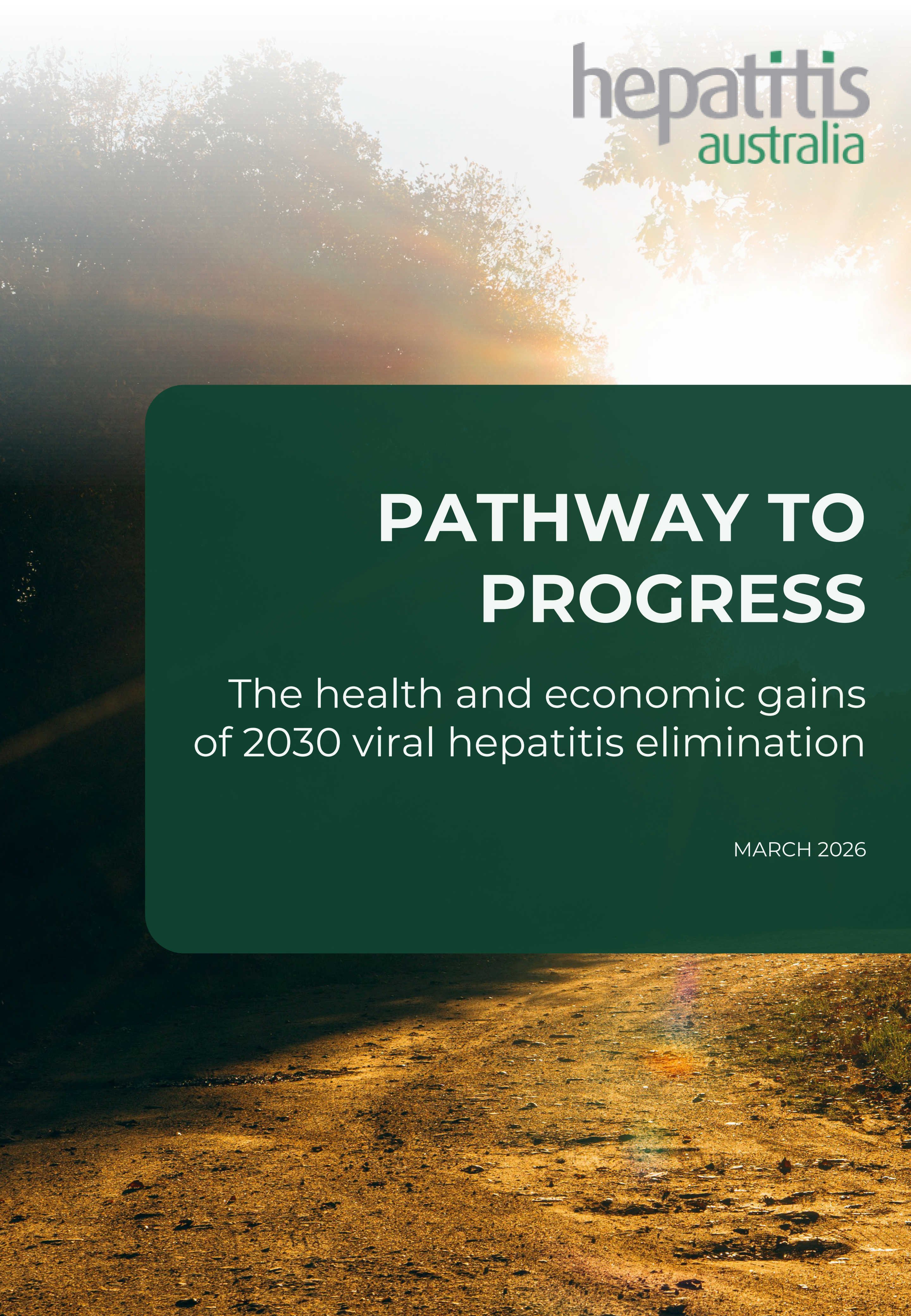


hepatitis
australia

# PATHWAY TO PROGRESS

## The health and economic gains of 2030 viral hepatitis elimination

MARCH 2026

This report was commissioned by Hepatitis Australia and is prepared on their behalf by **HT**ANALYSTS.

Hepatitis Australia thanks AIVL, ASHM, Burnet Institute, Doherty Institute, GESA, Health Equity Matters, Health+Law, Hepatitis Australia Clinical and Research Advisory Group, Hepatitis B Voices Australia, Hepatitis NSW, Hepatitis Australia's Member Organisations, Kirby Institute, Liver Foundation, NACCHO, and Scarlet Alliance for their support in developing this report.

Hepatitis Australia is funded by the Australian Centre for Disease Control.

This resource has been developed with the kind support of:

GILEAD GSK

This report is designed as an advocacy and awareness resource for people affected by viral hepatitis, the organisations that represent them, and decision makers. It should be read alongside the longitudinal epidemiological data produced by the Doherty Institute, the Burnet Institute, and the Kirby Institute.

In the spirit of reconciliation this report acknowledges the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We value Aboriginal and Torres Strait Islander cultures, traditions, views and ways of life and pay our respects to Elders past and present.

# ABBREVIATIONS

**ASHM**
Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine

**CHB**
Chronic hepatitis B

**DAA**
Direct-acting antiviral

**DNA**
Deoxyribonucleic acid

**HBV**
Hepatitis B Virus

**HCC**
Hepatocellular Carcinoma

**HCV**
Hepatitis C Virus

**HEP B PAST**
Partnership Approach to Sustainably eliminating Chronic Hepatitis B in the Northern Territory

**MTCT**
Mother-to-child transmission

**SCT**
Significant Cost Threshold

**STI**
Sexually Transmitted Infection

# CONTENTS

# AT A GLANCE

Almost 300,000 people in Australia live with hepatitis B and hepatitis C. Hepatitis B is treatable, and hepatitis C is curable. Despite this, nearly 1,000 people in Australia are estimated to have died in 2023 due to hepatitis B and hepatitis C.

Australia has committed to eliminating hepatitis B and hepatitis C as public health threats by 2030. This report examines the consequences of failing to meet agreed targets and outlines the costs to people, governments, and society. The estimates draw on economic modelling and lived-living experience insights to capture both healthcare impacts and the broader effects on wellbeing, workforce participation, and human rights. Results are presented separately for hepatitis B and hepatitis C, and at national, state, and territory levels, to support planning and implementation across jurisdictions.

**FOR THE 2030 COHORT**

## Impact of not meeting the targets

Projected economic cost of unmet viral hepatitis elimination targets:

HEPATITIS B: $1.17 BILLION

- **IMMEDIATE IMPACT: $964 MILLION**
- **DOWNSTREAM IMPACT: $202 MILLION**

HEPATITIS C: $1.43 BILLION

- **IMMEDIATE IMPACT: $1.39 BILLION**
- **DOWNSTREAM IMPACT: $40 MILLION**

**TOTAL IMPACT: $2.60 BILLION**

Based on the estimated Federal investment required, as assessed in economic modelling commissioned by Hepatitis Australia for the 2024–25 pre-budget submission, the return on investment is:

HEPATITIS B: **$7 returned for every $1 spent**

HEPATITIS C: **$16 returned for every $1 spent**

These figures do not cost the implementation of the National Strategies. A separate analysis will be required to cost the elimination efforts required.

NOTE: The investment amount used to calculate the ROI is drawn from prior economic modelling prepared for the 2024–25 Federal Pre-Budget Submission [1, 2]. It is provided as an indicative estimate only and may change as updated policy settings and costings are developed through the release and implementation of the new National Hepatitis Strategies.

Across Australia, hepatitis B and hepatitis C continue to place a substantial and largely preventable health impact on those who are affected, their families and communities, as well as the broader health system. These impacts extend beyond clinical outcomes, affecting people through preventable illness and death, reduced participation in work and study, reduced quality of life, and ongoing healthcare costs. Other impacts including those associated with stigma and discrimination and legal and human rights-related issues are well recognised but challenging to accurately quantify. Based on the findings of this report, three priority recommendations are proposed to ensure equitable access and alignment with national strategies and existing Government commitments:

1. **Fully fund and implement the National Hepatitis B and Hepatitis C Strategies** at Commonwealth, state and territory levels, with clear accountability for timely implementation and measurable progress toward 2030 targets.

2. **Invest in sustained, community-led responses** that work alongside national strategies to reach priority populations, remove barriers to testing, care, and treatment, and ensure services are culturally safe, accessible, and responsive to local need.

3. Strengthen integration of hepatitis elimination efforts and liver monitoring programs to **detect liver disease earlier**, improve access to antiviral treatment, and prevent progression to cirrhosis and liver cancer.

**While this analysis estimates the impact at a single point in time in 2030, for every year the targets remain unmet, the associated annual or immediate impacts are expected to recur for the people, the community, governments and society more broadly. This means that impacts estimated in this analysis are a conservative estimate, and the true burden is likely to be much greater.**

## HEPATITIS B IMPACT BY TARGET

Targets are drawn from the draft Fourth National Hepatitis B Strategy (2023-2030) and existing evidence (see page 14), and the dollar values show the modelled incremental impact of missing each target in 2030. The total for each target is split into immediate impact (incurred in 2030) and downstream impact (occurring beyond 2030 but attributable to people living with hepatitis B in 2030).

| | | Immediate impact | Downstream impact |
|---|---|---|---|
| 1 | CHILDHOOD VACCINATION[1] | Expected to meet the national target | |
| 2 | PREVENTION OF MOTHER-TO-CHILD TRANSMISSION[2] | Limited impact experienced in the short term | |
| 3 | INCIDENCE REDUCTION[3] | Expected to meet the national target | |
| 4 | PROPORTION DIAGNOSED | $18.6M | $20.0M |
| 5 | STIGMA[4] | UNABLE TO BE ACCURATELY ESTIMATED | |
| 6 | QUALITY OF LIFE | $262.7M | |
| 7 | LEGAL AND HUMAN RIGHTS[4] | UNABLE TO BE ACCURATELY ESTIMATED | |
| 8 | PROPORTION IN CARE | $119.4M | $125.7M |
| 9 | PROPORTION RECEIVING TREATMENT | $21.4M | $56.0M |
| 10 | ATTRIBUTABLE MORTALITY | $541.7M | |

🟦 Immediate impact ☐ Downstream impact

The estimated immediate impact is expected to recur each year until elimination is achieved.

---

[1] Vaccination rates are declining and while currently on track, this number is expected to decline with priority populations experiencing disproportionate burden.

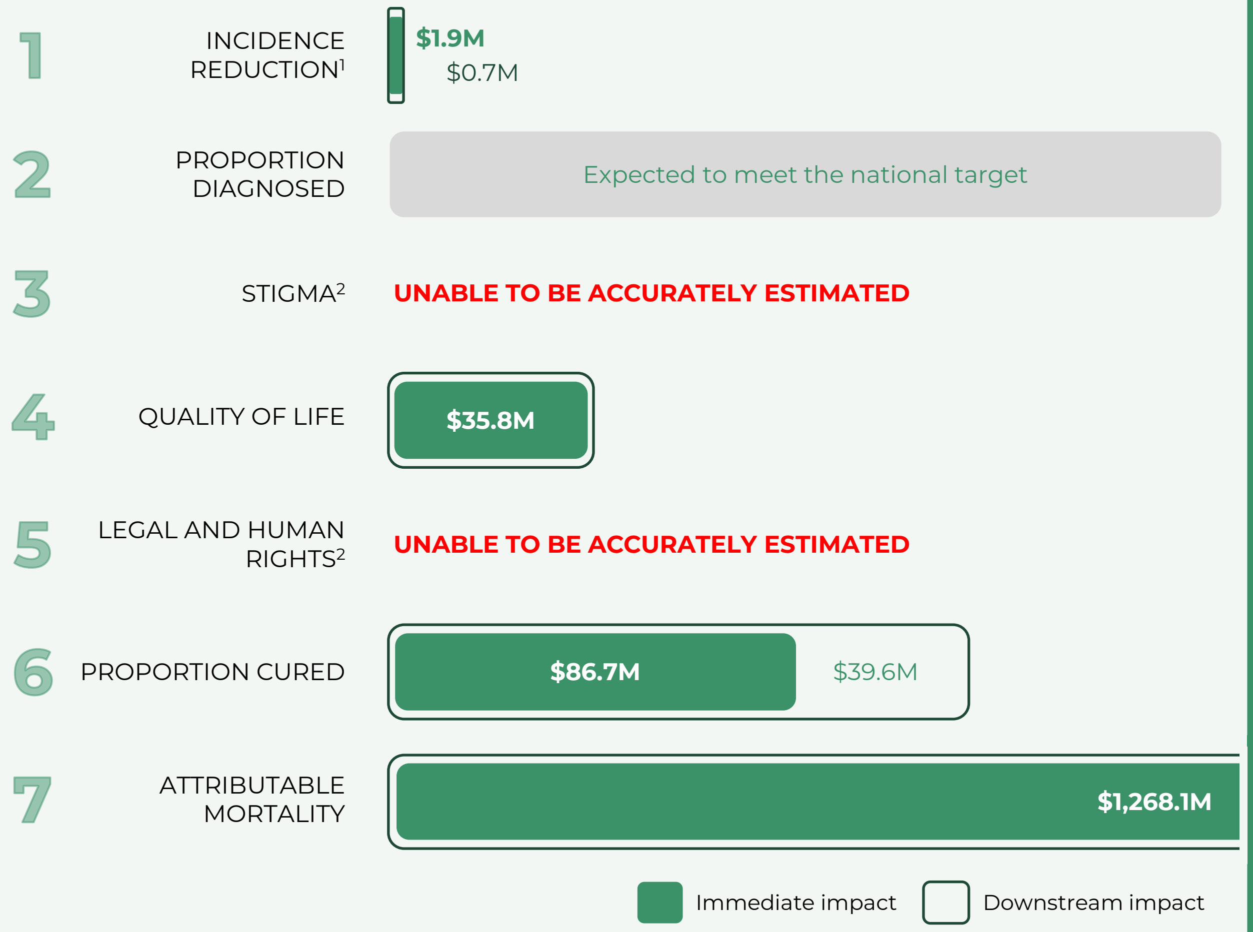
[2] Target is not expected to be met but significant consequences and impact are expected to be experienced more distantly in the future.

