

## Contribution of prison-based hepatitis C treatment initiations to overall treatment uptake in Victoria, Australia

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### Background:

Prisons have a disproportionately high prevalence of hepatitis C infection and are a priority setting for hepatitis C elimination in Australia, where the annual number of people treated has. To inform targeted strategies for health system strengthening and improve hepatitis C coverage, we aim to quantify trends in the rates of treatment in prison and in the community.

### Methods:

We conducted an ecological study of all direct acting antiviral (DAA) prescriptions for hepatitis C treatment among adults in the state of Victoria. Total DAA prescription data was sourced from the Pharmaceutical Benefits Scheme and the proportion of these prescribed in Victorian adult prisons was determined from the Victorian Statewide Hepatitis Program (2016-2022). To estimate the association between monthly prescriptions (person's first treatment only) and time, we fitted a generalised linear model (Poisson distribution), reporting incidence rate ratios (IRRs) and 95% confidence intervals (95%CI); as the average change DAA initiations per month.

### Results:

Between 1-March-2016 and 31-December-2022, 24,125 primary treatments and 2,238 retreatments were prescribed. Of primary treatments, 21,228 (88%) were in the community and 2,897 (12%) were initiated in prison. The proportion of primary treatments initiated in prison increased from 5% in 2016 to 14% in 2022. The number of treatment initiations declined in both settings over time, but the decline was more pronounced in community settings (average monthly decline 3.82% [IRR 0.962, 95% CI 0.961-0.962]) compared to prison (average monthly decline 1.62% [IRR 0.984, 95% CI 0.982-0.985]). There was a statistically significant difference between the decline in monthly treatments between the settings (IRR 0.978, 95% CI 0.976-0.979).

### Conclusion:

Amid declining hepatitis C treatment rates, treatment in prisons in Victoria is becoming increasingly important to hepatitis C elimination efforts. Strategies to

eliminate hepatitis C in Australia must sustain treatment models in prison and strengthen community testing and treatment models.

Figure 1a and 1b). Observed and fitted monthly DAA prescriptions in the Statewide Hepatitis Program and the community setting, 2016-2022.

