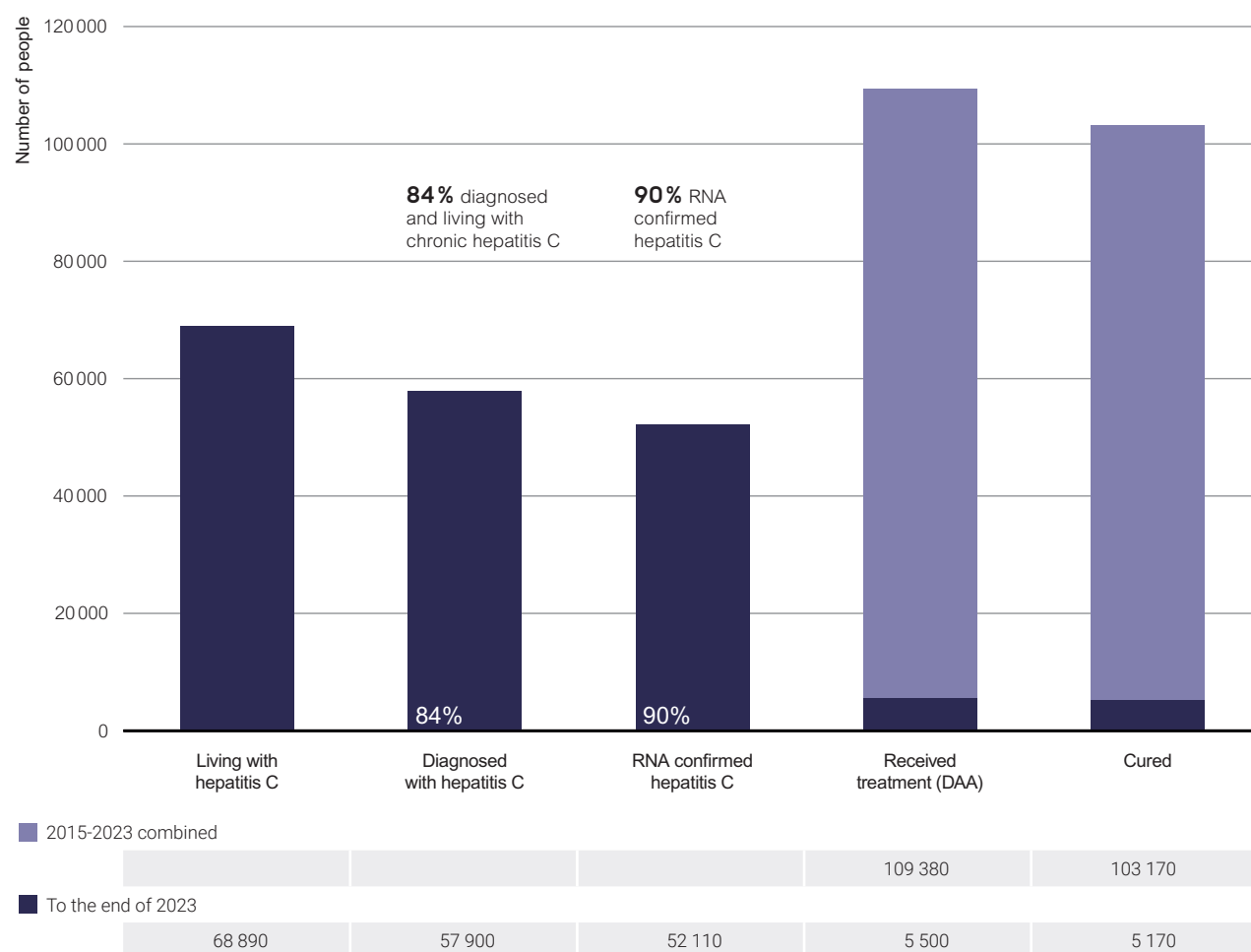
This section includes the hepatitis C diagnosis and care cascade, with estimates of the number of people living with chronic hepatitis C in Australia, the number and proportion of people who have been diagnosed, and the number who received antiviral treatment. These estimates are used to support and inform the delivery of services to people living with chronic hepatitis C infection, from diagnosis of chronic hepatitis C to initiation of antiviral therapy and cure. Using available data and accounting for uncertainties, the number and proportions of people in each stage of the cascade in Australia were estimated (Figure 18, Figure 19, Table 2).

