Simplifying hepatitis C service delivery in resource-constrained settings

Joseph D. Tucker,[1,2,3*] Dan Wu,[3] Philippa Easterbrook*[4]

[1]School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, USA

[2]University of North Carolina Project-China, Guangzhou, Guangdong, China

[3]Clinical Research Department, Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, UK

[4] Department of Global HIV, Hepatitis and STI Programmes, World Health Organization, Geneva, Switzerland

*Contributed equally to this manuscript.

Corresponding author: Joseph D. Tucker, jdtucker@med.unc.edu

Hepatitis C clinical management is still largely organized through specialists in tertiary care settings, separate from primary care services.[1] As of 2017, less than 20% of those with chronic HCV infection had been diagnosed and less than 10% treated.[2] Achieving the ambitious WHO targets for elimination of viral hepatitis as a public health threat by 2030[3] will require a radical simplification of care pathways to expand access. The 2018 WHO guidelines on care and treatment of persons with chronic hepatitis C infection endorsed a series of good practice principles for simplified service delivery, including decentralisation, integration and task-shifting.[4] A recent comprehensive systematic review of 142 studies now provides a strong evidence base supporting these approaches in HCV care.[5] Full decentralisation of HCV testing and treatment compared to no or only partial decentralisation was associated with increased linkage and treatment uptake, especially among persons who inject drugs. Task-shifting to primary care providers was associated with high rates of HCV cure compared to specialist-delivered care in all subpopulations. However, data were limited for these approaches among the general population and in primary care clinics. The study led by Médecins Sans Frontières with the Cambodian Ministry of Health addresses this gap in the literature.[6]

This study demonstrates the feasibility and effectiveness of a simplified model of HCV care and treatment for the general population integrated into the rural Cambodian public health system. Approximately 10,425 adults were screened for hepatitis C at one of 13 primary care clinics by a general practitioner. Those with positive rapid tests were referred for pre-treatment assessment at the local district referral hospital and the majority started direct acting antivirals at the primary care clinics. Only two visits were required prior to treatment initiation, with three monthly visits thereafter for pick-up of treatment refills and cure assessment. Overall, among those who screened HCV antibody positive, the project achieved very high uptake (>95%) of HCV viral load testing, linkage to care, and treatment intitiation. There was also a short turnaround time of five working days from positive HCV antibody result to treatment initiation. Key features of the simplified pathway included use of rapid HCV diagnostic tests, access to point-of-care viral load testing, incorporation of Fibroscan (transient elastography) for liver disease staging, and adoption of a differentiated care model with task-shifting to primary care providers. Approximately nine-tenths of patients received all care at the primary care clinic and the

remainder of patients (including those with decompensated cirrhosis, HBV co-infection, previous direct acting antiviral therapy, and those with comorbidities) were managed at the referral hospital. This simplified care model has already been replicated in two other health districts and incorporated into the new Cambodian national strategic plan.[7]

The authors provide additional suggestions for how to further simplify the HCV care pathway: dispensing the full 12 week treatment supply at initiation; and expanding the nurse role to include treatment initiation. The basis for the recommendation to remove routine pre-treatment staging of liver disease step is less clear. While pre-treatment staging of liver disease is a recognised rate-limiting step, it is essential to identify those with cirrhosis who require the longer 24-week treatment course. Only 10 patients (1·9%) with decompensated cirrhosis received a 24-week treatment. Yet, one quarter of patients had evidence of cirrhosis, and their cure rate was lower at (89·3% vs. 97·3%) compared to non-cirrhotics. The shorter treatment course in these cirrhotic patients may have contributed to this lower cure rate. Identification of those with cirrhosis is also important to flag those in need of follow-up screening for hepatocellular carcinoma. Since Fibroscan machines are expensive, the use of aminotransferase to platelet ratio index (APRI score) or similar tests based on widely available blood tests represent alternate low-cost options for primary care settings.

Decentralisation of HIV care to community-based care facilities and task-shifting to non-specialists had a substantial impact on scale-up of antiretroviral treatment,[8] but generating the evidence for these approaches took over a decade. Short course HCV curative treatment requires minimal expertise and monitoring and presents an opportunity to scale-up a simplified care model much faster than with HIV. Implementation research is need to further refine these simplified models as well as explore different screening approaches to optimise case-finding (e.g., one-time screening of all adults or an age-targeted screening). Cost utility and cost-effectiveness research could provide important data to inform simplification. More implementation research that captures HCV outcomes across the entire continuum of care is needed.

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