

HCV RNA Testing and Treatment Uptake Patterns in New South Wales, Australia: A Contemporary Analysis of the Advanced DAA Era

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Background: Direct-acting antivirals (DAAs) revolutionised hepatitis C virus (HCV) treatment in Australia. This study examines treatment initiation following HCV notification during the early DAA era (2016–2018) and pangenotypic DAA era (2019–2021) in New South Wales (NSW).

Methods: HCV notifications (2010-2021) were linked to several administrative datasets including PBS treatment records (2002-2022). DAA treatment initiation, including whether treatment occurred within 4 weeks, 6 months, and 12 months of notification was assessed. Logistic regression assessed factors with treatment initiation within 6 months. Kaplan-Meier survival analysis estimated time to treatment initiation between the two eras.

Results: Estimated HCV treatment initiation at \leq 6 and $>$ 6 months post-notification was 65% and 35% for those notified in 2016-2018 (n=9402) and 80% and 20% for those notified in 2019–2021 (n=6,263). In adjusted models, timely treatment (within 6 months) was associated with age $<$ 30 (aOR 1.40, 95% CI 1.14–1.73, $p < 0.01$), incarceration in previous 12 months (aOR 1.51, 95% CI 1.31–1.75, $p < 0.001$), drug dependence (receipt of OAT or injecting-related hospitalisation) in previous 12 months (aOR 1.39, 95% CI 1.22–1.58, $p < 0.001$), and history of end-stage liver disease (hospitalisation) (aOR 1.57, 95% CI 1.19–2.06, $p = 0.001$). Lower odds of timely treatment were associated with females (aOR 0.76, 95% CI 0.67–0.86, $p < 0.001$), overseas birth (aOR 0.79, 95% CI 0.68–0.91, $p = 0.001$), rural/regional residence (aOR 0.83, 95% CI 0.72–0.95, $p = 0.008$), and alcohol use disorder (hospitalisation) (aOR 0.88, 95% CI 0.78–0.99, $p = 0.037$).

Conclusion: HCV treatment initiation following notification in NSW has improved from the early to latter DAA period. However, disparities persist. Strategies addressing treatment barriers, including rural/regional residence and female gender, are essential for equitable HCV care.

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