[3] Considers locally acquired cases only. As priority populations experience an unequal incidence burden, the target for the most affected communities may not be achieved.

[4] Stigma and legal and human rights targets could not be quantified due to limitations in available data

## HEPATITIS C IMPACT BY TARGET

Targets are drawn from the draft Sixth National Hepatitis C Strategy (2023-2030) and existing evidence (see page 14), and the dollar values show the modelled incremental impact of missing each target in 2030. The total for each target is split into immediate impact (incurred in 2030) and downstream impact (occurring beyond 2030 but attributable to people living with hepatitis C in 2030).



The estimated immediate impact is expected to recur each year until elimination is achieved.

## IMPACT OF LIVER CANCER AND TRANSPLANTS

Liver cancer and liver transplants represent some of the most severe and costly outcomes of viral hepatitis. This figure shows the incremental impact linked to these outcomes when projected 2030 progress falls short of the 2030 targets.

**LIVER CANCER**

HEPATITIS B: $32.4M
HEPATITIS C: $3.1M

**TRANSPLANT**

HEPATITIS B: $860,872
HEPATITIS C: $183,561

[1] Impact accrues within the priority population of people who inject drugs only
[2] Stigma and legal and human rights targets could not be quantified due to limitations in available data

# THE TARGETS IN CONTEXT

Australia's progress towards eliminating hepatitis B and hepatitis C by 2030 demonstrates both meaningful achievements and critical gaps. The Australian Government's National Hepatitis B and Hepatitis C Strategies for each condition outline a set of elimination targets designed to reduce transmission and mortality, improve diagnosis and care, and address the broader social and human rights impacts experienced by people living with viral hepatitis. The modelling presented in this report assesses the impact of falling short of these targets in 2030, with a consistent approach applied across both hepatitis B and hepatitis C. The impact of missing a target is estimated by comparing where we expect to be in 2030 with what the national target says we should achieve. The analyses provide a snapshot of the impact of failing to meet agreed targets at a single point in time and do not estimate changes beyond this. Impacts associated with people living with viral hepatitis in 2030 are divided into immediate impacts and downstream impacts.

This analysis focuses on immediate impacts, which are those that occur in 2030 to people who are affected by hepatitis in that year. They include health system and economic productivity costs, such as healthcare expenditure and tax receipts lost through absenteeism, and individual and community impacts, which include effects borne by individuals, families, employers, and communities, such as productivity losses and reduced quality of life. The cost of early death due to hepatitis is based on total life years lost but included as an immediate impact as it only captures people who die in 2030.

Downstream impacts relate mainly to long-term productivity loss caused by early exit from the workforce and reduced lifetime earnings which accrue to people living with hepatitis in 2030 over an extended period of time. Healthcare costs linked to mother-to-child transmission (MTCT) of hepatitis B are also included in downstream impacts because they are expected to accumulate over the lifetime of people who develop hepatitis B at birth in 2030. All downstream impacts are discounted to present value.

This analysis uses a snapshot of the estimated population taken to achieve the agreed targets in 2030 and does not model population dynamics or disease progression beyond this point. If the national targets are not met by 2030 similar immediate impacts will recur in each subsequent year until the targets are met. As a result, this analysis represents only a fraction of the total hepatitis burden and is a conservative estimate of the total downstream impact of hepatitis. The health and societal impacts of liver disease increase substantially with disease progression, so the longer people continue to receive suboptimal care, the impact of failing to meet the agreed targets is likely to increase.

# HEPATITIS B – PROGRESS TOWARDS 2030

Hepatitis B has been a long-standing public health issue. Despite decades of prevention and treatment options, there remains a substantial opportunity to accelerate progress on hepatitis B through targeted action. The draft Fourth National Hepatitis B Strategy sets out ten elimination targets; however, current projections suggest that eight of these will not be met by 2030, including two unable to be measured due to limited data and an unestablished baseline. [3-6] Meeting these targets will require improvements across the care cascade, reduced stigma, strengthened monitoring and prevention, and addressing the social and cultural determinants of health that contribute to hepatitis B morbidity and mortality.

**PROGRESS TOWARDS HEPATITIS B ELIMINATION TARGETS**

| | GOAL | PROJECTED IN 2030 | PEOPLE IMPACTED – 2030 | |
|---|---|---|---|---|
| **CHILDHOOD VACCINATION** | 95% 3-dose childhood vaccination rate | ✓ | N/A | [5] |
| **PREVENTION OF MTCT** | 95% receiving guideline-based care<br>≤1% MTCT | 41%<br>3% MTCT | **27**[1] | [7] |
| **INCIDENCE REDUCTION** | ≤0.1% HBV surface antigen in under 5s | ✓ | N/A | [3] |
| **PROPORTION DIAGNOSED** | 90% | 68% | **52,584** | [3, 8] |
| **STIGMA REDUCTION** | Reduce by 75% | ? | N/A | [4, 9] |
| **QUALITY OF LIFE** | 95% of people knowingly living with CHB report good quality of life | 81% | **21,021** | [10] |
| **LEGAL AND HUMAN RIGHTS** | Reduce the negative impact on people's health and wellbeing | ? | N/A | [11, 12] |
| **PROPORTION IN CARE** | 80% | 31% | **119,045** | [3, 8] |
| **PROPORTION ON TREATMENT** | 27% | 16% | **26,536** | [3, 8] |
| **ATTRIBUTABLE MORTALITY** | 30% reduction in hepatitis B attributable mortality | 20% increase | **210** | [3] |

[1] Children born in 2030 who will develop chronic hepatitis B.

NOTE: The Indigenous status identification data completion target was left intentionally blank in the draft Fourth National Hepatitis B Strategy, the latest available strategy at the time of analysis, so the impact of failing to meet this target has not been explored in this report. Stigma and Legal and human rights targets could not be quantified due to limitations in available data. Calculations provided in appendix.

# HEPATITIS C – PROGRESS TOWARDS 2030

Following the introduction of unrestricted access to highly effective direct-acting antiviral (DAA) therapies in 2016, Australia was viewed as a global leader in hepatitis C elimination. While incidence reductions for the overall population remain on track, progress across the broader set of elimination targets has slowed. Five of seven targets are not expected to be reached by 2030. The national incidence target is expected to be met, however the incidence target for people with living experience of injecting drug use is not expected to be met. [13-16] Progress toward the stigma reduction and legal and human rights targets could not be accurately quantified due to limitations in available data and no clear baseline to measure from.

The draft Sixth National Hepatitis C Strategy identifies both the importance and urgency of renewed investment and targeted action. The greatest ongoing challenge lies in reaching priority populations, particularly people with lived and living experience of injecting drug use. Reinfection risk, stigma, disengagement from care, and inconsistent access to harm reduction services all contribute to unmet need, with the consequences falling disproportionately on affected communities. [17] Without increased awareness, improved prevention, targeted outreach, stigma reduction, continuity of care, increased treatment uptake, and innovative approaches to testing and models of care, progress will remain below the levels required to achieve elimination.

## PROGRESS TOWARDS HEPATITIS C ELIMINATION TARGETS

| | GOAL | PROJECTED IN 2030 | PEOPLE IMPACTED – 2030 | |
|---|---|---|---|---|
| **INCIDENCE REDUCTION** | Reduce by 90%<br>≤2 cases per 100 people who inject drugs | ✓<br>5 cases per 100 people | N/A<br>**113[1]** | [15, 18] |
| **PROPORTION DIAGNOSED** | 90% | ✓ | N/A | [18, 52] |
| **STIGMA REDUCTION** | Reduce by 75% | ? | N/A | [16] |
| **QUALITY OF LIFE** | 95% of people report good quality of life | 48% | **14,227** | [16] |
| **LEGAL AND HUMAN RIGHTS** | Reduce the negative impact on people affected by hepatitis C | ? | N/A | [19-22] |
| **PROPORTION CURED** | 85% | 81% | **6,270** | [18, 52] |
| **ATTRIBUTABLE MORTALITY** | 65% reduction in hepatitis C attributable mortality | 17% reduction | **352** | [18, 52] |

NOTE: The Indigenous status identification data completion target was left intentionally blank in the Sixth National Hepatitis C Strategy, the latest available strategy at the time of analysis, so the impact of failing to meet this target has not been explored in this report. Stigma and Legal and human rights targets could not be quantified due to limitations in available data. Calculations provided in appendix.

[1] Includes reinfections

# METHODOLOGY

Australia has committed to eliminating hepatitis B and hepatitis C as public health threats by 2030. Increased investment and activity at state, territory, and national levels are needed to meet elimination targets. To support stronger policy and planning, Hepatitis Australia commissioned **HT**ANALYSTS to quantify the broader consequences of falling short of the 2030 elimination targets set out in the National Hepatitis Strategies.

This analysis combines economic modelling with lived-experience insights drawn from consultations with community organisations and stakeholder groups representing people most affected by hepatitis B and hepatitis C. By bringing these perspectives together, the report illuminates the full scale of the challenge, drawing attention to the human consequences of inaction and highlighting where targeted investment could have the greatest impact. The research also identified significant gaps in evidence, particularly for certain priority populations. This reflects long-standing gaps in how hepatitis services and outcomes are routinely captured. As a result, impacts for communities most affected may be underestimated.

The same methodological framework was used for both hepatitis B and hepatitis C analyses. [3, 15, 24, 25] For each condition, every 2030 target was modelled under two scenarios: achievement of the national target and the projected level of progress in 2030. The impact of not meeting each target was calculated as the incremental difference between these scenarios, and results were then summed across targets to determine the total impact. [6, 7, 18, 52]

Predicted progress for each target in 2030 was based on recently published estimates from the Doherty Institute (hepatitis B) and data from the Kirby Institute (hepatitis C). [3, 13–15, 18, 52] The number of people living with hepatitis C is expected to continue to decline in future years, and this is reflected in the projected 2030 target progress based on the most up to date projections. Where 2030 estimates were unavailable or could not be reliably derived, current target performance was projected forward under a scenario of unchanged investment. Additional inputs were drawn from academic research where necessary, particularly in relation to quality of life, and MTCT indicators. [4–6, 16]

The analysis adopted a national perspective, with supplementary state-level analyses where data permitted. [3, 18] Only the gap between projected and target outcomes was quantified. Targets already on track were either excluded or modelled only for populations in which gaps persist, such as the hepatitis C incidence target for people with lived-living experience of injecting drug use. [15, 26]

Outcomes included impacts on the health system, such as disease management, hospitalisations, liver cancer, liver transplantation, and premature mortality; and productivity impacts linked to absenteeism, presenteeism, and reduced workforce participation. Additional broader effects included reduced quality of life. The analysis was unable to quantify the impact of loss from unpaid work, including caring for children or the elderly, household work, or cultural roles and obligations.

The included outcomes were chosen to capture the full scale of failing to meet the agreed hepatitis elimination targets. However, outcomes were required to be quantifiable and relevant to a significant proportion of people affected by each target. Some individuals will be affected in other ways that are not quantified in this report.

Downstream impacts associated with not meeting the national targets were largely associated with premature exit from the workforce and were discounted to present value using a 5% discount rate. All costs were converted to 2025 Australian dollars. [6, 7, 27–30] Premature mortality was costed based on life years lost compared to average life expectancy but was included as an immediate impact given only deaths occurring in 2030 were considered in the analyses.

**While this analysis estimates the impact at a single point in time in 2030, for every year the targets remain unmet, the associated annual or immediate impacts are expected to recur both for the people, the community, governments and society more broadly. This means that impacts estimated in this analysis are a conservative estimate, and the true burden is likely to be much greater.**

The total impact was separated into a health system and economic productivity component and an individual and community component. Health system and economic productivity impacts include disease management costs associated with delayed or missed diagnosis, care, monitoring, or cure of viral hepatitis, as well as foregone tax receipts resulting from barriers to economic and social participation (see pages 17 and 19). Individual and community impacts include effects borne by individuals, families, employers, and communities.

Challenges faced by each priority community were identified through consultation with representatives from relevant community peak organisations representing affected communities. [31-36] These challenges were quantified where possible and examined qualitatively to reflect lived experience. Estimates were presented for priority populations only where suitable data was available and in ways that avoid mischaracterising communities.

It is acknowledged that not all outcomes could be quantified, either due to limitations in the available data or the intangible nature of the impact they have on people. Affected communities experience significant non-quantifiable consequences including stigma, social exclusion, and disruptions to family, community connection and wellbeing, which should be recognised alongside the modelled estimates.

Only the incremental gap between projected progress and the 2030 targets was quantified, applied to the cohort of people living with hepatitis B or hepatitis C in 2030. This included reinfections for hepatitis C, which is expected to account for the majority of new hepatitis C cases in 2030.

# THE IMPACT OF NOT MEETING THE TARGETS

## HEPATITIS B

Approximately 220,000 people in Australia are living with chronic hepatitis B. Hepatitis B continues to place a significant burden on individuals, communities, and the healthcare system. For people living with hepatitis B, the social and emotional impacts can reduce wellbeing, and the need for ongoing monitoring and care creates additional strain. [37]

The impact was estimated by quantifying the gaps between projected and target outcomes, rather than the overall impact of an outcome. Not all impacts of hepatitis B can be quantified, and affected communities experience significant unmeasured harms such as stigma, social exclusion, and reduced wellbeing, alongside the modelled estimates. Chronic hepatitis B can intersect with discrimination and racism, compounding barriers to care and contributing to broader inequities in health outcomes.

