

## Time to HIV treatment initiation as a national surveillance indicator and an implementation tool to reach HIV transmission elimination targets

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### **Background:**

Australia's 9<sup>th</sup> National HIV Strategy (2024-2030) prioritises new surveillance techniques to support progress towards HIV treatment and elimination goals. We aimed to develop and pilot the use of time-to-treatment initiation as a national surveillance indicator.

### **Methods:**

Population-based record-linkage cohort study combining HIV notifications from the Australian National HIV Registry with antiretroviral (ART) prescription data from the Pharmaceutical Benefits Scheme (PBS). Linkage was performed by the Australian Institute of Health and Welfare. We calculated the number of days from date of HIV diagnosis to first ART prescription and performed multivariable Cox regression analysis. By the time of submission, linked HIV notifications and PBS records were available until 2020 and 2021, respectively.

### **Results:**

We included 6002 people diagnosed with HIV in Australia: 2659 in the years 2013 to 2015, 2193 from 2016 to 2018 and 1150 from 2019 to 2020. Between 2013 and 2020 the proportion initiating treatment within 4 weeks of diagnosis increased from 16.6% to 68%, the proportion receiving treatment within 6 months of diagnosis increased from 59.9% to 95.9% and the proportion initiating treatment within 12 months of diagnosis increased from 71.7% to 98.6% For those receiving an HIV diagnosis in 2019 or 2020, 98.1% had a record of treatment initiation. Reported mode of acquisition as male-to-male sexual contact (aHR 1.13; CI 0.98—1.31), and diagnoses in South Australia and Western Australia (aHR 1.13; CI 0.95—1.36) were associated with earlier treatment initiation; being born outside Australia (aHR 0.83; CI 0.73—0.94) was associated with less rapid initiation.

### **Conclusion:**

These are the first national time-to-ART treatment surveillance data available for Australia. Further implementation of this surveillance indicator will inform the evaluation of the National Strategy target of 90% of people diagnosed with HIV initiating treatment within 4 weeks, by 2025, and the development of targeted public health strategies.

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