Prevalence of current HCV infection, prior treatment uptake, and advanced fibrosis among people who inject drugs: The ETHOS Engage study

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Abstract

Background: It is crucial to understand the relationship between trends in HCV treatment uptake, HCV prevalence, and liver disease to determine progress to HCV elimination. This study evaluated change in prevalence of current HCV infection, treatment uptake, and liver fibrosis in a national cohort of people who inject drugs during an era of unrestricted access to DAA therapy in Australia.

Methods: ETHOS Engage is an observational cohort study of people who inject drugs attending drug treatment clinics and needle and syringe programs in Australia. Participant enrolment occurred over three periods: Wave 1 (May 2018-September 2019, 25 sites); Wave 2 (November 2019-June 2021, 21 sites); and Wave 3 (May 2023-Jan 2025, 28 sites). Participants completed baseline questionnaires, point-of-care HCV RNA tests (Xpert® HCV Viral Load Fingerstick), and transient hepatic elastography (FibroScan®). Logistic regression was used to identify factors associated with current HCV infection and prior HCV treatment.

Results: 3565 unique individuals were enrolled across three recruitment waves (79% from drug treatment sites, 67% male, median age 44 years, 68% current opioid agonist treatment, and 66% injecting in previous month). HCV prevalence decreased from 24% (2018-2019) to 15% (2019-2021) to 9% (2023-2025) ($p<0.001$). HCV treatment increased from 66% (2018-2019) to 77% (2019-2021) to 89% (2023-2025) ($p<0.001$). Advanced fibrosis decreased from 14% (2018-2019) to 8% (2019-2021) and 8% (2023-2025) ($p<0.001$). After adjusting, recruitment Wave 3 was associated with a reduction in current HCV infection (vs. 2018- 2019; 2019-2021 aOR 0.61, 95%CI: 0.49-0.76 and 2023-2025 aOR 0.30, 95%CI: 0.23-0.38).

Conclusion: Implementation of unrestricted DAA therapy in Australia since 2016 has resulted in declining HCV infection prevalence and liver disease burden among people who inject drugs accessing harm reduction services.

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