At the end of 2023, an estimated 68 890 people were living with chronic hepatitis C in Australia, down from 162 590 at the end of 2015. Of those living with chronic hepatitis C at the end of 2023, an estimated 84% (57 900 people) were diagnosed up from 80% (129 710 people) in 2015. Including all years between 2015 and 2023, an estimated 90% of those diagnosed also had an RNA test to confirm their chronic hepatitis C infection (52 110 people in 2023; Figure 18, Table 2). Due to changes in methodology, the estimated proportion of people who had an RNA test to confirm their hepatitis C status is an increase on previous years' reporting. For further details, please see the [Methodology](#) chapter.

Of the 73 980 people living with chronic hepatitis C at the start of 2023 (end of 2022), 7% (5 500 people) received hepatitis C DAA treatment in 2023, down from 16% (21 250 people) in 2017 (end of 2016). In 2023, 94% of people who had received treatment were cured of hepatitis C, with 5 170 people cured in 2023 (Table 2). The Australian Government has committed to the World Health Organization targets of 90% of people living with chronic hepatitis C infection to be diagnosed, with 80% treatment coverage by 2030. For estimates over a greater range of years, please see the Kirby Institute data site.

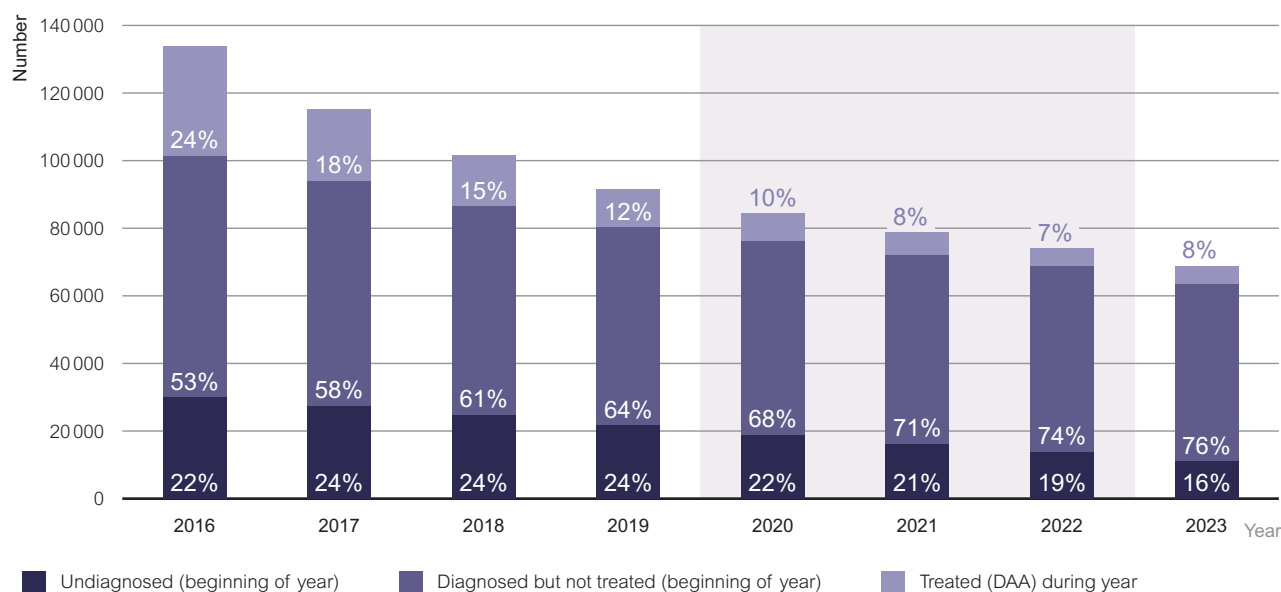
Further details are provided in the [Methodology](#) section.

