

REINFECTION FOLLOWING SUCCESSFUL DIRECT-ACTING ANTIVIRAL THERAPY FOR HCV INFECTION AMONG PEOPLE ATTENDING AN INNER-CITY COMMUNITY HEALTH CENTRE IN VICTORIA, CANADA

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Background: Studies of HCV reinfection following direct-acting antiviral (DAA) therapy among PWID have been limited by short follow-up and small case numbers. This study evaluated the incidence of HCV reinfection following successful DAA therapy among people attending an inner-city community health centre in Victoria, Canada.

Methods: In this observational study, participants treated with DAA therapy between November 2014 and December 31, 2019 were included. Retrospective chart review was performed to assess demographics, recent injecting drug use at treatment initiation (previous six months), opioid agonist treatment (OAT), and HIV. Endpoints included sustained virologic response (SVR), HCV reinfection, and mortality.

Results: Of 482 participants initiating DAA treatment, 30% were female, 46% were receiving OAT, 49% had recent injection drug use, 15% had HIV/HCV coinfection, and 22% had cirrhosis. Treatment completion was 97% (468/482; 12 discontinued therapy, and 2 died during treatment). SVR was 87% (418/482). Outcomes among those who completed treatment but did not achieve SVR (n=53), included loss to follow-up (n=11), HCV RNA for SVR testing not completed (n=18), viral relapse (n=6), reinfection (n=5) and viral recurrence (n=5, unable to distinguish viral relapse from reinfection), and death (n=7). The rate of HCV reinfection was 3.6/100 person-years (95% confidence interval [CI] 2.4-5.5; 22 cases; 602 person-years follow-up). Factors associated with an increased risk of HCV reinfection included recent injection drug use (adjusted relative risk [aRR] 8.55, 95% CI 1.98-36.96) and HIV co-infection (aRR 2.35, 95% CI 1.01-5.44). Fifty-five people died (overdose, n=19) during (n=2) or following (n=53) therapy (7.4/100 person-years; 95% CI 5.6-9.6).

Conclusion: This study demonstrates high reinfection rates among a marginalized population at an inner-city community health centre, with higher rates among those with HIV and recent injecting drug use. The high rates of reinfection and mortality highlight the importance of integrating HCV care with strategies to address drug-related harms.

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