

Estimating changes in HCV RNA positivity after broad access to HCV treatment using routinely collected clinical data from a national clinical surveillance network

Asselin J*, Stewart AC*, Sacks-Davis R, Pedrana A, Griffin S, Traeger MW, Doyle JS, Read P, Wade AJ, Gray RT, Kwon JA, Aung HL, Stoové M, Wilkinson AL*, Hellard M*

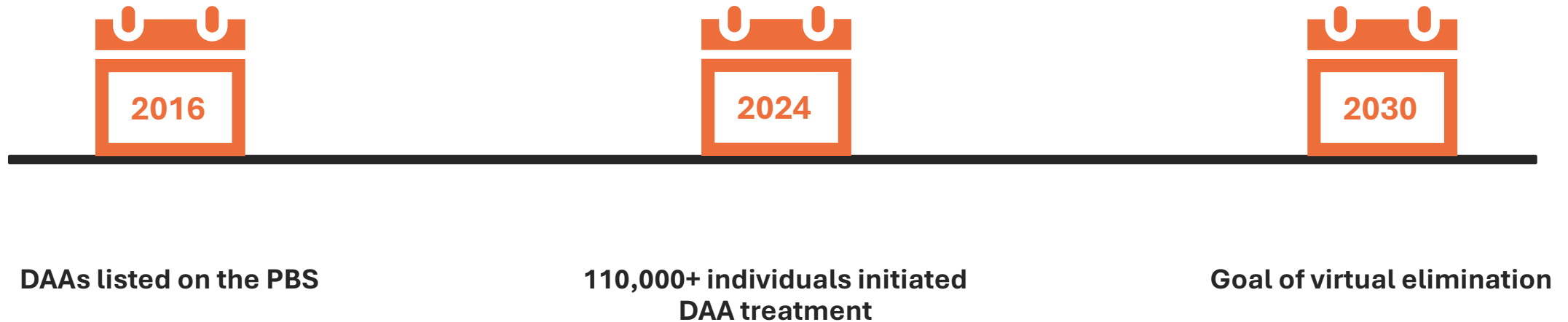


At Burnet Institute, we proudly acknowledge the Boon Wurrung people of the Kulin Nation as the Traditional Custodians of the land on which our office is located and recognise their continuing connection to land, waters and community. We acknowledge Aboriginal and Torres Strait Islander Peoples as Australia's First Peoples and acknowledge that sovereignty was never ceded. We pay our respect to Elders past and present, and extend that respect to all First Nations People.

Image: Stacey Edwards (Taungurung/Boon Wurrung/Bunurong)
'Bunjil The Creator' 2021, acrylic on canvas

This artwork was created through The Torch, a not-for-profit organisation that provides art, cultural and arts industry support to First Nations people currently in, or recently released, from Victorian prisons.

A decade of subsidised DAA access in Australia



Background

- Targets prioritise incidence reduction:
 - measurement requires repeat testing and follow-up
 - can be biased by variations in testing frequency
- HCV RNA prevalence can be derived from routinely collected data and provides a practical indicator of changes in active infection.

ACCESS

- Collaboration between Burnet Institute, Kirby Institute & NRL Quality
- National sentinel surveillance system for blood borne virus and sexually transmissible infections
- Collects linked, de-identified electronic medical record data including consultations, testing and treatment episodes
- Funded by the Australian Centre for Disease Control to monitor progress towards the National Strategy targets



ACCESS

- Cohort of nearly 3 million individuals over 100 clinical services nationwide
- ACCESS surveillance provides a large clinical cohort to measure HCV RNA prevalence nationally



Methods

- Individuals aged ≥ 15 years attending a participating health service;
- Had at least one recorded HCV RNA test or HCV antibody-negative test between 1 January 2015 and 31 December 2025;
- Individuals with only a positive HCV antibody test and no HCV RNA testing were excluded.

Methods

- **HCV RNA prevalence**: proportion of individuals with evidence of active HCV infection within each calendar year
- **Tests occurring 1–180 days following a recorded HCV treatment prescription** were classified as on treatment monitoring rather than diagnostic testing and were **excluded**.