### OUTCOMES INCLUDED FOR EACH NATIONAL STRATEGY ELIMINATION TARGET

**CHILDHOOD VACCINATION**
On track to be met

**PREVENTION OF MOTHER TO CHILD TRANSMISSION**
Avoidable chronic hepatitis B infections

**INCIDENCE REDUCTION**
On track to be met

**PROPORTION DIAGNOSED**
Increased disease burden
Lost opportunity to improve health literacy and greater healthcare utilisation
Reduced productivity due to absenteeism, presenteeism, and early workforce exit

**STIGMA REDUCTION**
Unable to be quantified

**QUALITY OF LIFE**
Reduced quality of life, measured through value of a statistical life-year adjusted for hepatitis B-related disability

**LEGAL AND HUMAN RIGHTS**
Unable to be quantified

**PROPORTION IN CARE**
Increased disease burden
Reduced productivity

**PROPORTION ON TREATMENT**
Increased disease burden
Reduced productivity

**ATTRIBUTABLE MORTALITY**
End-of-life costs related to liver cancer
Value of a statistical life year lost through avoidable mortality

### PREVENTABLE CHRONIC HEPATITIS B INFECTIONS

The number of new chronic hepatitis B infections occurring in 2030 is estimated using regional data on transmission rates in DNA-positive pregnant people living with hepatitis B. [6] This applies only to pregnancies within Australia for people who do not receive guideline-based care. [7, 38]

Costs include childhood monitoring at frequencies consistent with ASHM (Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine) guidance, as well as adult monitoring and treatment applied to those projected to be in care or receiving treatment in 2030. [3, 39-42] For those who develop compensated cirrhosis, decompensated cirrhosis, or liver cancer, disease management costs are applied for the age of disease onset and expected duration of illness. Disease management costs are discounted to 2030 using a 5% rate. [3, 41, 43-46]

### INCREASED DISEASE BURDEN

Hepatitis B elimination targets include several disease management stages. To avoid counting people more than once, the model identifies distinct populations for diagnosis, care, and treatment. Those who would have been diagnosed if the proportion diagnosed target were met, for example, also represent the group who would later have accessed care and treatment. This population is therefore counted only within the diagnosis target. A similar approach is taken for the target of people with hepatitis B in care.

Disease management costs increase for people who progress to cirrhosis or liver cancer. Approximately 1% of people living with hepatitis B are expected to have decompensated cirrhosis or liver cancer. [44]. When care targets are met, regular monitoring is assumed to support earlier identification of liver disease, which reduces the likelihood of progression to advanced stages. [47] Antiviral therapy is assumed to reduce progression further. [48] Hepatitis B related liver cancer is estimated using national data. [28, 49-51] Liver transplants were based on 2024 national data. [53]

### HEALTH LITERACY

Diagnosis is often the point at which people first receive health information and support relating to hepatitis B. Missing this opportunity can lead to increased primary care use compared to the general population. [4, 42, 53-54]

### PRODUCTIVITY

Reductions in productivity occur through additional sick days, lower on-the-job performance, and withdrawal from the workforce. These effects are calculated using published differences between people living with hepatitis B and those without hepatitis. [55-57] Stigma can intensify these effects, contributing to greater workplace difficulty and loss of employment. [58, 59]

For people with severe liver disease such as decompensated cirrhosis or liver cancer, long-term disability can reduce the ability to continue working.  Lost income and foregone taxation receipts are estimated using the age distribution of liver cancer and discounted to present value. [28, 29, 60, 61]

### TREATMENT ADHERENCE

Higher levels of hepatitis B-related stigma are associated with reduced adherence to antiviral therapy. Reduced adherence contributes to increased disease progression rates. [44]

### MENTAL HEALTH AND WELLNESS

People who experience hepatitis B-related stigma are more likely to experience anxiety and depression, [62-65] although this may not translate to actively seeking mental health services or support. Due to challenges in quantifying the impact of mental health due to hepatitis B-related stigma and limitations in the available data, this could not be included in the estimated impact.

### QUALITY OF LIFE

The impact of failing to meet the quality of life target is estimated using the value of a statistical life year adjusted for the disability associated with living with hepatitis B. This applies to people who self-report poor quality of life, using proportions drawn from the most recent national survey.  [10, 66, 67]

### END-OF-LIFE COSTS

People who die from hepatitis B-related liver cancer or cirrhosis incur end-of-life costs associated with emergency department visits, hospital care, and medications. [3, 68, 69] Years of life lost to early mortality are valued using the value of a statistical life year, discounted to present value. [67, 70, 71]

I have lived with hepatitis B for all of my life. Although this is a virus that can badly damage the liver, the worst thing about it has mostly been the lack of information about it and the behaviour of other people towards me when they find out I have hepatitis B.

No one told me what I should do about having hepatitis B

Until after a check-up for my pregnancy, I hadn't known that I had hepatitis B. Even then, no one told me what I should do about it, and so neither the doctor nor myself paid it much attention. I certainly didn't know that my son should get a vaccination for hepatitis B within 12 hours of his birth, so it was very lucky that he was not also infected.

The discrimination against my hepatitis B status began to impact my friendships

After migrating, in 2000, to Sydney from China, a very good friend of mine offered tremendous support to help me with my settlement. Australia was such a new environment and her help was very much appreciated.

***But, one day, without warning, she just walked away from me when she saw me… and never spoke to me again. She instantly became like a stranger to me.***

Then I realised it was because she must have known about my hep B status. She and I went to the same doctor, and I believe she found out through there. This hurt a lot, and I was very sad about the loss of our long-term friendship. After this, I never told other friends that I had hepatitis B and, even carried my own cutlery (even though the virus cannot be passed on through a shared eating utensil!).

The health effects of hep B became too much for me

Later, I had a breakout of hepatitis B, and my liver function tests showed that the virus might be damaging my liver. The doctor prescribed anti-viral medication, which helped to get my blood indicators back to normal. The doctor said I needed to take this treatment every day for the rest of my life, otherwise the virus would most likely become resistant to the medicine.

While I have followed the doctor's advice, concerns over my health and the social pressures of living with hep B have had a dramatic effect on my personality. I became withdrawn and began to lose too much weight.

Joining Hepatitis NSW activities turned my life around!

Luckily, all this has now changed. I got to know Hepatitis NSW, joined in their activities with the Sydney Chinese community and even became a Hep B speaker!

***Having now acquired more knowledge about hepatitis, I am confident that people living with hepatitis B can lead a long and healthy life.***

More so, I know that while those who have hep B should encourage people close to them to get tested, they also have the right to keep their personal health matters private.

I have shared my experience with a great number of people from different communities and a variety of backgrounds. This, along with being an active participant in dancing activities, has greatly improved my mental wellbeing. I've even regained that lost weight!

MARY

LIVING WITH HEPATITIS B

# HEPATITIS C

Approximately 63,000 people in Australia are living with hepatitis C. The ongoing health impacts of hepatitis C result in significant social, economic and healthcare costs. The impact was estimated by quantifying the gaps between projected and target outcomes in 2030 based on modelling conducted by the Kirby Institute.[18] Not all impacts of hepatitis C can be quantified, and affected communities experience significant unmeasured harms such as stigma, social exclusion, and reduced wellbeing, alongside the modelled estimates.

## OUTCOMES INCLUDED FOR EACH ELIMINATION TARGET

**INCIDENCE REDUCTION**

Increased diagnostic burden for new cases

Increased DAA treatment costs

Increased demand for specialist care

Reduced productivity

Increased disease management needs

Costs linked to long-term liver damage

**PROPORTION DIAGNOSED**

On track to be met

**STIGMA REDUCTION**

Unable to be quantified

**QUALITY OF LIFE**

Reduced quality of life, measured through value of a statistical life year adjusted for hepatitis C-related disability

**LEGAL AND HUMAN RIGHTS**

Unable to be quantified

**PROPORTION CURED**

Increased disease burden

Reduced productivity

**ATTRIBUTABLE MORTALITY**

End-of-life costs related to liver cancer

Value of a statistical life year lost through avoidable mortality

### DISEASE MANAGEMENT AND BURDEN

While the incidence reduction target is on track at the national level, the target for people with living experience of injecting drug use is not expected to be met. The associated impact includes diagnostic tests, DAA treatment, specialist care, and disease management costs for the proportion of new cases projected to develop compensated cirrhosis within one year of diagnosis. [15, 26, 51, 72-74]

### PRODUCTIVITY

Additional sick days and presenteeism reported for people living with hepatitis C are applied to those who would otherwise have been cured. [55] Productivity impacts are limited to those participating in the workforce, as there was limited data to accurately quantify the impact of unpaid work. [29, 56, 57, 60] For severe liver disease, lost income and taxation are estimated using the age distribution of hepatitis C-related liver cancer and discounted to present value. [28, 29, 60, 61]

### INCREASED IMPACT OF DISEASE

It is estimated that approximately 19% of people living with hepatitis C have stage F4 liver disease. [13] Reinfections among people with living experience of injecting drug use are included in the impact estimates. [18]

Disease management costs cover clinical care, pathology, imaging, procedures, and hospital care for those who develop compensated or decompensated cirrhosis or liver cancer. [13, 75-76] Liver cancer estimates were based on 2030 population modelling. [18, 49-52] Liver transplants were based on 2024 national estimates. [18]

### MENTAL HEALTH AND WELLNESS

People who experience hepatitis C-related stigma, discrimination, social exclusion and economic barriers are more likely to experience anxiety and depression. [62-65] However, due to insufficient data availability, this was unable to be quantified in the analysis.

### QUALITY OF LIFE

The impact linked to the quality of life target is estimated using the value of a statistical life year adjusted for the disability associated with hepatitis C-related cirrhosis or liver cancer. [13, 67, 75]

### END-OF-LIFE COSTS

People who die from hepatitis C-related liver cancer or cirrhosis incur end-of-life costs associated with emergency department visits, hospital care, and medications. [3, 68, 69] Years of life lost to early mortality are valued using the value of a statistical life year, discounted to present value. [67, 70, 71]

**VICKI**
LIVED WITH HEPATITIS C

“When I was diagnosed with hepatitis C in the 80’s, they didn’t even have a name for it. It was simply called “non-A non-B hepatitis”.

I remember being very frightened when I received the diagnosis. The scariest part to me was how it might affect others. At the time, I was living with someone who was pregnant. I didn’t know how hepatitis C was transmitted, and I was worried about passing it on to her and others close to me.

When I was out socialising with friends, I began noticing that even a few drinks would leave me extremely unwell. Instead of recovering the next day, it would take days, and I was constantly exhausted. It was one of the first signs that something wasn’t right.

***It took a long time before I finally understood what hepatitis C was and what it meant for my health.***

I was planning to start treatment with interferon. My partner at the time began treatment before I did. He became very unwell — really sick — and sadly passed away from complications. The experience frightened me so much that I decided not to go ahead with interferon. I stopped attending the liver clinic altogether.

It took ten years until I felt ready to focus on my health again.

Finding the right support made all the difference for me. I didn’t know there were new treatments for hepatitis C until Hepatitis ACT told me about direct-acting antivirals. They were just small tablets I needed to take for 8-12 weeks – and that was it.

After all those years of fear and uncertainty, I was finally cured! It felt like a huge weight lifted off my shoulders. I no longer felt worried about transmitting hepatitis C at the dentist or at a doctor’s appointment.

Hepatitis ACT also encouraged me to reconnect with a liver clinic.

At the time, I would walk past the clinic every day. I knew I needed to go back – I meant to – but emotionally, it felt too hard. Then one day, I received a call from the clinic. Hepatitis ACT facilitated to ensure I would get the support I needed.

It turned out that, after living with long-term hepatitis C, I had developed cirrhosis. Thanks to ongoing monitoring and being cured of hepatitis C, my liver has slightly improved, and I am less likely to need a liver transplant.

Without the encouragement from Hepatitis ACT, I’m not sure I would have ever walked through the liver clinic’s doors and accessed treatment.

For many of us, older treatments like interferon were traumatic and came with serious side effects. Those experiences have kept people away from getting treatment for years, just like they did for me.

***But the treatment today is simple, short-term, and far easier on the body. It’s so important that people know this. Many people are still living with hepatitis C, thinking treatment will be as hard as it used to be.***

Organisations like Hepatitis ACT are invaluable, and I always let people know that when you come into these spaces, there’s no judgement. It’s a safe place to ask questions and be guided in ways that benefit all of us.

If you’ve been putting off treatment because of what you went through – or what you’ve heard – know that things have changed. Support is there, and cure is possible.”

VICKI

LIVED WITH HEPATITIS C

# OVERVIEW OF THE PRIORITY POPULATIONS

Differences in experiences of viral hepatitis across and within priority populations reflect a diverse intersect of characteristics. These factors include higher prevalence rates, varying exposure to transmission pathways, social, cultural, and structural barriers that impede access to and engagement with healthcare, and differing profiles of co-morbid health conditions. Many people also sit across multiple priority groups, and some may be living with both hepatitis B and hepatitis C, which can compound stigma, barriers to care, and health impacts. Progress towards elimination requires improvements across all priority populations.

## PRIORITY POPULATIONS LIVING WITH HEPATITIS B AND HEPATITIS C

**ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES** 🟦 🟩

**CULTURALLY AND LINGUISTICALLY DIVERSE COMMUNITIES** 🟦 🟩

**PEOPLE IN CUSTODIAL SETTINGS** 🟩

**PEOPLE WITH LIVED-LIVING EXPERIENCE OF INJECTING DRUG USE** 🟩

**SEX WORKERS** 🟦 🟩

🟦 Priority for hepatitis B

🟩 Priority for hepatitis C

NOTE: all the figures presented in the priority population sections refer only to the gaps between projected and target outcomes and not the overall impact of an outcome for the whole priority population, consistently with the rest of the report.

NOTE: the impacts of hepatitis C for culturally and linguistically diverse communities was not explicitly modelled in the priority population calculations due to data availability. Similarly, the impacts of hepatitis B for sex workers was not explicitly modelled in the priority population calculations due to stakeholder engagement feedback availability. Nonetheless the impact of hepatitis C on culturally and linguistically diverse communities and hepatitis B on sex workers was included in the overall impact calculations.