Figure 18 The hepatitis C diagnosis and care cascade, 2023



Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

Figure 19 The hepatitis C diagnosis and care cascade gaps, 2016 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.



What does this mean?

The number of people living with hepatitis C is steadily reducing and the proportion of people who know their hepatitis C status is increasing. However, the proportion of people with hepatitis C who are on treatment is reducing.

Table 2 The hepatitis C diagnosis and care cascade estimates, 2015 – 2023

Year	Living with chronic hepatitis C (end of year)	Diagnosed with chronic hepatitis C (end of year) (% ^a)	RNA confirmed hepatitis C (end of year) (% ^b)	Received DAA hepatitis C treatment (during the year) (% ^c)	Received DAA following hepatitis C reinfection	Cured of hepatitis C (during the year) (% ^d)	Cured of hepatitis C reinfections (during the year)
2015	162 590	129 710 (80%)	116 740 (90%)				
2016	133 790	103 810 (78%)	93 430 (90%)	32 460 (20%)		30 620 (94%)	
2017	115 170	87 700 (76%)	78 930 (90%)	21 250 (16%)	2	19 950 (94%)	1
2018	101 730	77 040 (76%)	69 340 (90%)	15 360 (13%)	450	14 420 (94%)	430
2019	91 680	70 020 (76%)	63 020 (90%)	11 430 (11%)	770	10 750 (94%)	720
2020	84 470	65 560 (78%)	59 000 (90%)	8 220 (9%)	1 030	7 720 (94%)	970
2021	78 650	62 420 (79%)	56 180 (90%)	6 560 (8%)	970	6 170 (94%)	910
2022	73 980	60 230 (81%)	54 210 (90%)	5 180 (7%)	1 350	4 860 (94%)	1 270
2023	68 890	57 900 (84%)	52 110 (90%)	5 500 (7%)	1 910	5 170 (94%)	1 790

