

# FEASIBILITY OF A PRISON-BASED TEST-AND-TREAT MODEL FOR ENHANCING HEPATITIS C CARE IN KEDAH, MALAYSIA

## Authors:

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## Background:

Hepatitis C virus (HCV) infection remains a public health concern, significantly affecting vulnerable populations including substance users and incarcerated individuals. This study assessed the feasibility of a prison-based test-and-treat model for HCV in two types of prisons in Kedah, Malaysia.

## Methods:

A retrospective cohort study was performed on 4,054 new prison inmates tested for HCV between June 2022 and December 2023. The study involved two prisons: one remand-type and one sentenced-type facility. The model implemented a streamlined process within prisons, encompassing rapid anti-HCV testing, HCV ribonucleic acid (RNA) testing, pre-treatment assessments, and treatment initiation for eligible inmates. The outcome assessment focused on program uptake, implementation success across the HCV care cascade (screening, confirmatory testing, treatment initiation rate, treatment completion rate, and sustained virologic response rate), and practicality within resource-limited prison environments.

## Results:

Study participants were mainly male (98.1%), with nearly half (48.2%) aged 40-49 years. A vast majority (95.7%) reported at least one HCV risk factor, primarily injection drug use (95.2%). Among 4,054 inmates testing positive for HCV antibodies, 19.6% (n=793) underwent HCV RNA testing, with 82% (n=655) testing positive. Of those with a positive test result, 98.2% (n=648) completed pre-treatment assessments. Antiviral treatment was initiated in 49.2% (n=319) of them, with 51.7% (n=165) completing the full course. Among those completing treatment, 48.5% (n=80) of those received post-treatment HCV RNA testing, with 96.3% (n=77) achieving a sustained virologic response 12 weeks after treatment.

## Conclusion:

This prison-based test-and-treat model demonstrates promising feasibility for detecting HCV and initiating antiviral treatment within prisons. Our findings highlight the importance of collaborative efforts across agencies to overcome resource limitations and ensure successful program implementation, suggesting potential for broader adoption of the care model in correctional facilities. Further research is needed to optimize treatment completion rates and address potential factors contributing to drop-out.

## Disclosure of Interest Statement:

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