There is a strong relationship between an individual's health and their living and working conditions, with social and commercial determinants influencing up to half of all health outcomes. [78] This is evident in viral hepatitis, where people describe experiencing varying degrees of stigma, barriers to accessing care, and misinformation about transmission or treatment. These factors affect both quality of life and the ability to manage or treat hepatitis. **Lived-experience accounts indicate that the social impacts of viral hepatitis can, at times, be more significant than the condition itself.** [37]

Experiences have also changed over time as treatment options have advanced. This is particularly evident for hepatitis C, where highly effective DAA therapies have been widely available since 2016. [79] Earlier interferon-based treatments were less effective and had substantial side effects. In additional to factors including stigma and discrimination, cultural safety, lack of person-centred care and criminalisation, experience with interferon-based treatments may have contributed to disengagement from care among those diagnosed before DAAs became available.

This report draws on lived-experience insights to explore the drivers of transmission, barriers to care, and quality of life impacts across each priority population. While grouping people in this way helps illustrate shared challenges, it is important to recognise that each person's experience is unique. Many individuals belong to more than one priority population, and their needs cannot be fully captured within a single category.

Recognising intersectionality, when someone belongs to multiple priority populations is essential to delivering person-centred and culturally safe care. Multiple forms of stigma, contradictory information sources, or compounded barriers can make it more difficult to engage with testing, monitoring, or treatment, and may mean that some people are not well served by services targeting a single population group.

Data on the intersectional impacts of viral hepatitis across priority populations remain limited. Existing research typically notes that individuals at risk may belong to several population groups, and that these overlaps are likely to increase barriers to care and the day-to-day challenges of living with hepatitis. [80] For example, Australian research into hepatitis B susceptibility identified priority groups that only partially align with those considered in this report but still found that almost one-quarter of participants belonged to two or more population groups. [81] No equivalent research is available for hepatitis C.

Because of these data limitations, the results presented in the priority population sections are not intended to be mutually exclusive. They will not add up to the total impact presented in the report, as individuals with lived experience of hepatitis B or hepatitis C may belong to more than one priority population.

Estimated impacts for each priority population are calculated only for individuals within that population who are projected not to achieve the specified outcomes if targets are not met. As to not misrepresent the broader burden of hepatitis B and hepatitis C, only healthcare-related disease management burden is presented for each priority population. Stepped calculations showing the total number of people impacted by each priority-population level outcome presented in this report are available in the technical appendix. **Estimates represent the minimum expected impact, due to limitations in availability and quality of data used to estimate the size of each priority population.** In addition, there were challenges in quantifying outcomes which are specific to one or two priority populations only. Limitations in data relating specifically to priority populations was identified, which may further mask the deep inequities faced. To preserve the clarity and depth of insights shared by community representatives, each group is therefore presented separately. Even so, many thematic similarities arise across population groups, and readers are encouraged to consider how these issues may compound for people who belong to more than one group.

Finally, adjustments to services that better support people belonging to multiple populations are likely best implemented at the service-delivery level, where care can be tailored to individual needs. However, these must be supported at national and jurisdictional levels by funding and policies that meet the needs of priority populations.

Additional barriers may also arise from factors outside the scope of this report, such as rurality or geographic isolation. Addressing these evidence gaps will be essential to designing more targeted and effective hepatitis elimination strategies.

# ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

Aboriginal and Torres Strait Islander peoples experience disproportionately high rates of hepatitis B and hepatitis C occurring at 1.3 and six times the rates observed in the non-Indigenous population, respectively. These disparities reflect the ongoing impacts of colonisation on social, cultural and economic determinants of health and structural inequities in health systems. [12, 13] Aboriginal and Torres Strait Islander peoples living with hepatitis B and/or hepatitis C face multiple and intersecting forms of stigma. This stigma can come from within an individual's community, the broader community, and healthcare professionals. These experiences can lead to disengagement from care pathways, even after a diagnosis. Access can be further complicated by a desire to stay in Country, or by difficulties obtaining culturally safe care and negative experiences within mainstream healthcare settings, including experiences of racism. Culturally safe care has been shown to improve outcomes for hepatitis B and C yet remains inconsistently available.

Aboriginal and Torres Strait Islander peoples are also overrepresented in correctional settings, which remain the single largest setting for hepatitis C transmission. This overrepresentation worsens infection outcomes and experience of stigma through limiting access to prevention, impacting engagement in healthcare and reinforcing cycles of poor health outcomes.

### STIGMA AND DISCRIMINATION

Aboriginal and Torres Strait Islander peoples living with hepatitis B or C may experience intersecting and overlapping forms of discrimination including racism and stigma. The nature of stigma often differs depending on the type of viral hepatitis. Stigma related to hepatitis B is frequently experienced within families or Aboriginal and Torres Strait Islander communities and can stem from misconceptions about uncleanliness and transmission risks. In contrast, stigma associated with hepatitis C often reflects community attitudes toward injecting drug use or incarceration, both of which are commonly assumed routes of transmission.

Community consultation indicated that stigma may arise from multiple directions: from healthcare workers, from within the community, or as internalised self-stigma. [36] These experiences discourage engagement with health services. People who receive a diagnosis, including in custodial settings, may disengage from care due to fear of stigma or discrimination. Stigmatising attitudes also contribute to low community awareness that hepatitis C is curable and that hepatitis B can often be effectively managed with medication. [36, 82] Increasing both healthcare workers' and communities' knowledge of hepatitis B and hepatitis C are important in reducing stigmatisation and increasing engagement with health and preventative services. Although stigma is a recognised concern for Aboriginal and Torres Strait Islander peoples, available data are insufficient to accurately quantify its impact.

### ACCESS TO CULTURALLY APPROPRIATE CARE

Despite higher rates of hepatitis B, Aboriginal and Torres Strait Islander people are half as likely to receive guideline-recommended medical care for hepatitis B compared with other priority populations. [83] In addition, Aboriginal and Torres Strait Islander hospital patients report poorer experiences of care, including feeling less informed about their condition and less respected in relation to their cultural or religious beliefs. [84]

Avoidable cost of **disease management** hepatitis B in 2030:

**$7.38M**

Misconceptions about prevention, transmission, and treatment remain common among both patients and healthcare workers. [82]

In one NSW study, only 20% of Aboriginal people diagnosed with hepatitis C were tested at the suggestion of a healthcare worker, indicating an opportunity for clinicians to play a stronger role in initiating care. [85] Healthcare workers have reported low confidence and inadequate training in hepatitis C management, as well as challenges adapting resources to different literacy levels and cultural contexts. [82]

Disengagement from the healthcare system often extends beyond hepatitis-related care. This is especially concerning given the high rates of multimorbidity among Aboriginal and Torres Strait Islander peoples, which can complicate treatment decisions, medication management, and care prioritisation. [36, 86]

Avoidable cost of **disease management** hepatitis C in 2030:

**$12.91M**

Culturally appropriate care, delivered through Aboriginal Community Controlled Health Organisations or via systemic reform within mainstream healthcare is essential to ensure equitable access and outcomes. Successful targeted programs demonstrate the value of this approach. For example, hepatitis B vaccination rates have increased among Aboriginal and Torres Strait Islander children. [5, 87] The Hep B PAST program in the Northern Territory improved data quality, linked people to care, embedded Aboriginal and Torres Strait Islander health workers, and strengthened practitioner capability. The number of people identified as living with chronic hepatitis B quadrupled during the program, and all key hepatitis B elimination targets were exceeded among more than 30,000 participants, with the data indicating the gap in hepatitis care has been closed. [88, 89]

For those with advanced liver disease or cancer, a desire to return to Country at the end of their life can create additional challenges. Complex medical needs may exceed the capacity of local community settings or smaller hospitals, and limited support for carers can further complicate care delivery. [36]

### TRANSMISSION WITHIN CORRECTIONAL SETTINGS

Aboriginal and Torres Strait Islander peoples comprise more than a third of Australia's prison population, and this hyperincarceration is a major driver of the disproportionate hepatitis C burden. [19] The absence of needle and syringe programs, limited access to culturally safe healthcare, and interruptions to testing and treatment both during and after imprisonment heighten risks of transmission, reinfection and disease progression. Rates of retreatment following hepatitis C reinfection are significantly higher among Aboriginal and Torres Strait Islander people than among non-Indigenous people. [90]

Without access to primary healthcare and prevention resources, including sterile injecting equipment, people in prison do not have equivalent access to healthcare available in the community. This inadequacy within correctional settings contributes to a cycle of infection, disengagement, and poor health outcomes that extend beyond prison walls. Hyperincarceration and systemic neglect perpetuate the structural conditions that drive transmission and reinforce existing health inequities. [36]

The experiences of Aboriginal and Torres Strait Islander peoples highlight the need for evidence-based, culturally safe, community-led, and rights-affirming approaches to healthcare. Ensuring equitable access to prevention, testing, treatment, care and support requires meaningful partnerships with Aboriginal Community Controlled Health Organisations and sustained efforts to address systemic racism within mainstream healthcare. Tackling stigma and discrimination is essential not only to improve health outcomes for Aboriginal and Torres Strait Islander peoples but also to strengthen the fairness, quality, and effectiveness of Australia's broader health system.

# CULTURALLY AND LINGUISTICALLY DIVERSE COMMUNITIES

People from culturally and linguistically diverse communities can face multiple barriers when accessing healthcare in Australia. These include difficulties navigating an unfamiliar health system, language barriers, and misinformation about hepatitis B and hepatitis C transmission and care, as well as intersecting stigma and discrimination, including self-stigma. However, data to quantify and assess these stigma-related impacts are limited.

Such challenges can reduce engagement in care, limit social participation, and contribute to poorer health outcomes. Significant data gaps also meant that the hepatitis C–specific impact for this priority population could not be quantified in this analysis.

For hepatitis B, progress is often constrained by limited access to culturally safe care and the trust and support needed for ongoing, long-term engagement in monitoring and treatment. Low awareness and understanding of hepatitis B, together with stigma, discrimination and racism, can further deter testing and sustained care.

## STIGMA AND MISINFORMATION

In some culturally and linguistically diverse communities, hepatitis B is rarely discussed due to fears of judgement or exclusion. [91] People may conceal their diagnosis to avoid being treated differently or to protect family and social relationships, concerns that are well-founded. Over half of people from culturally and linguistically diverse backgrounds living with hepatitis B report experiencing stigma or discrimination. [4]

Misunderstandings about transmission remain widespread and are a leading cause of social exclusion. Common misconceptions include beliefs that hepatitis B can be transmitted through sharing cutlery or casual proximity. [37, 91] These misconceptions can affect not only social relationships but also education, employment, and migration opportunities.

Misinformation about prevention and treatment is also common. Awareness of vaccination varies, and some individuals fear that pharmaceutical treatments may cause more harm than traditional medicine. Others believe traditional approaches are equally effective, which can delay engagement with Western medical care and treatment. [91, 92]

Stigma and misinformation are well-recognised barriers for culturally and linguistically diverse communities, but data to quantify their impact for this priority population are limited. Attempts have been made to measure stigma, however the findings are constrained by limitations in survey responses and may not be representative of the broader community.

More culturally safe, routine data collection is needed to measure progress and achieve the national strategy targets.

## NAVIGATING THE HEALTHCARE SYSTEM

Over two-thirds of people living with hepatitis B in Australia were born overseas, and have identified fragmentation of services, prolonged wait times, and out-of-pocket expenses, perhaps due to Medicare ineligibility as barriers to meaningfully engaging with the healthcare system and accessing the care they need. [33, 90, 93] Past experiences with hepatitis care in their country of origin, including approaches to monitoring and provision of information about long-term risks, influence how and when they seek treatment in Australia. [94]

Language barriers and limited system familiarity can result in delayed diagnoses and poorer-quality care. [95] For instance, a lack of accessible information in people's preferred languages can reduce understanding of hepatitis management, including which activities are safe, how treatment works, and when to seek medical advice. [91, 96] While outreach workers and multilingual resources have helped to address this, interpreter availability remains inconsistent, particularly in regional and rural areas.

Avoidable cost of **disease management** hepatitis B in 2030:

**$59.06M**

Concerns about visa status and inconsistent official guidance about how hepatitis B impacts visa status can further deter care-seeking. Some temporary visa holders and people awaiting visa outcomes may avoid disclosure or care due to concerns about potential implications for their visa. [33]

Even those eligible for Medicare may face uncertainty about entitlements or struggle to afford recommended twice yearly monitoring, which can cost hundreds of dollars per year. This is particularly challenging when people feel well and do not perceive an immediate need for care. [33, 91]

### HEALTH ASSESSMENT VISA COSTS

Because most hepatitis B cases in Australia occur among people born overseas, visa-related health requirements have significant implications for people migrating from endemic countries. Visa applicants from countries with higher prevalence must meet a health requirement to ensure their anticipated healthcare costs remain below the Significant Cost Threshold (SCT) of $86,000.[1] [97]

Although hepatitis B is generally not considered a public health risk and typical management costs fall below the SCT, people with advanced liver disease may exceed this threshold. [32, 98] The legal and medical processes involved in meeting the health requirement can be complex, expensive, and stressful. Conflicting information about eligibility, visa outcomes, and employment implications contributes to widespread uncertainty and anxiety. [33]

The “One Fails, All Fail” policy, under which a single family member’s health status can affect an entire family’s visa outcome, further compounds inequity and distress. [32, 33, 98] These systemic barriers can discourage testing and treatment uptake and undermine the principles of fairness and inclusion that underpin Australia’s migration and health systems. [98-102] Improved data collection on legal and human rights indicators is also required to credibly track progress toward the 2030 targets.

The experiences of people from culturally and linguistically diverse communities highlight the need for evidence-based, co-designed, culturally responsive, peer-led programs and accessible responsive healthcare approaches in partnership with affected communities, addressing the social and cultural determinants of health. Addressing awareness, misinformation, reducing stigma, and ensuring language community support, trust and partnership are vital to improving engagement with care and achieving equitable outcomes for people living with hepatitis B and hepatitis C. Reforming visa-related health requirements and expanding culturally safe service delivery would not only strengthen health equity for culturally and linguistically diverse communities but also enhance the overall fairness and effectiveness of Australia’s health system. Improved data collection is required to measure progress to the 2030 elimination targets.