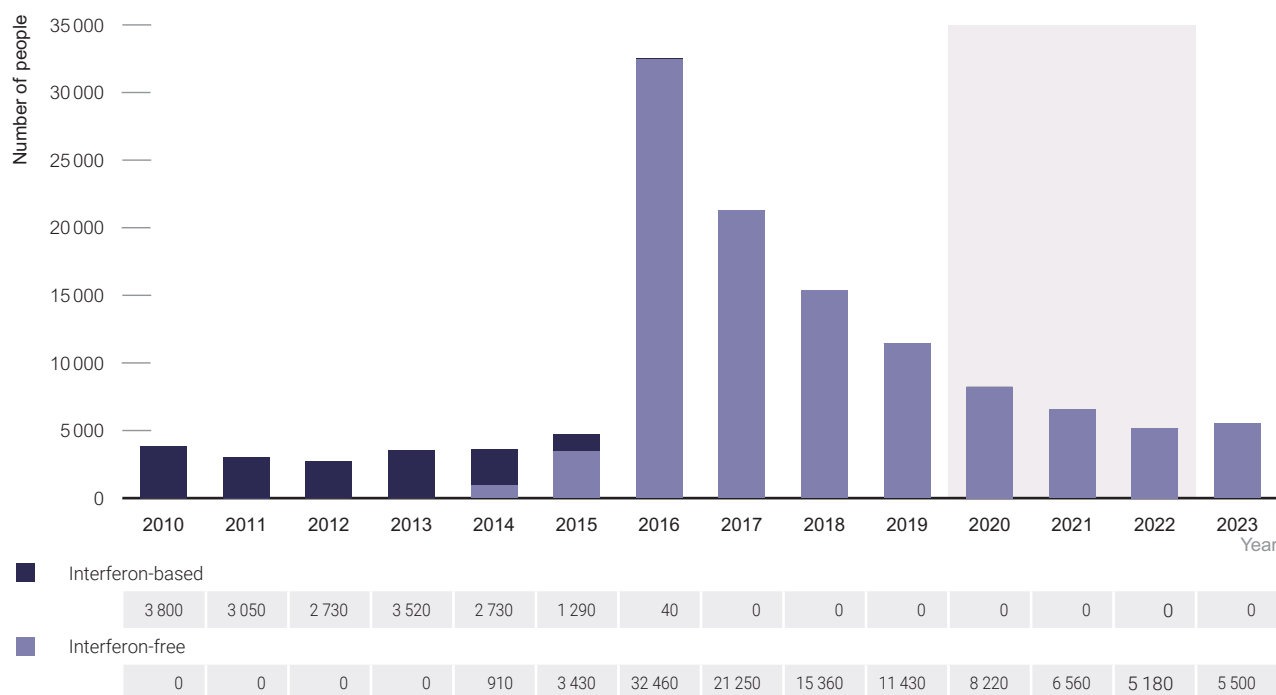
Notes: a The proportion diagnosed is the number of people diagnosed divided by the number of people living with chronic hepatitis C;
 b The proportion of RNA confirmed hepatitis C is the number of people with RNA confirmed hepatitis C divided by the number of people diagnosed with hepatitis C;
 c The proportion for diagnosed and received treatment is the number of people treated with DAA therapy over the given year divided by the number of people with hepatitis C at the start of the given year;
 d The proportion cured of hepatitis C is the number of people cured of hepatitis C divided by the number of people who received hepatitis C treatment.

Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

9 Hepatitis C treatment

Subsidised interferon-free DAA regimens became available in Australia from March 2016. Access to new highly effective hepatitis C treatments led to a 26-fold increase in the number of people receiving treatment between 2015 and 2016. The large initial DAA uptake in 2016 likely reflected a 'warehouse' effect, with many patients awaiting DAA treatment access after a hepatitis C diagnosis in previous years⁽²⁾. Since then, DAA treatment initiations (the number of people commencing a course of therapy) per year have declined from 33 460 in 2016 to 5 500 in 2023 (Figure 20). Between March 2016 and the end of 2023, 105 960 people received PBS-subsidised DAA treatment. This means that during this period, including those who have been cured, 63% of all people living with HCV at the start of 2016 (162 590 people), have received treatment.

Figure 20 The number of people living with hepatitis C who received treatment, 2010 – 2023

