

A Decade of Direct Acting Antiviral therapy: Trends in hepatitis C Treatment Completion, Discontinuation, and Retreatment in Australia, 2018–2024

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Background: Treatment discontinuation of direct-acting antivirals (DAAs) for hepatitis C (HCV) challenges elimination goals. This study assessed national trends in DAA discontinuation and retreatment from 2018 to 2024, using Pharmaceutical Benefits Scheme (PBS) dispensing data.

Methods: Individuals commencing sofosbuvir-velpatasvir (prescribed duration: 84 days) weeks or glecaprevir-pibrentasvir (prescribed duration: 56 or 84 days) between January 2018 and September 2024 were identified. Discontinuation was defined as one or more authorised 28-day prescriptions not being dispensed; early discontinuation as discontinuation after the first 28-day supply; late discontinuation as discontinuation after 56 or more days dispensed. Logistic regression assessed factors associated with discontinuation and subsequent retreatment.

Results: Of 43,137 individuals who initiated DAAs, 6,539 (15%) discontinued treatment, including 61% (n=3,978) and 39% (n=2,561) after 28 and 56 days, respectively. Discontinuation increased from 11% in 2018 to 23% in 2024. Discontinuation after 28 days increased (2018: 5%, 2024: 16%), while discontinuation after 56 days remained stable (2018: 6%, 2024: 6%). In adjusted analysis, younger age (aOR 1.15 per 10-year decrease, 95%CI 1.12–1.18), female sex (aOR 1.12, 95%CI 1.06–1.19), HIV coinfection (aOR 1.50, 95%CI 1.19–1.90), remote location (aOR 1.35, 95%CI 1.12–1.63), and later treatment year (2024 vs. 2018: aOR 2.40, 95%CI 2.14–2.69) were associated with discontinuation. Among those who discontinued after 28 days, 13% (n=524) initiated retreatment. Retreatment was associated with age (aOR 1.11 per 10-year decrease, 95%CI 1.02–1.20), prescriber type (Infectious Disease Physician vs General Practitioner; aOR 1.50, 95% CI 1.04–2.14), initial treatment year (2024 vs. 2018: aOR 0.16, 95%CI 0.09–0.28), and prior discontinued DAA regimen (glecaprevir-pibrentasvir 56 days vs sofosbuvir-velpatasvir 84 days; aOR 0.82, 95%CI 0.66–1.00).

Conclusion: DAA treatment discontinuation doubled from 2018 to 2024, largely driven by rising early discontinuation. Targeted adherence support for individuals who are younger, female, and live remotely, alongside broad access to retreatment are essential to achieving HCV elimination by 2030.

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