REDUCTION IN HEPATITIS C VIRUS (HCV) PREVALENCE FOLLOWING THREE HIGH INTENSITY POINT-OF-CARE HCV TESTING CAMPAIGNS IN A PRISON SETTING IN QUEENSLAND, AUSTRALIA

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Background: Hepatitis C (HCV) point-of-care testing enables efficient test and treat models of care in correctional facilities and could greatly enhance progress towards HCV elimination. We aimed to analyse trends in HCV RNA prevalence and treatment history across three point-of-care HCV testing campaigns in a male prison in Queensland, Australia.

Methods: Three HCV test and treat campaigns (Campaign-1, June 2022; Campaign-2, November 2022 and Campaign-3, February 2024) were conducted in Borallon prison. Participants received point-of-care HCV antibody testing (Bioline) with reflex point-of-care HCV RNA testing (Xpert HCV Viral Load Fingerstick assay) if antibody positive. HCV treatment was offered to those with active infection. Trends in RNA prevalence and treatment history were assessed using linear and logistic regression.

Results: In total, 1203 point-of-care tests were performed (Campaign-1, n=358; Campaign-2, n=310; Campaign-3, n=535) representing 49%, 38%, and 66% of facility's population respectively. There was no difference in age (p=0.264) or Indigenous status (p=0.323) between campaigns although injecting drug use decreased from 79% to 68% (p<0.001). There was a significant decrease in RNA prevalence across the campaigns from 39% in Campaign-1, to 22% in Campaign-2 and 17% in Campaign-3 (p<0.001). Adjusting for history of injecting drug use, Campaign-2 (adjusted odds ratio [aOR] 0.43; 95% CI 0.30-0.61) and Campaign-3 (aOR 0.34; 95% CI 0.24-0.46) were associated with lower odds of being RNA positve. Among partcipants with detectable RNA, mean number of previous treatments increased from 0.56 in Campaign-1 to 0.75 in Campaign-2 and 0.81 in Campaign-3 (p=0.013) and the proportion with prior treatment increased from 49% in Campaigns 1 and 2 to 62% in Campaign-3.

Conclusions: Key stakeholder collaboration enabled significant reductions in active HCV infections over 18 months through three intensive HCV point-of-care test and treat campaigns. The increase in treatment experience highlights the importance of retreatment to progress towards elimination in prisons.

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