Simplifying hepatitis C service delivery in resource-constrained settings

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Lancet Gastroenterol Hepatol 2021

Published Online March 18, 2021 https://doi.org/10.1016/S2468-1253(21)00033-9

See Online/Articles https://doi.org/10.1016/S2468-1253(21)00012-1

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

Zhang and colleagues' study shows 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. 10 425 adults were screened for HCV at 13 primary care clinics. Those with positive results from rapid diagnostic tests were referred for pretreatment assessment at the local district referral hospital and the majority started direct-acting antivirals at the primary care clinics. Only two visits were required before treatment initiation, with three visits, once a month thereafter for medication refills and HCV cure assessment. Overall, among those who screened positive for HCV antibody, the project achieved high uptake (>95%) of HCV viral load testing, linkage to care, and treatment initiation. A short turnaround time of 5 working days was also reported 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 90% of patients received all care at the primary care clinic and the remainder of patients (including those with decompensated cirrhosis, hepatitis B virus 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 provided additional suggestions for how to further simplify the HCV care pathway. These include dispensing the full 12-week treatment supply at initiation and expanding the role of nurses to include treatment initiation. The basis for a recommendation to remove routine pretreatment staging of liver disease is less clear. Although pretreatment 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 ten (1·9%) of 530 patients had decompensated cirrhosis and received 24-week treatment. Yet, about 25% of patients had evidence of cirrhosis, and their cure rate was lower than those who had no cirrhosis (89·3% *vs* 97·3%). The shorter treatment course in patients with cirrhosis might have contributed to the lower cure rate. Identification of patients 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 (ie, the 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 needed to further refine these simplified models as well as explore different screening approaches to optimise case-finding (eg, 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.

PE is an employee of WHO; and the views and opinions expressed might not reflect that of WHO. We declare no other competing interests.

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