

DECENTRALIZATION, INTEGRATION, AND TASK-SHIFTING WITH HEPATITIS C SELF-TESTING: A MICRO-ELIMINATION PROJECT AMONG PRISONERS IN NORTHERN INDIA

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Background: This prison-based Hepatitis C virus (HCV) micro-elimination project used **decentralized** testing and treatment, **task-shifting** to pharmacists, and **integrated** HCV/HIV testing through National AIDS Control Organisation (NACO), with support from National Viral Hepatitis Control Program (NVHCP), to streamline care and accelerate treatment.

Description of model of care/intervention/program: A micro-elimination project was conducted across four major jails in Uttarakhand, India, from Aug2024- Mar2025, offering HCV self-testing (HCVST). Reactive HCVST results led to RNA testing and liver fibrosis assessment via transient elastography (TE). Drones aided sample collection and direct-acting antiviral (DAA) delivery. Confirmed active infections were treated with DAA therapy, following NVHCP guidelines. A usability study of HCVST kits was also conducted among 100 inmates.

Effectiveness: Among 4050 inmates (185 females, age 34.8±14.4 years), most were <30 years (43%), literate (74%), unmarried (40%), and 66.6% from lower socioeconomic classes. Reported risk behaviors included razor sharing (68%), unsafe sex (26%), dental procedures (5.9%), intravenous drug use (3.9%), needle sharing (3.1%), surgery (2.5%), and tattooing (1.3%). Significant associations of HCV infection were found with intravenous drug use (odds ratio [OR] 3.7, 95% confidence interval [CI] 1.7-7.7), needle sharing (OR 4.5, 95% CI 2.0-9.9), and tattooing (OR 6.5, 95% CI 1.7-23.9). HCVST identified 255 (6.3%) with anti-HCV antibodies, of whom 145 (56.9%) were HCVRNA positive (median HCVRNA-30,245 IU/mL (range 262-625,463)). Significant liver fibrosis (TE>12kPa) was observed in 15 cases. All 145 individuals with active HCV infection initiated DAA treatment. Overall usability of HCVST kits was 80%, with high acceptability and some challenges with sample collection requiring assistance.

Conclusion and next steps: This project demonstrated feasibility of utilizing HCVST to screen and link inmates to hepatitis C care within a correctional setting which has high burden. Model of care was effective in delivering comprehensive care with innovative approaches contributing to national elimination goals. Next step is to collect and document data on complete cascade of care including SVR-12 and to make the model of care self-sustainable.

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