Methods

- Outcomes were stratified by recent opioid agonist treatment (OAT): an OAT prescription within 12 months before, or on, the HCV test date.
- Classified as recent OAT or no recent OAT (no OAT history, or no OAT prescription in the 12 months before the test).
- For 2015 tests, 2014 prescription records were used to determine recent OAT.

Results

229,823

individuals tested for hepatitis C

55 health services, 2015–2025

404,922

HCV tests included in analysis

All test types

32,325

HCV RNA tests (8% of all tests)

From 18,814 individuals

WHO WAS TESTED

34 yrs Median age (IQR 27–44)

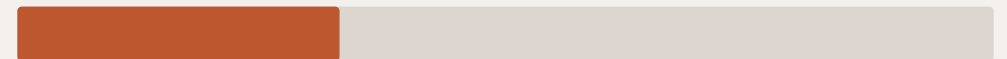
63% Male

4% Aboriginal and/or Torres Strait Islander



33% RNA tests were positive

n=10,589 of 32,325 HCV RNA tests



Results



3% (n=5,953)

of individuals had any history of an OAT prescription

41 yrs median age (IQR 35–49)

69% Male

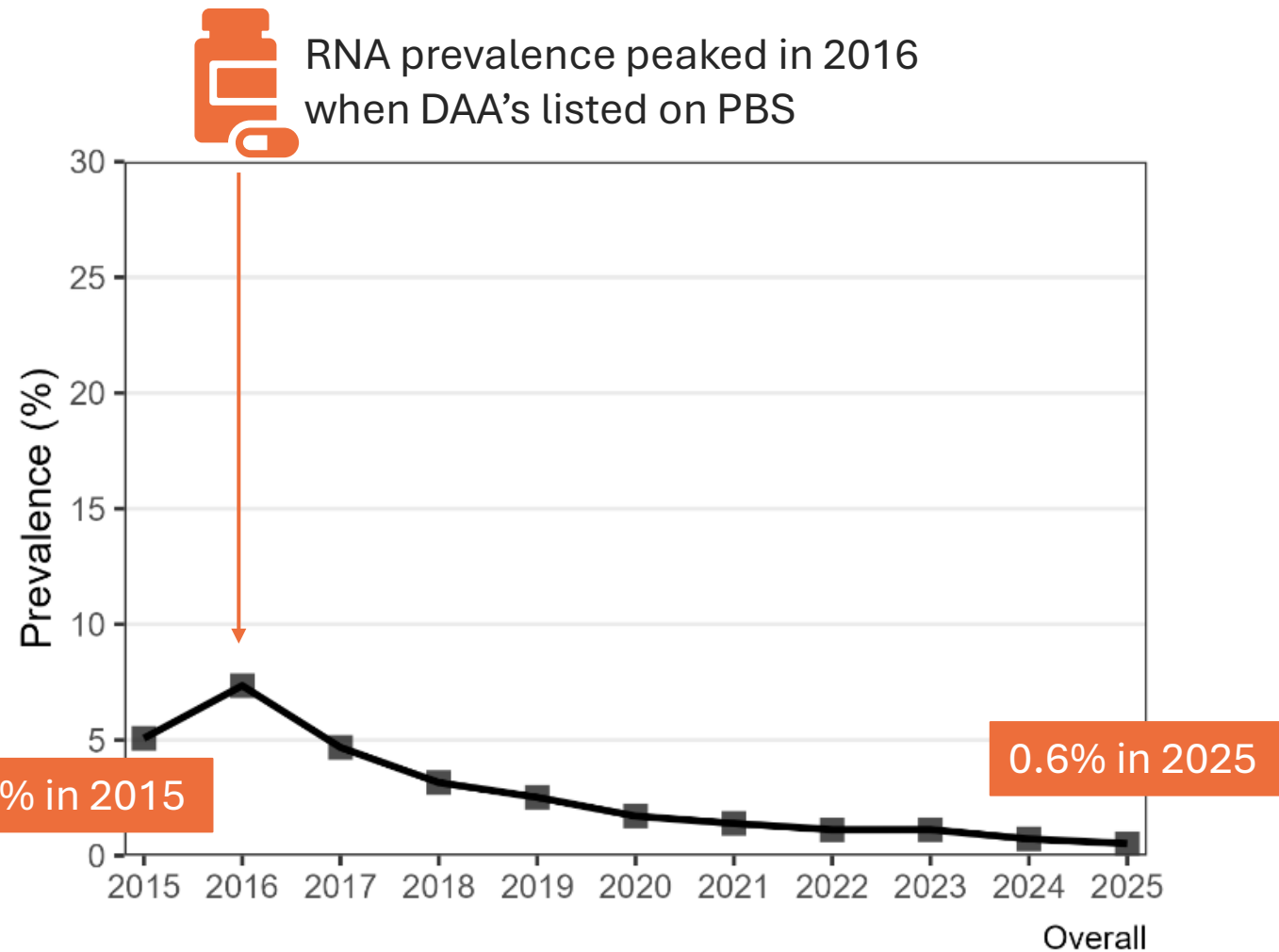
8.3% Aboriginal and/or Torres Strait Islander