---

[1] The Significant Cost Threshold (SCT) is a monetary limit set by the Australian government to control public health and community service expenditure. If a visa applicant's estimated costs for health and community services over their intended stay in Australia exceed this amount, the visa may be denied unless a health waiver is granted. The threshold is periodically reviewed and updated to reflect current costs. Costs above the threshold are interpreted as ‘higher than the average health and community services cost for an Australian’.

# PEOPLE IN CUSTODIAL SETTINGS

Correctional settings represent the single most significant location for hepatitis C transmission and reinfection in Australia. Without major progress in these settings, national hepatitis C elimination goals cannot be achieved. People in custodial environments face heightened infection risks, and healthcare provision is often reactive, focusing on treatment rather than prevention.

## REINFECTIONS AND PREVENTION

Around one in twelve people in correctional settings are living with hepatitis C, making these environments the primary site of ongoing transmission. [103] In 2023, more than 40% of all people treated for hepatitis C in NSW began their treatment while incarcerated, showing that prisons are central to elimination efforts. [104]

Despite increased access to treatment, reinfection rates remain high. Nearly half of people in correctional settings report a history of injecting drug use, and of these, 1 in 7 detainees reports injecting drugs in prison in the last month. [22, 105] The absence of needle and syringe programs means sterile injecting equipment is not available, resulting in widespread needle sharing and unsafe injecting practices. Reports indicate that 93% of the detainees injecting drugs in prison report using shared injecting equipment, and that syringes may be reused up to 100 times. [22, 105, 106]

Healthcare in prisons remains heavily oriented toward cure rather than prevention. Anecdotal evidence suggests that some individuals are cured of hepatitis C multiple times during a single incarceration period; a considerable and avoidable cost to the health system. Prevention-focused strategies such as introducing needle and syringe programs, more consistently offering hepatitis C testing on entry, strengthening access to disinfectants, implementing health promotion programs, and expanding opioid agonist therapy could significantly reduce infection and reinfection. [36]

Stigma within correctional settings further limits engagement with care. Although challenging to measure, discriminatory or judgemental attitudes among prison and healthcare staff, who act as gatekeepers to treatment access, can deter people from seeking or continuing care. [107]

## THE RIGHT TO HEALTH

Legal and human rights issues in custodial settings are well recognised, but routinely collected data to quantify their impact and track progress toward the 2030 targets remain limited. Needle and syringe programs are internationally recognised as an essential harm reduction intervention, designed to prevent blood-borne virus transmission among people who inject drugs. The absence of needle and syringe programs in Australian correctional settings undermines the right to health and breaches the United Nations' principle that healthcare standards in prisons must be equivalent to those in the community. [105]

The lack of needle and syringe programs, and a broader failure to prioritise hepatitis C prevention, denies incarcerated people equitable healthcare and exposes them to avoidable infection risks. It also perpetuates discrimination against people with lived experience of injecting drug use. [36, 105]

Although opposition to needle and syringe programs often centres on perceived safety or moral concerns, evidence shows that correctional needle and syringe programs are cost-effective and improve health outcomes. Prospective modelling in Australia suggests similar programs would be both cost-saving and ethically necessary. [105]

## DISRUPTED CARE

Many people begin hepatitis C treatment while incarcerated, but significant care gaps persist both within prisons and during the transition back to the community. [108]

Delays in initiating treatment are common, caused by medical staff shortages, long waits for medication delivery, and reluctance among some clinicians to manage hepatitis C because it is seen as a specialist area. Until recently, nurse practitioners were unable to prescribe DAA treatments in correctional settings, which further contributed to delays. [107, 108]

Avoidable cost of **disease management** hepatitis C in 2030:

**$5.74M**

Continuity of care after release is often inadequate. Responsibility for arranging follow-up care largely falls on the individual, who may face major barriers such as homelessness, reimprisonment, or limited information about accessing community-based services. [107-109] These disruptions heighten the risk of reinfection and undermine the overall effectiveness of Australia's elimination strategy.

The experiences of people in custodial settings highlight the urgent need for evidence-based, rights-affirming, and prevention-focused approaches to hepatitis C care. Ensuring continuity between correctional and community healthcare and implementing harm reduction measures such as needle and syringe programs are critical to breaking the cycle of infection and reinfection. Expanding equitable access to care within correctional settings would not only improve individual health outcomes but also bring Australia closer to achieving hepatitis C elimination. Addressing the current gaps in stigma measurement and routine data collection in custodial settings is also essential to track progress against the 2030 targets and ensure accountability.

# PEOPLE WHO INJECT DRUGS

People with lived or living experience of injecting drug use face significant barriers to accessing healthcare and hepatitis C treatment. While challenging to measure, stigma and discrimination within both healthcare settings and the wider community, discourage disclosure and reduce engagement with testing and treatment.

Needle and syringe programs and opioid agonist therapy services have high coverage in Australian community settings and effectively support harm reduction and prevention of blood borne viruses. They also act as critical points of support and referral for people affected by hepatitis C wishing to access testing and/or treatment and care.

## IDENTIFYING PEOPLE LIVING WITH HEPATITIS C

Programs designed to engage people with lived-living experience of injecting drug use in hepatitis C testing and treatment often reach participants through needle and syringe programs, opioid agonist therapy services, or through novel peer-partnership service delivery models. These approaches may not reach people who have stopped injecting or otherwise do not engage with these services, and some people may instead access testing and treatment through care pathways such as general practice and specialist liver, sexual health or drug and alcohol clinics.

Stigma remains a major barrier to diagnosis and treatment. Over half of healthcare workers self-report that they would treat people who inject drugs negatively, leading many to conceal their injecting history from healthcare providers out of fear of discrimination. [110] Stigma and discrimination related to hepatitis C status and injecting drug use are, at times, also experienced in pharmacy and hospital settings. [106] As a result, hepatitis C-related stigma is difficult to measure and track because it is often experienced across multiple settings, is frequently underreported due to fear of discrimination and although is now being measured, results may not represent people with lived or living experience of injecting drug use.

Avoidable cost of **diagnosis and treatment** of new hepatitis C cases in 2030:

**$1.26M**

Criminalisation of drug use compounds stigma and discourages disclosure to healthcare workers, limiting the effectiveness of risk-based screening. This dynamic illustrates how these factors directly contribute to missed and late diagnoses, preventable liver disease, and onwards transmission. This may be exacerbated in areas where specialist addiction and sexual health services are limited, and people often rely on their regular general practitioners or community medical services. [31, 108] People who inject drugs may for various reasons choose to not disclose their drug use or injecting practices or other personal information. [31, 108] Concern that disclosure may negatively impact the care received is one such reason. [31] People who are uncertain how they acquired hepatitis C may also hesitate to seek testing and treatment due to strong associations between injecting drug use and the hepatitis C virus. This stigma extends beyond those with injecting experience, affecting anyone living with hepatitis C regardless of transmission route. [111]

## PUBLIC HEALTH MESSAGING

Public health messaging has traditionally primarily focused on discouraging needle and syringe sharing. However, sharing ancillary equipment such as water, cotton, or spoons also poses transmission risks and is reported more frequently. [112]

Recent studies in community settings show that 32% of people who inject drugs reported sharing ancillary items in the past month, compared with 19% who reported sharing needles or syringes. [113]

Many people who inject drugs reduce harm by accessing sterile equipment, avoiding sharing, and ensuring they only inject when sterile equipment is available. Others may regularly or occasionally reuse equipment or share, including couples who inject together or when there are limited options [31, 106, 114]

Information gaps also exist around testing and diagnosis. Often, hepatitis C is not routinely included in sexual health screening or blood tests ordered for other reasons. This can lead to people assuming they have been tested, leading to missed opportunities for early detection and management, and knowledge enabling people living with hepatitis C to better prevent onward transmission. [31]

### ATTITUDE TOWARDS HEPATITIS C TREATMENT

Although DAA treatment has been widely available under the Pharmaceutical Benefits Scheme since 2016, some people with lived or living experience of injecting drug use may face competing priorities that delay or prevent treatment initiation. [79] These can include poverty, unstable housing, family or dependent responsibilities, whether people view themselves as deserving of care or fear involvement from the child protection and criminal justice systems.

For some people, particularly those now in midlife and older, the long pre-DAA era also created lasting, unmeasured impacts. Earlier interferon-based treatments were often poorly tolerated and not suitable or acceptable for many, meaning some people lived for decades with ongoing symptoms, uncertainty and disrupted life plans. These long-term effects may include reduced participation in work and study, lower superannuation accumulation, and diminished ability to maintain cultural and community connections, impacts that are not fully captured in the quantitative estimates in this report.

Engagement with opioid agonist therapy services is linked to greater treatment readiness, and alcohol and other drug treatment programs often serve as referral points into hepatitis C care. [108]

Avoidable cost of **disease management** hepatitis C in 2030:

**$11.48M**

The asymptomatic or non-specific nature of hepatitis C can lead individuals to underestimate its severity. Symptoms such as fatigue may be attributed to other health or mental health issues. Lower health literacy about the natural history of disease for hepatitis C and previous negative healthcare experiences can reinforce disengagement from healthcare. [31, 108]

Concerns about reinfection risks and the routine of daily treatment also influence decision-making. Some people with ongoing injecting experience may delay treatment until hepatitis C becomes a higher priority or they become confident in their ability to avoid reinfection. [31, 108]

The experiences of people with lived or living experience of injecting drug use highlight the need for non-judgemental, inclusive, and accessible healthcare approaches that address both prevention and treatment. Reducing stigma and discrimination within healthcare settings, expanding access to peer-led and other harm reduction services in all priority settings, and integrating hepatitis C care into trusted community-led programs are critical steps toward eliminating hepatitis C. Improved data collection is required to support tracking progress against the 2030 national strategy. Supporting people to make informed choices about testing and treatment not only improves individual health outcomes but also advances Australia's broader public health goals.

# SEX WORKERS

Sex workers in Australia experience significant and ongoing barriers when accessing healthcare and related support services. These barriers are shaped by intersecting forms of stigma and discrimination, particularly for those living with hepatitis. Despite strong evidence that sex workers are proactive in managing their health, discriminatory attitudes within healthcare settings continue to undermine equitable access to care and contribute to poorer health outcomes. [115-117] The impacts of stigma and structural discrimination extend beyond individual health experiences. They influence employment security, limit access to financial protection, and shape how people engage with testing and treatment services.

## STIGMA AND DISCRIMINATION IN HEALTHCARE SETTINGS

Many sex workers report experiencing negative treatment from healthcare professionals, with around a quarter indicating this occurs regularly. [76] However, hepatitis-C related stigma is difficult to measure and track because it can intersect with stigma linked to sex work across healthcare, community and regulatory settings, is often under-reported due to concerns about discrimination or confidentiality and is not consistently captured in routine data collections. Self-reported attitudes of healthcare workers reflect this issue: a quarter of respondents indicated they would behave negatively towards people with hepatitis C and one-third reported negative behaviour towards people engaged in sex work. [111]

Healthcare-related stigma and discrimination linked to hepatitis C, sex work, or both, reduces people's willingness to seek medical support in the future, regardless of their current or future health needs. Some healthcare providers have also shown reluctance to provide treatment while people continue to engage in sex work. [35] This has broader implications for health outcomes beyond hepatitis C and can lead to additional costs for the health system if care is delayed until later stages of illness.

Sex workers frequently report withholding disclosure of their occupation when seeking medical care, which can limit the ability of clinicians to provide appropriate care, even when that specific clinician would not have discriminated based on hepatitis status or occupation. [117, 118] Where available, many sex workers rely on holistic healthcare services that collaborate with sex worker organisations to deliver non-judgemental and high-quality care. [35] This means mainstream services are not carrying a reasonable service-delivery burden for this group, and sex worker needs are being addressed within and by the sex worker community instead.

Evidence shows that mandatory testing is not effective in achieving meaningful reductions in infection rates and it does not provide individualised care. Sex workers already demonstrate high levels of voluntary testing and safer sex practices, including consistent condom use with clients. [35, 115] These community-led practices have been shown to be more effective at maintaining low transmission rates than compulsory approaches. [35, 115] In practice, mandatory testing imposes unnecessary administrative and financial burdens on health services and sex workers alike. It diverts resources from more targeted public health strategies, without providing wellbeing support for those who receive positive results, and creating a false sense of security, as a negative test result only reflects a person's health status at the time of testing and does not guarantee future protection. It can also discourage engagement with broader sexual and reproductive health services, as testing may be perceived as a compliance requirement rather than a health-affirming process. Voluntary, confidential, and non-discriminatory testing and care, in partnership with sex worker organisations, has been shown to be a more effective and rights-based approach.

### EMPLOYMENT

For some people living with chronic hepatitis C, the flexible schedule and high hourly wages associated with sex work allow people to adjust their schedule to accommodate fluctuating hepatitis C symptom severity. This flexibility can be particularly important for people living with chronic illness or disability.

However, employment gaps (if not disclosed) for the period of participation in sex work, and stigma and discrimination from disclosure may impact sex workers' ability to gain future employment opportunities. Missed superannuation contributions and reduced access to financial products, such as income protection and home loans, also limit financial security. [35] These barriers are compounded by financial discrimination against the cash-based nature of the sex work industry. [119]

Internalised and anticipated stigma can prevent people from recognising the impact of chronic illness on their daily lives. Symptoms associated with hepatitis C, such as fatigue or "brain fog" may be dismissed or misunderstood, leading individuals to underestimate the benefits of treatment. This can contribute to people considering themselves unsuitable for other forms of education or employment of interest. [35] Extended reliance on sex work without access to the financial protection available in other industries can deepen existing economic disadvantage and undermine long-term security.