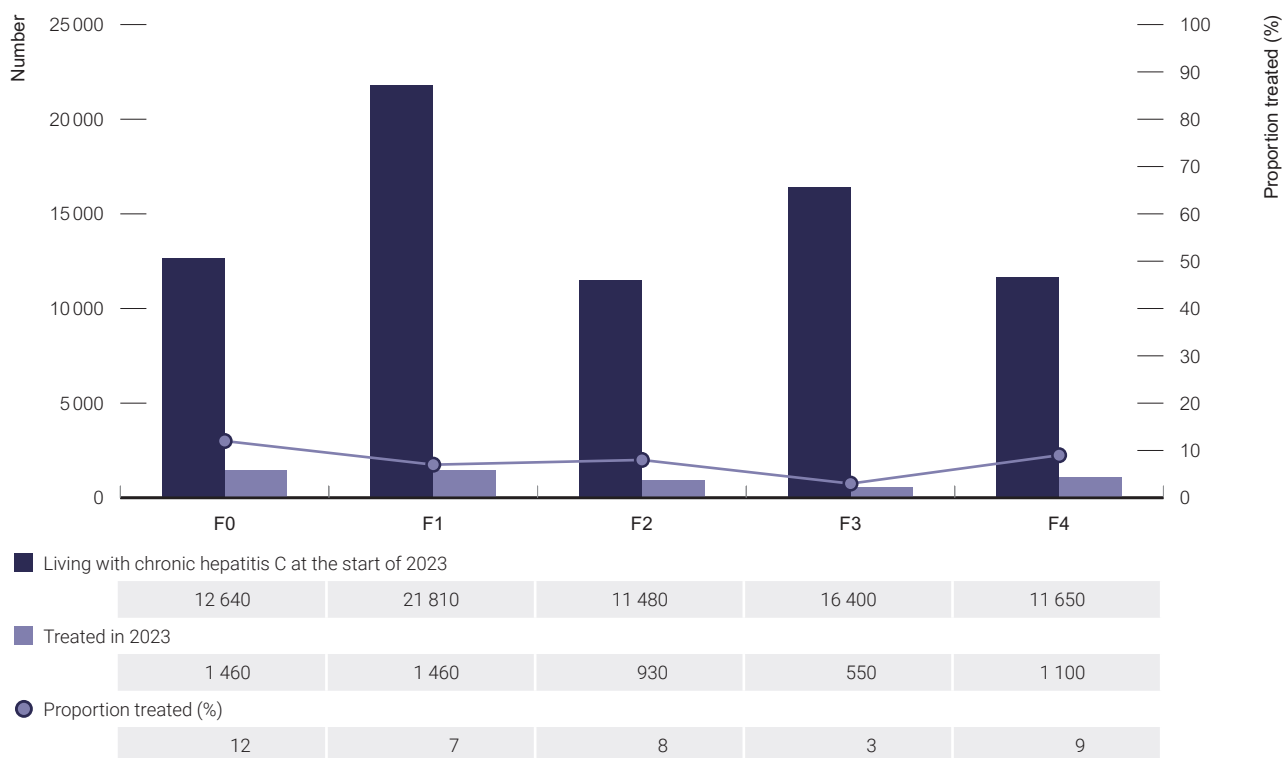


Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Pharmaceutical Benefits Scheme.

In 2023, 7% of all people estimated to be living with hepatitis C at the start of the year initiated DAA therapy (Table 2). A higher proportion of people with hepatitis C-related cirrhosis (stage F4) and early fibrosis (stage F0) at the start of 2023 were estimated to have gone on to receive treatment (9% and 12%, respectively) in 2023 compared with moderate fibrosis (stages F1-F2; 7%) and with severe fibrosis (stage F3; 3%) (Figure 21).

Figure 21 Number and proportion of people living with chronic hepatitis C at the start of 2023 who received treatment during 2023, by stage of disease



Note: F4 includes fibrosis stage 4, decompensated cirrhosis, and hepatocellular carcinoma.

Source: Pharmaceutical Benefits Scheme; see [Methodology](#) for detail.



What does this mean?

The highest uptake of hepatitis C treatment occurs among people who have early and advanced hepatitis.

Table 3 Number of people with chronic hepatitis C infection initiating direct-acting antiviral therapy by state/territory, 2023