Results

In the overall sample, between 2015 and 2025

HCV RNA prevalence declined from 5.4% to 0.6%

A reduction of 88.9% from 2015

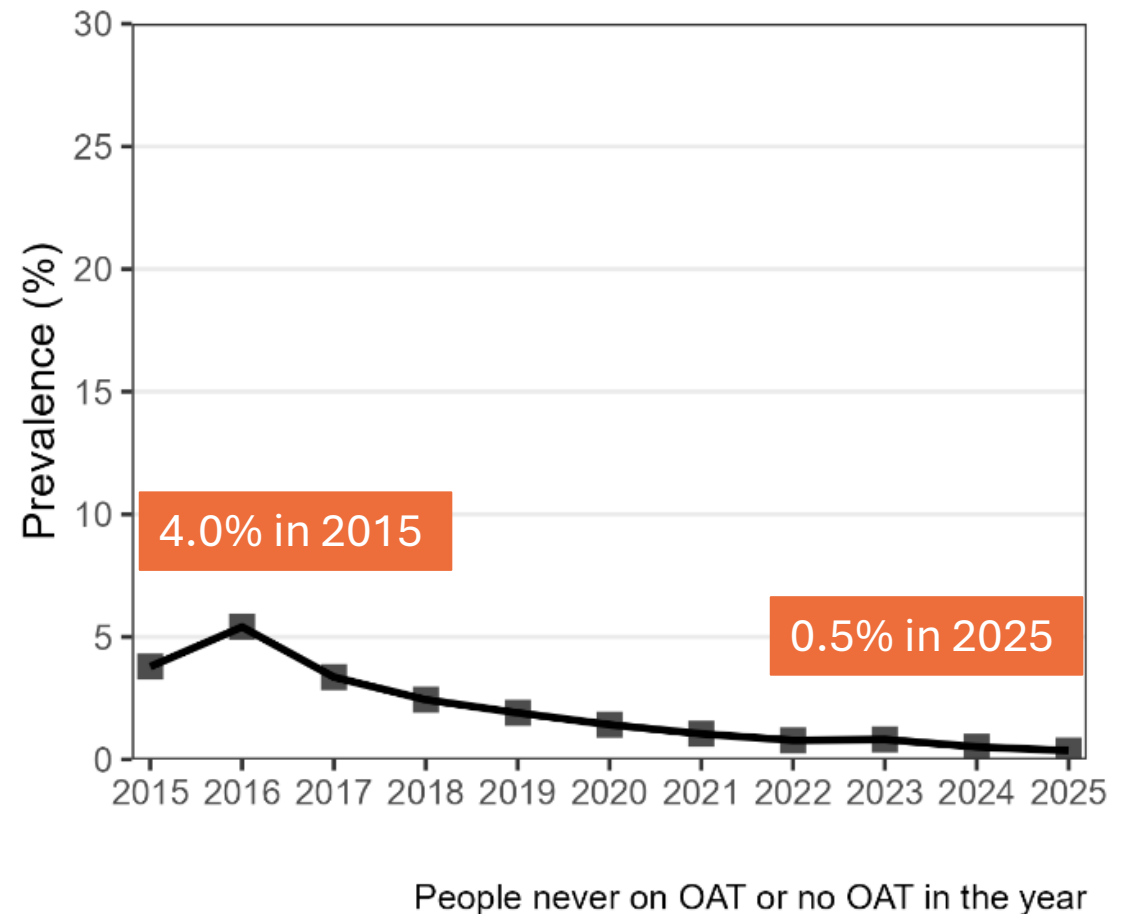


Results

Among individuals no evidence of recent OAT

HCV RNA prevalence declined from 4.0% to 0.5%

A reduction of 87.5% from 2015

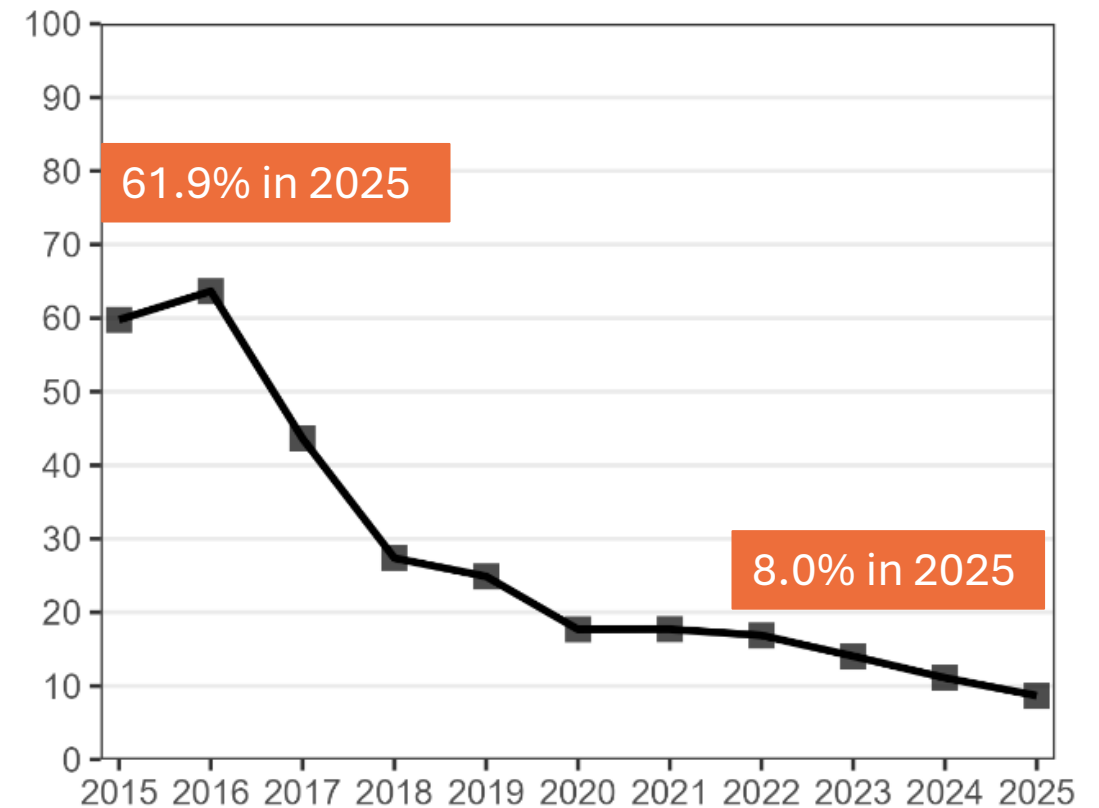


Results

Among individuals prescribed OAT
in the year

HCV RNA prevalence declined
from 61.9% to 8.0%

A reduction of 87.1% from 2015

