AN UPDATED ESTIMATE OF THE ANNUAL NUMBER OF NEW HEPATITIS C INFECTIONS AMONG PEOPLE WHO INJECT DRUGS IN AUSTRALIA

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Background: The recent downward revision of the estimated number of people living with chronic hepatitis C in Australia means the historical annual number of new hepatitis C infections should also be revised. We aimed to estimate the annual number of new hepatitis C infections among people who inject drugs (PWID) in Australia in 2015, prior to the introduction of direct-acting antiviral treatment (DAA) for hepatitis C, as an updated baseline measure for assessing the impact of DAAs on hepatitis C incidence over the next 10 years.

Methods: A systematic review identified articles containing estimates of hepatitis C incidence rates among PWID in Australia between 2002 and 2015. Reported incidence rates were adjusted to account for estimated needle and syringe program (NSP) coverage among study participants relative to PWID overall. The total number of PWID in Australia and the hepatitis C RNA prevalence among PWID were taken from published estimates. The annual number of new infections was estimated by multiplying the pooled NSP-coverage-adjusted incidence rate by the number of susceptible PWID in 2015.

Results: Five studies were included, with unadjusted incidence rates ranging from 7.6 to 12.8 per 100 person-years. The overall pooled incidence rate (after adjusting for NSP coverage) was 9.9 per 100 person-years (95% CI: 8.2–11.8). This resulted in an estimate of 4,126 (range 2,469–6,405) new hepatitis C infections among PWID occurring in 2015.

Conclusion: This updated 2015 estimate is lower than most previous estimates of the annual number of new infections among PWID in Australia. Our updated estimate provides an important baseline for evaluating the impact of hepatitis C elimination efforts and can be used to validate outcomes of future modelling studies.

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