### TRANSMISSION RISK AND TESTING

Although sex work is often perceived as high risk for sexually transmitted infections (STIs), Australian evidence shows sex workers have similar or lower STI rates compared to the general population. [116] This is largely due to high voluntary testing rates and consistent use of protections. [115, 117] However, some groups face additional barriers to testing, including street-based workers, people with housing insecurity, people with financial hardship, people with a history of injecting drug use, competing life priorities including children or dependents, and migrant sex workers without Medicare access. [35, 115]

Avoidable cost of **disease management** hepatitis C in 2030:

**$1.38M**

Mandatory testing is frequently framed as a measure to reduce infection rates, but beyond being ineffective, implementation is resource intensive and places additional pressure on sexual health clinics. Requiring sex workers to disclose their occupation to obtain a fit-to-work certificate can also expose them to discrimination. Some have reported being denied certification or threatened with police involvement if they test positive. [115]

The criminalisation of sex work in some States and Territories, and cases of severe legal consequences for accidental or alleged transmission, have been linked to reduced willingness to engage with testing and care. [35]

Sex workers' experiences highlight the need for evidence-based, rights-affirming approaches to healthcare that prioritise voluntary, accessible, and non-judgemental services. Being able to measure and address stigma and discrimination is essential not only to improve health outcomes for sex workers but also to strengthen the overall effectiveness and efficiency of the health system.

# IN FOCUS: LIVER DISEASE AND LIVER CANCER

Liver cancer is one of the fastest-growing causes of cancer death in Australia, and more than three-quarters of people diagnosed will not survive beyond five years, one of the poorest outlooks across all cancer types. [120]

People living with chronic hepatitis B or hepatitis C have a substantially elevated risk of developing liver cancer, particularly hepatocellular carcinoma (HCC), than the general population (around 20-times higher). [121] Australian data show that hepatitis B or hepatitis C are among the most common risk factors for developing liver cancer. [49, 122] Although more people live with hepatitis B, the burden of severe liver disease is proportionally greater among people with hepatitis C. [13, 44] If the 2030 hepatitis elimination targets are not achieved, an estimated 379 hepatitis B-related and 136 hepatitis C-related liver cancer cases could occur in 2030 that might otherwise have been avoided.

Elimination efforts to date have focused on reducing transmission, particularly in people and communities who inject drugs and in custodial settings. While this must remain a priority area for resourcing it is important to note that there is a large portion of people living with hepatitis C who contracted hepatitis C in the past, who have disengaged from care, and no longer consider themselves part of a priority population. This includes those with lived experience of injecting drug use. Responses which effectively support this diverse and dispersed group to engage in hepatitis C education, testing, treatment and care are critical and must be prioritised if elimination is to be reached. As a result, many historic hepatitis C cases are only recognised once individuals develop symptoms of liver disease or liver cancer. [34]

Due to the elevated risk of liver cancer, twice-annual liver monitoring is recommended for people living with hepatitis B. Ongoing screening is also advised for people cured of hepatitis C who have cirrhosis or fibrosis, although this cost was unable to be quantified. [123] The burden of screening is significant, particularly for people in rural areas who must travel long distances for imaging and for those who are ineligible for Medicare, including many who were born overseas. [33, 34] Without regular monitoring, liver cancer is typically diagnosed at a later, symptomatic stage, and there are lost opportunities to utilise antivirals to delay or prevent liver disease.

**LIVER MONITORING**

The avoidable impact of failing to maintain adequate liver monitoring for people living with hepatitis B in 2030 is estimated at

**$77.41M**

Hepatitis treatment has advanced considerably in recent decades. For hepatitis B, antiviral therapy can effectively suppress viral load and reduce the risk of cirrhosis or liver cancer. Hepatitis C can now be cured before serious liver damage develops. Despite these advances, many people continue to live with liver disease resulting from viral hepatitis, either because they experienced barriers to accessing care or because their liver damage occurred before effective treatment was available.

**LIVER DISEASE**

The avoidable impact of managing viral hepatitis-related liver disease in 2030 is projected to be

**$190.69M**

Liver transplantation is considered the definitive treatment for advanced liver disease, including decompensated cirrhosis and early-stage liver cancer. [45] Almost one-third of hepatitis-related liver transplants in 2030 could be avoided if elimination targets are met, representing savings of approximately $1,044,433 (hepatitis B $860,872, hepatitis C $183,561).

In Australia, liver cancer is often diagnosed at an advanced stage, limiting treatment options and reducing survival outcomes. When detected early, liver cancer can be treated and cured. [34, 124] This is particularly important for people living with viral hepatitis, who are more likely to have underlying cirrhosis that restricts their treatment options. [125] The total healthcare cost of viral hepatitis-related liver cancer is expected to be approximately $35 million in 2030.

## LIVER CANCER

The avoidable impact of liver cancer related to viral hepatitis in 2030 is estimated to be

**$35.46M**

The estimated immediate impact is expected to recur each year until elimination is achieved.

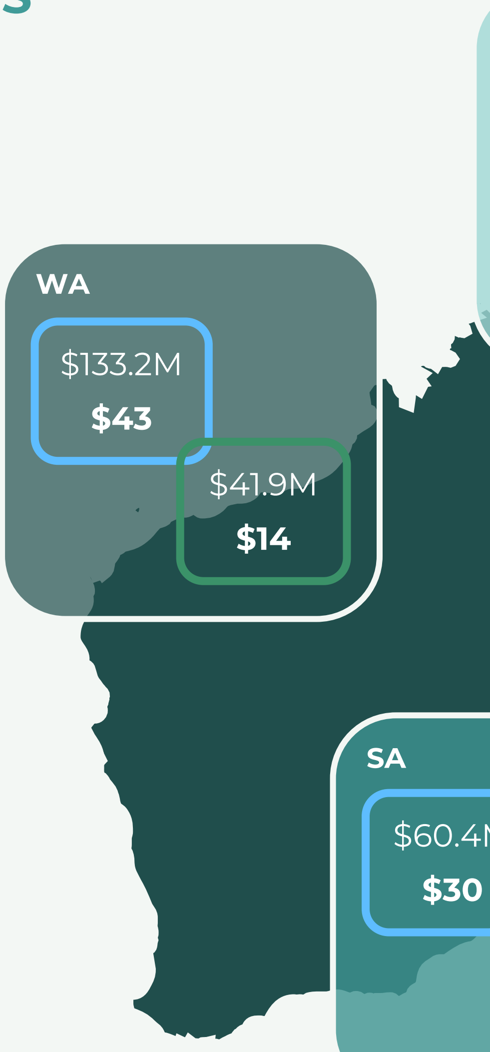
# IN FOCUS: STATE-LEVEL IMPACTS

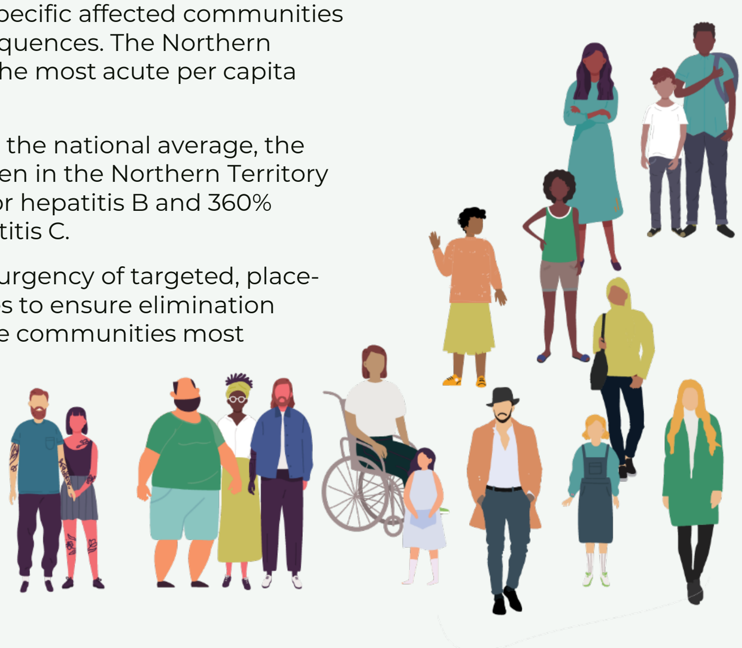
Understanding the impact of not meeting hepatitis B and hepatitis C elimination targets at a state and territory level is essential because the burden of disease, service capacity, and population needs vary considerably across Australia. Prevalence differs between jurisdictions and is influenced by factors such as regional and remote population distribution, patterns of injecting drug use, migration, and the location of Aboriginal and Torres Strait Islander communities. Healthcare infrastructure, access to prevention, testing, and treatment services, and the ability to direct resources to priority populations also vary. These differences mean the potential economic, social, and health impacts are not uniform nationwide.

Where available, state and territory-level cascade of care data showing progress towards the elimination targets were incorporated to estimate the total impact of not meeting the targets in 2030. The total impact of failing to meet hepatitis elimination targets in 2030 has been presented to highlight jurisdictions, such as the Northern Territory, where the burden is most intense relative to population. The burden of falling short will not be shared equally. State and territory analysis shows marked variation in disease burden, service capacity, and population need across Australia, and specific affected communities carry the consequences. The Northern Territory faces the most acute per capita impact.

Compared with the national average, the per capita burden in the Northern Territory is 44% higher for hepatitis B and 360% higher for hepatitis C.

This shows the urgency of targeted, place-based responses to ensure elimination efforts reach the communities most affected.



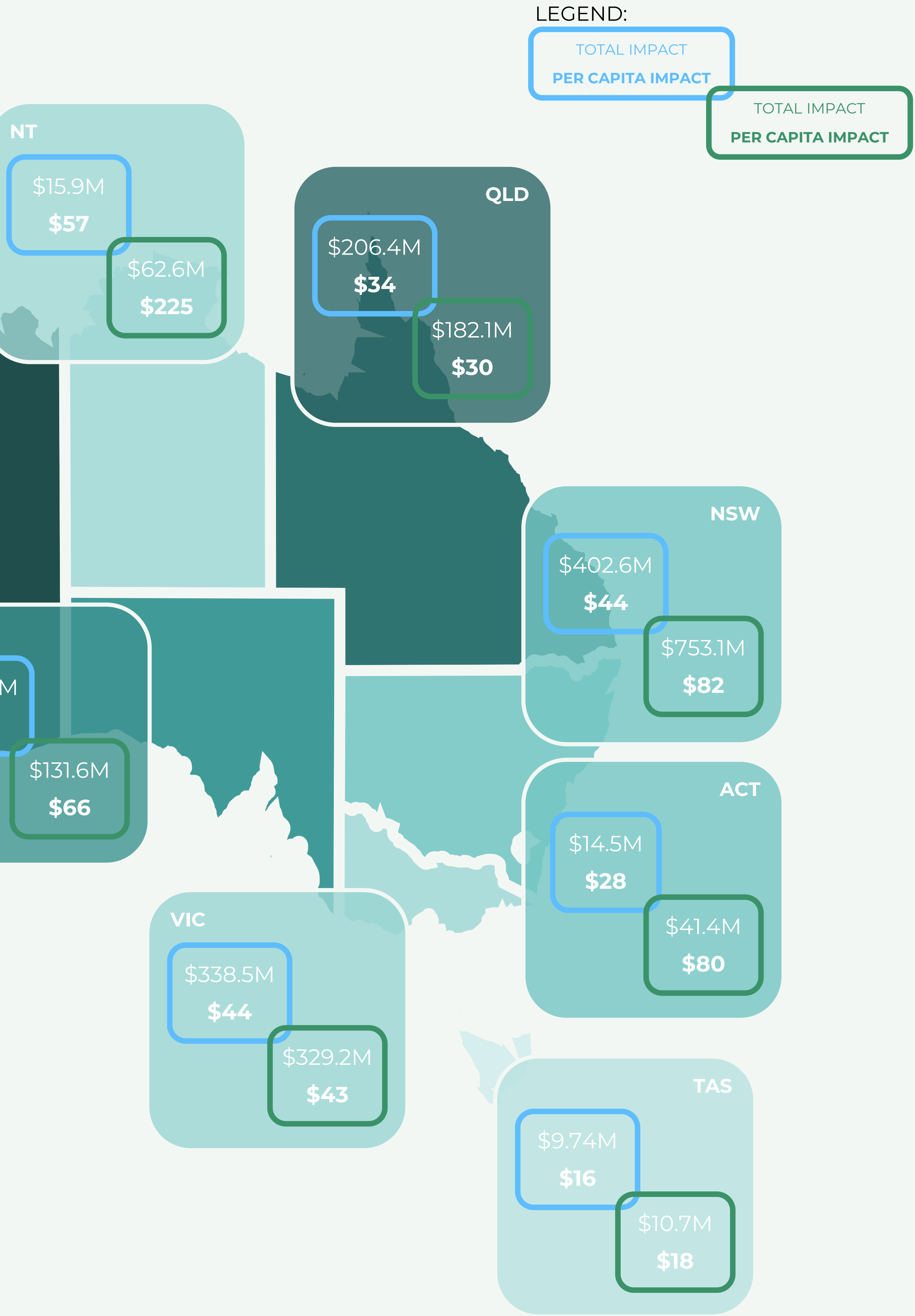


## NATIONAL IMPACT PER CAPITA [126]

**HEPATITIS B**
**$40**

**HEPATITIS C**
**$49**

Notes: The national impact is not presented in these tables as it does not equal the sum of state and territory impacts due to rounding, reporting differences between State and Territory and national data, and differences in projected population at a State and Territory vs national level. Data for SA may vary to national estimates due to variations in reporting. Tasmania is projected to have a rapid increase in hepatitis B prevalence and is likely to increase in the coming years


LEGEND:
TOTAL IMPACT
PER CAPITA IMPACT
TOTAL IMPACT
PER CAPITA IMPACT
NT
$15.9M
$57
$62.6M
$225
QLD
$206.4M
$34
$182.1M
$30
NSW
$402.6M
$44
$753.1M
$82
M
$131.6M
$66
ACT
$14.5M
$28
$41.4M
$80
VIC
$338.5M
$44
$329.2M
$43
TAS
$9.74M
$16
$10.7M
$18

# RECOMMENDATIONS AND NEXT STEPS

Meeting Australia's viral hepatitis elimination targets by 2030 is essential to reduce the substantial and preventable impact of hepatitis B and hepatitis C on people, the health system, and wider society. **Australia has an opportunity to accelerate progress toward national targets, which could avoid an estimated $2.6 billion in additional costs. Much of this cost will recur each year until progress accelerates, highlighting the significant benefits that timely action can deliver.**

Despite major advances in diagnosis and treatment, the development of highly effective linkage to ongoing care, addressing the social and cultural determinants of health, partnership with affected communities and ongoing investment by the Australian Government, many people remain disconnected from the care they need. Without continued efforts to identify undiagnosed cases and support people to access appropriate, culturally safe care, viral hepatitis will continue to affect wellbeing and contribute to avoidable liver disease and premature mortality. There are several recommendations to ensure that the 2030 hepatitis elimination targets are reached, and the negative impacts of failing to meet the targets are avoided:

1. **Fully fund and implement the National Hepatitis B and Hepatitis C Strategies** at Commonwealth, state and territory levels, with clear accountability for timely implementation and measurable progress toward 2030 targets.