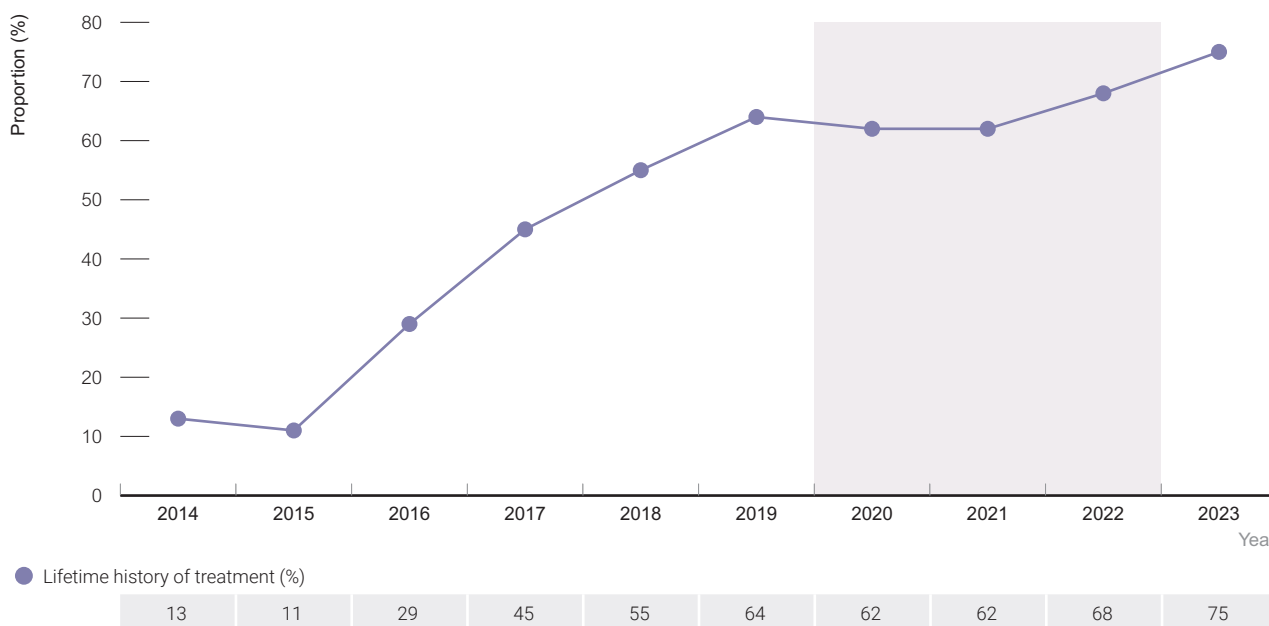
State/Territory	Number initiating direct-acting antiviral therapy in 2023
Australian Capital Territory	40
New South Wales	1990
Northern Territory	40
Queensland	1500
South Australia	240
Tasmania	110
Victoria	970
Western Australia	620
Australia	5500

Source: Pharmaceutical Benefits Scheme

Data from the ANSPS indicate that among respondents with self-reported chronic hepatitis C in 2023, 75% reported ever having received hepatitis C treatment, the highest in the reporting period, and an increase from 11% in 2015 (Figure 22). This increase reflects improved access through subsidised interferon-free direct-acting antiviral regimens from March 2016 ⁽⁹⁾.

Among Aboriginal and/or Torres Strait Islander ANSPS respondents, there was more than a six-fold increase, from 10% in 2015 to 68% in 2023, similar to the seven-fold increase in non-Indigenous respondents from 11% to 78% over the same period. Please refer to the [Australian Needle Syringe Program Survey National Data Report 2019 – 2023: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees](#) for more information ⁽⁹⁾.

Figure 22 Proportion of hepatitis C antibody positive people seen at needle and syringe programs with a lifetime history of hepatitis C treatment, 2014 – 2023



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Denominator for lifetime history of treatment is restricted to people with hepatitis C antibody positive serology and excludes people who self-reported spontaneous clearance; excludes people who reported treatment induced clearance >12 months previously.

Source: Australian Needle Syringe Program Survey; see [Methodology](#) for detail.

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What does this mean?

The proportion of people using needle and syringe programs who have ever have hepatitis C treatment has increased considerably since 2015.