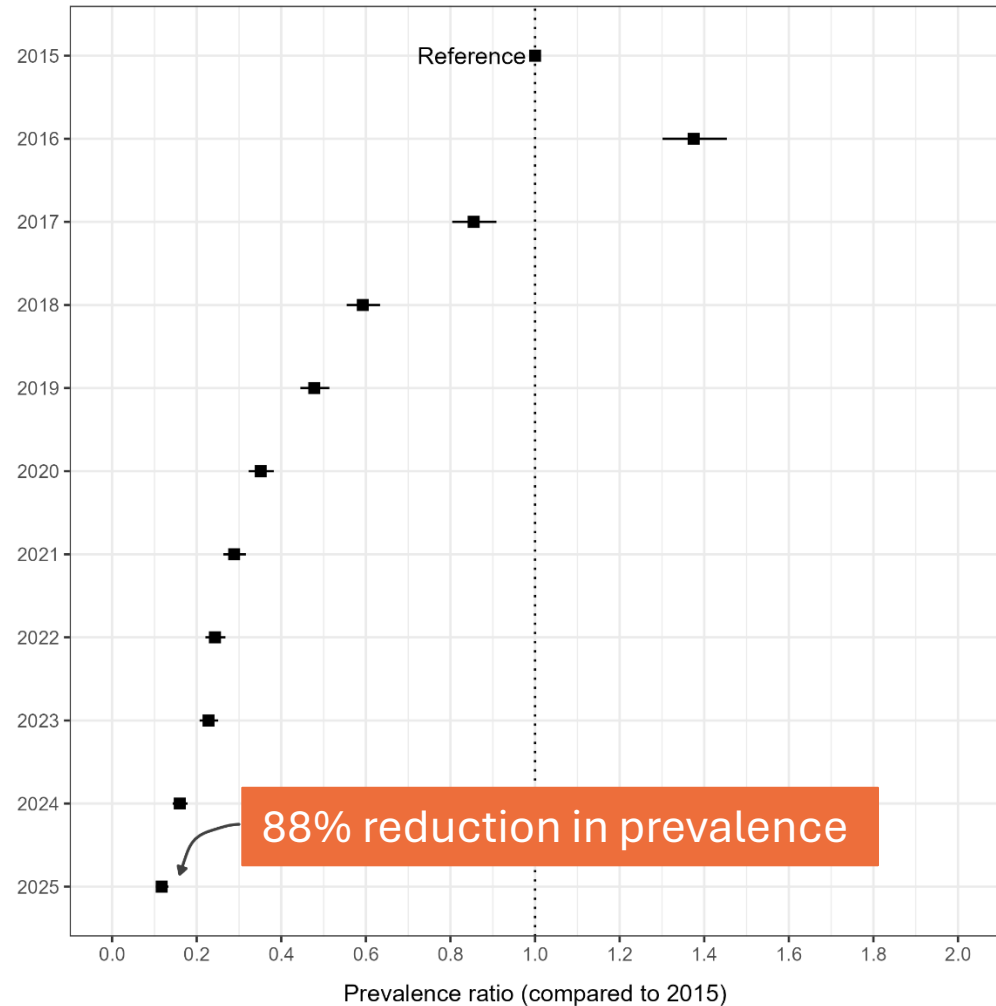


People prescribed OAT in the year

Results

Compared to 2015:

- Prevalence reduced more rapidly in earlier years
- Continued slow reductions to 2025



Conclusions

- Active HCV infection fell substantially over the decade following DAA scale-up, an overall 88% relative reduction.
- HCV RNA prevalence among people with recent OAT demonstrates ongoing efforts required.
- Provides empirical evidence of large declines in viraemic HCV in a high-income setting with deliberate expansion of DAA access.
- Demonstrates ongoing measurable progress towards Australian HCV elimination targets.

Acknowledgements

- Ashleigh Stewart and co-authors
- ACCESS team: Victoria Polkinghorne, Brendan Quinn, Nyssa Watson, Thi Nguyen, Anna Wilkinson, Htein Linn Aung, Allison Carter
- ACCESS is supported by the Australian Centre for Disease Control and the Victorian Department of Health



Mr Jason Asselin

Head of Surveillance & Data Linkage

jason.asselin@burnet.edu.au