2. **Invest in sustained, community-led responses** that work alongside national strategies to reach priority populations, remove barriers to testing, care, and treatment, and ensure services are culturally safe, accessible, and responsive to local need.

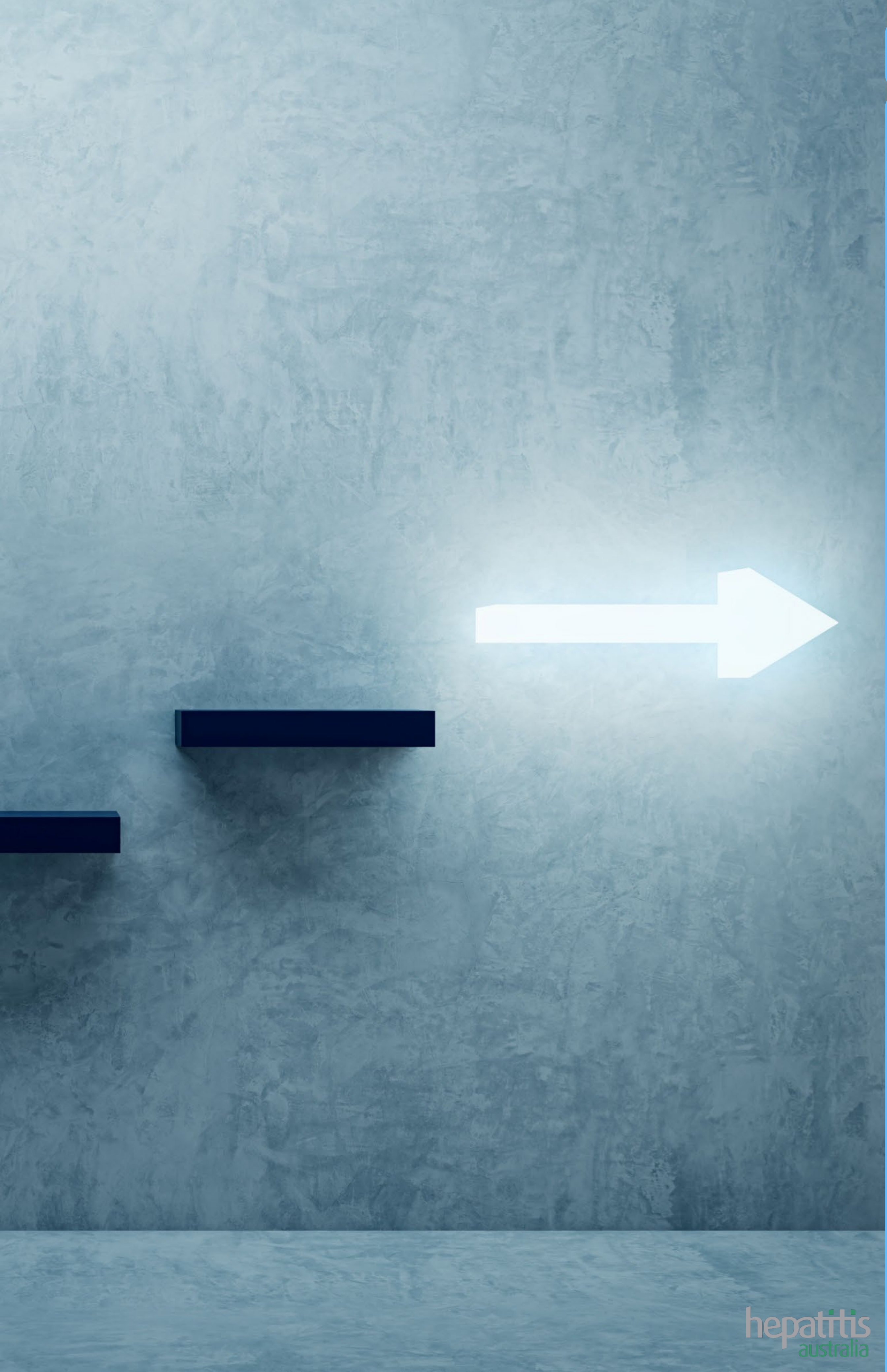
3. Strengthen integration between hepatitis elimination efforts and liver monitoring programs to **detect liver disease earlier**, improve access to antiviral treatment, and prevent progression to cirrhosis and liver cancer.

Findings from this analysis add to the existing evidence that elimination of viral hepatitis is achievable and cost-effective, viral hepatitis is both costly and highly preventable, and that elimination remains achievable. Direct healthcare costs that could be avoided if elimination targets were met, including those linked to monitoring, advanced liver disease, exceed $190 million each year. When broader impacts are included, such as early withdrawal from the workforce, reduced quality of life, and experiences of stigma, the total economic burden increases significantly.

The results also highlight a clear opportunity: targeted investments that reduce barriers to care, expand testing, and support earlier treatment for people living with hepatitis C can deliver measurable results and savings to government, people living with viral hepatitis, and the healthcare system, while improving equity for people who experience stigma and reducing restrictions on their legal and human rights. These investments help prevent liver cancer and liver failure, reduce long-term pressure on the health system, and improve outcomes for affected individuals and communities.

This analysis also identified important evidence gaps across several targets, most notably stigma and legal and human rights, where baseline measures and routinely collected data are limited. Strengthening these foundations will be essential to track progress credibly and to ensure future investment decisions are informed by the experiences and outcomes of communities most affected.

Overall, the message is clear. The cost of inaction is significant. By addressing barriers to timely diagnosis, ensuring fair and culturally safe access to care, and strengthening evidence-based public health initiatives, Australia can reduce the physical, emotional, and financial toll of viral hepatitis, improve outcomes for thousands of people, and secure long-term benefits for future generations.



# REFERENCES

1. Hepatitis Australia, *Federal Pre-Budget Submission 2024-2025. Implementing the new National Hepatitis C Strategy 2023 – 2030 through the next phase of Australia's National Hepatitis C Project*. 2024.
2. Hepatitis Australia, *Federal Pre-Budget Submission 2024-2025 An innovative, cost-effective community-led National Hepatitis B Project to implement the new National Hepatitis B Strategy 2023 - 2030*. 2024.
3. The Doherty Institute, *Surveillance for Hepatitis B Indicators: Tracking Australia's progress towards hepatitis B elimination – National Report 2023*. 2025.
4. Horwitz R, et al., *Stigma Indicators. Vietnamese and Chinese Community: Hepatitis B related knowledge, attitudes and health seeking behaviour. Snapshot Report.*, UNSW Centre for Social Research In Health, Editor. 2022.
5. Department of Health Disability and Ageing. *Current coverage data tables for all children*. 2025; Available from: https://www.health.gov.au/topics/immunisation/immunisation-data/childhood-immunisation-coverage/current-coverage-data-tables-for-all-children?language=en
6. Wiseman E, et al., *Perinatal transmission of hepatitis B virus: an Australian experience.* The Medical Journal of Australia, 2009.
7. MacLachlan J, et al., *Hepatitis B clinical care provision in pregnancy: A whole-of population linkage study in Victoria, Australia.* Journal of Gastroenterology and Hepatology, 2024.
8. The Doherty Institute, *Surveillance for CHB Indicators Dashboard*. 2025.
9. Horwitz R, et al., *Informing hepatitis B prevention, testing, and treatment programs in Filipino and Korean communities in Australia.*, UNSW Centre for Social Research In Health, Editor. 2023.
10. Hajarizadeh B, et al., *Hepatitis B-Related Concerns and Anxieties Among People With Chronic Hepatitis B in Australia.* Hepatitis Monthly, 2016.
11. Hepatitis B Positive. *Prevalence and epidemiology of hepatitis B*. 2023; Available from: https://hepatitisb.org.au/prevalence-and-epidemiology-of-hepatitis-b/.
12. Kirby Institute, *HIV, viral hepatitis and sexually transmissible infections in Australia Annual surveillance report 2023: Hepatitis B*. 2023.
13. Kirby Institute, *HIV, viral hepatitis and sexually transmissible infections in Australia Annual surveillance report 2024: Hepatitis C*. 2024.
14. Kirby Institute, *Hepatitis C in Australia more than halved in less than a decade*. 2024.
15. Burnet Institute and Kirby Institute, *Australia's progress towards hepatitis C elimination: annual report 2024*. 2024.
16. Broady T, et al., *Stigma snapshot: People living with hepatitis C 2023*, UNSW Centre for Social Research In Health, Editor. 2023.
17. Australian Centre for Disease Control. *Hepatitis C*. 2025; Available from: https://www.cdc.gov.au/topics/hepatitis-c.
18. King, J., Kwon J., Gray, R., McManus H., & McGregor, S., 2025, HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2025, The Kirby Institute, UNSW Sydney, Sydney, Australia.
19. ABS (Australian Bureau of Statistics). *Prisoners in Australia*. 2024; Available from: https://www.abs.gov.au/statistics/people/crime-and-justice/prisoners-australia/latest-release.
20. ASID (Australasian Society for Infectious Diseases). *Needle and syringe programs needed in prisons*. 2024; Available from: https://asid.net.au/news/needle-and-syringe-programs#:~:text=There%20is%20a%20wealth%20of,and%20reduce%20rates%20of%20reoffending.
21. Houdroge F, et al., *Evaluating the cost-effectiveness of Canada's prison needle exchange program*. 2024.
22. Bah R, et al., *Prevalence of blood-borne virus infections and uptake of hepatitis C testing and treatment in Australian prisons: the AusHep study.* The Lancet Regional Health – Western Pacific, 2024. **53**.
23. Kirby Institute, *Monitoring hepatitis C treatment uptake in Australia*. 2025.
24. Australian Centre for Disease Control, *Draft Sixth National Hepatitis C Strategy 2023–2030 – for public consultation*. 2023.
25. Australian Centre for Disease Control, *Draft Fourth National Hepatitis B Strategy 2023–2030 – for public consultation*. 2023.
26. Scott N, et al., *Australia needs to increase testing to achieve hepatitis C elimination.* Medical Journal of Australia, 2020.
27. PBAC (Pharmaceutical Benefits Advisory Committee), *Public Summary Document – July 2022 PBAC Meeting - Review of base-case discount rate in the PBAC Guidelines*. 2022.
28. AIHW (Australian Institute of Health and Welfare), *Cancer data in Australia:Table S1a.1: Cancer incidence counts*. 2025.
29. ABS (Australian Bureau of Statistics). *Average Weekly Earnings, Australia*. 2024; Available from: https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/average-weekly-earnings-australia/nov-2024.
30. ABS (Australian Bureau of Statistics), *Consumer Price Index, Australia: Health (series ID: A2331111C)*. 2025.
31. AIVL (Australian Injecting and Illicit Drug Users League), *Interview with AIVL*. 2025.
32. Carter D, *Interview with David Carter (Faculty of Law & Justice, UNSW)*. 2025.
33. Hepatitis NSW, *Interview with Hepatitis NSW Project Officers*. 2025.
34. Liver Foundation, *Interview with Liver Foundation*. 2025.
35. Scarlet Alliance, *Interview with Scarlet Alliance*. 2025.
36. NACCHO (National Aboriginal Community Controlled Health Organisation), *Interview with NACCHO*. 2025.
37. Liver Foundation, *Interview with Liver Foundation*. 2025.
38. Scarlet Alliance, *Interview with Scarlet Alliance*. 2025.
39. NACCHO (National Aboriginal Community Controlled Health Organisation), *Interview with NACCHO*. 2025.
40. Hepatitis NSW, *The worst thing about hep B isn't always the virus (Mary).*
41. He WQ, et al., *Trends in chronic hepatitis B prevalence in Australian women by country of birth, 2000 to 2016.* Journal of Viral Hepatitis, 2019.
42. ASHM (Australasian Society for HIV Viral Hepatitis and Sexual Health Medicine). *Managing hepatitis B virus in pregnancy and children*. Available from: https://testingportal.ashm.org.au/managing-hepatitis-b-virus-in-pregnancy-and-children/.

43. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 69482*.

44. Xiao Y, et al., *The cost-effectiveness of universal hepatitis B screening for reaching WHO diagnosis targets in Australia by 2030.* Medical Journal of Australia, 2023.

45. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 23*.

46. Wigg AJ, et al., *Cost-effectiveness of a chronic disease management model for cirrhosis: Analysis of a randomized controlled trial.* Journal of Gastroenterology and Hepatology, 2018.

47. Nguyen ALT, et al., *Hospitalisation costs of primary liver cancer in Australia: evidence from a data-linkage study.* The Australian Health Review, 2022.

48. Potosek J, et al., *Integration of Palliative Care in End-Stage Liver Disease and Liver Transplantation.* Journal of Palliative Medicine, 2014.

49. Thai P Hong, et al., *Surveillance improves survival of patients with hepatocellular carcinoma: a prospective population-based study.* The Medical Journal of Australia, 2018.