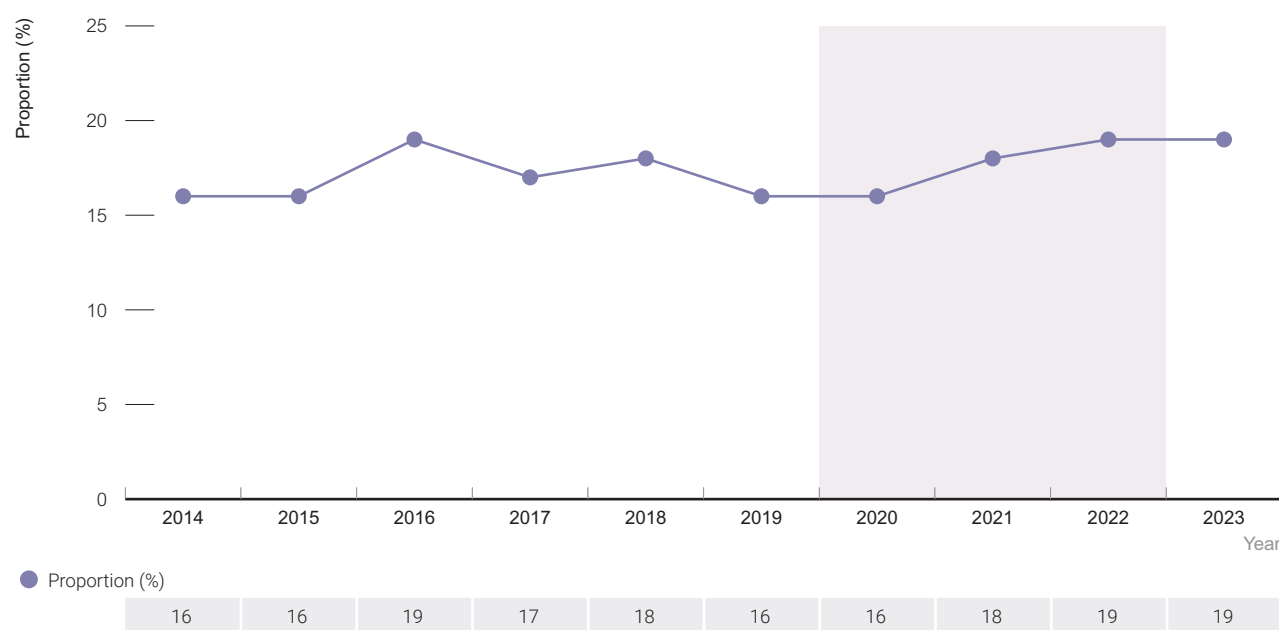
10 Hepatitis C prevention

The reuse of needles and syringes that have been used by others (receptive syringe sharing) is a major risk factor for the transmission of hepatitis C and other bloodborne viruses among people who inject drugs. Harm reduction strategies, in community and prison settings, such as needle and syringe programs and opioid substitution therapy as well as safe injecting spaces, community education and peer interventions can reduce injecting risk behaviour and therefore reduce hepatitis C transmission^(10–12). Opioid agonist therapy has been shown to reduce the incidence of hepatitis C and HIV among people who inject drugs^(13–15). Health promotion is important to enhance the effectiveness of harm reduction strategies and to support people who inject drugs to implement safer practices. Mathematical modelling suggests improving access to diagnosis and antiviral treatment and engagement in regular ongoing liver cancer monitoring for all people with cirrhosis, even when cured of hepatitis C infection, can lead to reductions in hepatitis C incidence⁽¹⁶⁾.

Injecting risk behaviour

Data from the ANSPS indicate that the prevalence of receptive syringe sharing has been generally stable over the past 10 years (2014 – 2023). In 2023, 19% of people attending needle and syringe programs reported receptive syringe sharing in the last month (Figure 23). The proportion of respondents reporting receptive syringe sharing was higher among Aboriginal and/or Torres Strait Islander survey participants (27%) compared with non-Indigenous participants (15%). Please refer to the [Australian Needle Syringe Program Survey National Data Report 2019 – 2023: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees](#) for further information⁽³⁾.

Figure 23 Proportion of people seen at needle and syringe programs reporting receptive syringe sharing in the past month, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian Needle Syringe Program Survey; see [Methodology](#) for detail.

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