Decentralizing Viral Hepatitis and HIV Care: A Pilot of Integrated Multi-disease Testing on GeneXpert Platforms in Viet Nam

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Background: Viet Nam faces overlapping epidemics of HIV, hepatitis C (HCV), and tuberculosis (TB), particularly among marginalized key populations. Historically, service delivery for HIV and HCV has been fragmented and centralized at provincial or tertiary hospitals, resulting in long diagnostic pathways, high patient costs, and significant attrition between screening and treatment. This study evaluates a pilot model leveraging the country's extensive, underutilized GeneXpert network—originally deployed for TB—to decentralize and integrate multi-disease services.

Methods: The pilot was implemented at two district-level sites: Nam Tu Liem District Health Center (Ha Noi) and Thot Not District Hospital (Can Tho). The model utilized shared GeneXpert molecular platforms for integrated TB diagnosis and HIV/HCV viral load testing. Key strategies included task-shifting counseling and treatment initiation to trained non-specialist healthcare workers, simplifying clinical algorithms, and integrating client flow across ART, methadone maintenance, and PrEP services. Treatment was decentralized to the district level to reduce specialist referrals.

Results: The pilot achieved substantial reach, screening 5,210 individuals for anti-HCV antibodies and performing 905 HCV RNA tests. Among those diagnosed with active HCV, the treatment initiation rate exceeded 93%, with a 95% completion rate. Notably, the sustained virologic response (SVR12) rate was over 96%, with very low reinfection observed. Additionally, 1,555 people living with HIV received viral load testing, with the majority achieving viral suppression. TB treatment initiation and completion rates also exceeded 90%. The model effectively reached underserved key populations, including people who inject drugs and sex workers.

Conclusion: Integrated, decentralized HIV, HCV, and TB services using existing molecular platforms are highly effective and feasible in routine public-sector settings. By reducing attrition and optimizing infrastructure, this model achieves clinical outcomes comparable to specialist-led centralized care. It offers a practical blueprint for scaling up people-centered integrated service delivery.