50. Zhang BH, et al., *Randomized controlled trial of screening for hepatocellular carcinoma.* Journal of Cancer Research and Clinical Oncology,, 2004. **130**: p. 417–422.

51. Singal AG, et al., *AGA Clinical Practice Update on Interaction Between Oral Direct-Acting Antivirals for Chronic Hepatitis C Infection and Hepatocellular Carcinoma: Expert Review.* Gastroenterology, 2019.

52. updated from Kwon JA, Dore GJ, Grebely J, Hajarizadeh B, Guy R, Cunningham EB, et al. Australia on track to achieve WHO HCV elimination targets following rapid initial DAA treatment uptake: A modelling study. J Viral Hepat. 2019 Jan;26(1):83–92.

53. Kirby Institute, personal communication on hepatitis B related liver transplants conducted in 2024

54. IHACPA, *National Hospital Cost Data Collection (NHCDC) Public Sector 2022–23: Appendix tables.* 2023.

55. Tran S, et al., *'Teach-back' is a simple communication tool that improves disease knowledge in people with chronic hepatitis B – a pilot randomized controlled study.* BMC Public Health, 2019.

56. Friis K, et al., *Impact of low health literacy on healthcare utilization in individuals with cardiovascular disease, chronic obstructive pulmonary disease, diabetes and mental disorders. A Danish population-based 4-year follow-up study.* The European Journal of Public Health, 2020.

57. AIHW (Australian Institute of Health and Welfare), *Medicare Benefits Scheme funded services: monthly data*. 2025.

58. Baran R. W, et al., *Costs and absence of HCV-infected employees by disease stage*. Journal of Medical Economics, 2015.

59. DiBonaventura daCosta M, et al., *The impact of hepatitis C on labor force participation, absenteeism, presenteeism and non-work activities.* Journal of Medical Economics, 2011.

60. Jacobs P, et al., *Labour force participation among individuals with hepatitis C in the US.* Pharmacoeconomics, 2003.

61. Oka T, et al., *Employment-related difficulties and distressed living condition in patients with hepatitis B virus: A qualitative and quantitative study.* BMC Public Health 2017.

62. Groot C, et al., *Report on Findings from the Our Turn to Speak Survey: Understanding the impact of stigma and discrimination on people living with complex mental health issues*. 2020.

63. ABS (Australian Bureau of Statistics), *Spotlight: Changes in participation rates for men and women in Australia*. 2025.

64. Mahumud RA, et al., *The changing relationship between health burden and work disability of Australian cancer survivors, 2003–2017: evidence from a longitudinal survey.* 2020.

65. Low CE, et al., *Burden of psychological symptoms and disorders among individuals with hepatitis B: a systematic review, meta-analysis and meta-regression.* Frontiers in Psychiatry, 2025.

66. Quantum Market Research, *Bupa Pulse Check*. 2023.

67. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 2715*.

68. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 80100*.

69. Xiao Y, et al., *Enhancing the hepatitis B care cascade in Australia: A cost-effectiveness model.* Journal of Viral Hepatitis, 2020.

70. OIA (Office of Impact Analysis), *Value of a statistical life*, Department of the Prime Minister and Cabinet, Editor. 2024.

71. AIHW (Australian Institute of Health and Welfare), *Australia's health 2022: Health service costs in the last year of life*. 2022.

72. Jahan S, et al., *End-of-life healthcare use and associated costs for First Nations Australians diagnosed with cancer in Queensland, Australia.* Supportive Care in Cancer, 2025.

73. Tillakeratne S, et al., *Trends in viral hepatitis liver-related morbidity and mortality in New South Wales, Australia.* The Lancet Regional Health – Western Pacific, 2024.

71. Alavi M, et al., *Lower life expectancy among people with an HCV notification: a population-based linkage study.* Journal of Viral Hepatitis, 2014.

72. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 69499*.

73. Department of Health Disability and Ageing, *Medicare Benefits Schedule - Item 104*.

74. Moon S and Erickson E, *Universal Medicine Access through Lump-Sum Remuneration — Australia's Approach to Hepatitis C.* The New England Journal of Medicine, 2019.

75. Kwon JA, et al., *Hepatitis C treatment strategies in prisons: A cost-effectiveness analysis.* PLoS ONE, 2021.

76. Broady T, et al., *Stigma snapshot: Sex workers 2022,* 2022, UNSW, Centre for Social Research in Health, and Scarlet Alliance.

77. Lipponen A and Linnosmaa I, *Wellbeing valuation method on determining monetary value of welfare loss due to healthcare access barriers.* Value in Health, 2019.

78. AIHW (Australian Institute of Health and Welfare). *Social determinants of health*. 2024; Available from: https://www.aihw.gov.au/reports/australias-health/social-determinants-of-health.

79. Department of Health Disability and Ageing, *New drug to help over 200,000 Australians*. 2017.

80. MacLachlan J, et al., *Viral Hepatitis Mapping Project: Hepatitis B National Report 2023*. 2025.

81. Bell L, et al., *Hepatitis B susceptibility and subsequent vaccination in priority populations across an Australian sentinel surveillance network, 2017–2023.* Epidemiology and Infection, 2025. 153(e84): p. 1–10.

82. Lim D, et al., *Barriers and Facilitators to Hepatitis C Virus (HCV) Treatment for Aboriginal and Torres Strait Islander Peoples in Rural South Australia: A Service Providers' Perspective.* International Journal of Environmental Research and Public Health, 2023.

83. Han, C., R. Karamatic, and J. Hanson, Chronic hepatitis B care in regional Australia: implications for clinical practice and public health policy. Internal Medicine Journal, 2024. 54(7): p. 1155–1163.

84. BIH (Bureau of Health Information), *The Insights Series: Aboriginal people's experiences of hospital care*. 2025.

85. Brener L, et al., *Experiences of diagnosis, care and treatment among Aboriginal people living with hepatitis C.* Australian and New Zealand Journal of Public Health, 2016. **40**: p. S59–S64.

86. AIHW (Australian Institute of Health and Welfare). *Health and wellbeing of First Nations people*. 2024; Available from: https://www.aihw.gov.au/reports/australias-health/indigenous-health-and-wellbeing.

87. Department of Health Disability and Ageing. *Current coverage data tables for Aboriginal and Torres Strait Islander children*. 2025; Available from: https://www.health.gov.au/topics/immunisation/immunisation-data/childhood-immunisation-coverage/current-coverage-data-tables-for-aboriginal-and-torres-strait-islander-children.

88. Hosking K, et al., *Evaluating a novel model of hepatitis B care, Hep B PAST, in the Northern Territory of Australia: results from a prospective, population-based study.* The Lancet Regional Health – Western Pacific, 2024.

89. Menzies School of Health Research, *Landmark study reveals hepatitis B risks for First Nations people in the Northern Territory*. 2025.

90. Kirby Institute, *Progress towards hepatitis C elimination among Aboriginal and Torres Strait Islander people in Australia*. 2021.

91. Brener L, et al., *'People Like Us Would Have No Clue If the Information Is Online': Exploring Understanding and Sources of Hepatitis B Information Among Vietnamese Australians.* 2024.

92. Horwitz R, et al., *Stigma Indicators: Vietnamese and Chinese General Community*, UNSW Centre for Social Research In Health, Editor. 2023.

93. Nisar M, et al., *Exploring Healthcare Access Challenges Among SouthAsian Migrants in Australia: A Mixed-Method Study.* Health Promotion Journal of Australia, 2025.

94. Hepatitis Australia, *Sidney's story*.

95. AIHW (Australian Institute of Health and Welfare). *Culturally and linguistically diverse Australians.* 2021; Available from: https://www.aihw.gov.au/reports-data/population-groups/cald-australians/overview#:~:text=Language%20barriers%2C%20lower%20health%20literacy,outcomes%20compared%20with%20other%20Australians.

96. Khatri RB, et al., *Access to health services among culturally and linguistically diverse populations in the Australian universal health care system: issues and challenges.* BMC Public Health, 2022. **22**.

97. Department of Home Affairs. *Protecting health care and community services.* 2025; Available from: https://immi.homeaffairs.gov.au/help-support/meeting-our-requirements/health/protecting-health-care-and-community-services.

98. LiverWELL, et al. *Hepatitis B Visa & Migration FAQ.* 2024; Available from: https://liverwell.org.au/liver-conditions/hepatitis-b/hepatitis-b-visa-migration-faq/

99. Bupa Medical Visa Services. *Fees for Australian Visa Medical Assessment*. Available from: https://www.bupa.com.au/bupamvs/more-information/fees/australian-mvs.

100. Estrin Saul Migration Specialists. *Fee estimates.* Available from: https://estrinsaul.com.au/about-us/.

101. Department of Home Affairs, *Appendix D: Salary and Classification Rates* 2023.

102. Department of Home Affairs, *Candidate Information Pack APS3 – Immigration Group*. 2025.

103. NPHN (National Prisons Hepatitis Network). *THE NPHN SURVEILLANCE DASHBOARD*. 2022; Available from: https://www.nphn.net.au/dashboard.

104. Hepatitis Australia, *If hepatitis was 100 people*. 2025.

105. Houdroge F, et al. *Prison needle programs could save double what they cost – our new modelling shows how*. 2025; Available from: https://www.burnet.edu.au/news/prison-needle-programs-could-save-double-what-they-cost-our-new-modelling-shows-how/.

106. Carruthers S, *Needle and Syringe Programs in Australia: Peer-led Best Practice* 2018.

107. Panahi I, et al., *'You've Just Got to Keep Pestering': Barriers and Enablers of Attaining Continuity of Hepatitis C Care for People Transitioning Between Prison and Community Health Services in South-East Queensland, Australia.* 2025.

108. Pho A, et al., *Exploring opportunities for hepatitis C treatment uptake among people who inject drugs in Australia: a qualitative Study.* Journal of Substance Abuse, 2023.

109. ADF (Alcohol and Drug Foundation). *Prison, alcohol and drug use*. 2025; Available from: https://adf.org.au/insights/prison-aod-use/.

110. Broady T, et al., *Stigma snapshot: Health care workers 2024*, UNSW Centre for Social Research In Health, Editor. 2024.

111. Broady T, et al., *Stigmatising attitudes towards people who inject drugs, and people living with blood borne viruses or sexually transmissible infections in a representative sample of the Australian population.* UNSW Centre for Social Research In Health, 2020.

112. Strike C, et al., *Giving away used injection equipment: missed prevention message?* Harm Reduction Journal, 2010.

113. Heard S, et al., *Australian Needle Syringe Program Survey National Data Report 2019-2023: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees*. 2024, Kirby Institute

114. Walker, S., Curtis, M., Kirwan, A. *et al.* "No-one just does drugs during business hours!": evaluation of a 24/7 primary needle and syringe program in St Kilda, Australia. *Harm Reduct J* **21**, 51 (2024). https://doi.org/10.1186/s12954-024-00960-9

115. Macioti PG, et al., *Understanding the health and social wellbeing needs of sex workers in Victoria*. 2022.

116. ASHM (Australasian Society for HIV Viral Hepatitis and Sexual Health Medicine). *STI management guidelines: Sex workers*. 2024; Available from: https://sti.guidelines.org.au/populations-and-situations/sex-workers/.

117. Kirby Institute, *The Sex Industry in New South Wales: A report to the NSW Ministry of Health*. 2012.

118. Jones J, et al., *Factors influencing transgender and male sex worker access to sexual health care, HIV testing and support study (TaMS) report*. 2018, The University of Queensland.

119. Stardust Z, et al., *High Risk Hustling: Payment Processors, Sexual Proxies, and Discrimination by Design.* City University of New York Law Review, 2023.

120. Cancer Australia. *Liver cancer in Australia statistics.* 2025; Available from: https://www.canceraustralia.gov.au/cancer-types/liver-cancer/liver-cancer-australia-statistics.

121. Petruzziello, A., Epidemiology of Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) Related Hepatocellular Carcinoma. Open Virol J, 2018. 12: p. 26–32.

122. Yeoh, Y.K.J., et al., Temporal change in aetiology and clinical characteristics of hepatocellular carcinoma in a large cohort of patients in New South Wales, Australia. Intern Med J, 2024. 54(4): p. 602–612.

123. Hepatitis C Virus Infection Consensus Statement Working Group, *Australian recommendations for the management of hepatitis C virus infection: a consensus statement*. 2022.

124. GI cancer institute. *Liver Cancer*. 2025; Available from: https://gicancer.org.au/cancer/liver-cancer/#cancer-symptoms.

125. Liver Cancer UK. *Alastair's story*. Available from: https://livercanceruk.org/stories/alastairs-story-i-went-through-all-the-medical-trials-including-interferon-and-ribavirin-as-they-tried-to-figure-out-how-to-control-hepatitis-c/.

126. Australian Bureau of Statistics. (2022-base---2071). *Population Projections, Australia;* 2030, medium series. ABS. https://www.abs.gov.au/statistics/people/population/population-projections-australia/latest-release.

hepatitis australia

HTANALYSTS

Hepatitis Australia is the national peak community organisation working to eliminate hepatitis B and hepatitis C in Australia. We represent eight state and territory community hepatitis organisations and advocate for the rights, health, and dignity of people affected by viral hepatitis. Our purpose is to enable everyone to live free from the impact of viral hepatitis.

**HT**ANALYSTS has been providing boutique value and impact assessment services for over two decades. Our organisation has grown to become a leader in social impact consulting, providing services to the healthcare industry. We exist to make a powerful impact on society by driving human-centric outcomes.

---

## Get information and support for viral hepatitis

HEPLINK AUSTRALIA
1800 437 222
www.heplink.au

### HepLink Australia provides free and confidential viral hepatitis information, advice and support services to anyone, anywhere in Australia.

HepLink is delivered in partnership with the eight state and territory community hepatitis organisations, providing information and advice, referral, collaborative support and linkage to resources and services. Telehealth services for Hepatitis C are also available through HepLink. Call HepLink or visit the website to learn more.

**Call 1800 437 222**
**or visit www.heplink.au**

HepLink is funded by the Australian Government.