Building the evidence base to eliminate hepatitis B and C as public health threats

The rigorous analysis of evidence by Kali Zhou and colleagues is a benchmark endeavour that reveals both the evidence-based interventions that improve hepatitis B virus (HBV) and hepatitis C virus (HCV) testing and linkage to care and treatment (ie, the care cascade), and the major remaining gaps in this knowledge base. This analysis arrives at a crucial time for public health. The global burden of viral hepatitis is huge. Over 400 million people have HBV or HCV infection. In 2013, about 1·4 million people died of HBV-related or HCV-related liver cancer and other diseases, surpassing deaths from HIV, tuberculosis, and even road injuries. Testing with linkage to care and treatment reduces the risk of these health outcomes. For people infected with HBV, treatment that suppresses viral replication reduces the risk of liver cancer by 50%. For people with HCV, all-oral therapy cures up to 90% of those infected within 8–12 weeks of therapy. HCV treatment lowers the risk of liver cancer by 75% and all-cause mortality by 45%. However, availability of testing and effective, even curative therapies, together do not ensure that infected people will have access to and receive the full continuum of services needed to improve health outcomes. Indeed, less than 5% of people with HBV or HCV infection are aware they are infected and are receiving recommended care and treatment.

Although only 33 studies met Zhou and colleagues’ rigorous inclusion criteria, their analysis identifies several effective interventions. They showed that patient and provider education improves HBV testing, HCV reminders for clinicians improves HCV testing, patient navigators to guide patients through health systems improves completion of referrals and linkages to care and treatment after diagnosis, and patient education and co-location of HCV care with other clinical services (eg, mental health care) improves HCV treatment completion and virological cure. Studies of HBV and HCV testing supported by the US Centers for Disease Control and Prevention have revealed similar benefits of these interventions. These interventions are readily adaptable for use in diverse health systems, including those in low-income and middle-income countries.

Despite evidence of effectiveness, gaps in implementation of interventions persist. Studies of interventions that improve HBV testing in clinical settings or HBV treatment uptake and adherence are absent. Safe, curative HCV therapies increase opportunities for expanding access to HCV treatment to prevent both HCV-associated disease and transmission, few data are available to guide best use of transformative HCV drugs. Although the new treatment regimens are simpler to use than older regimens, studies are needed to guide the transition of HCV testing and treatment from the domain of specialists (eg, infectious disease, gastroenterology) to other health-care providers (eg, primary care). Models suggest that HCV treatment of people who inject drugs can decrease transmission to others; data are needed to identify the most effective strategies to promote treatment adherence and limit reinfection among people who inject drugs. Studies that use affordable generic versions of HBV and HCV drugs are needed for low-income and middle-income countries.

In May, 2016, the 69th World Health Assembly adopted a Global Viral Hepatitis Strategy with goals for the elimination of HBV and HCV as public health threats by 2030. The goals are ambitious. The burden of disease is large and the task of improving access to care and treatment formidable. Central to achievement of these goals is identification and implementation of a package of simple, affordable, high-impact services that can be readily implemented by diverse health systems. The analysis by Zhou and colleagues identifies proven strategies that can be widely adopted and become standard elements of a package of services to be considered for use in elimination programmes. However, this study revealed the need for additional high-quality data to guide other strategies for testing and linkage to care. It is time for public health authorities to consider two complementary strategies: conducting additional research while taking immediate action to implement effective interventions on a global scale. As evidence accumulates to guide operational interventions for HBV and HCV testing, care, and treatment, we can...
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avert millions of new HBV and HCV infections and associated deaths, and make substantial progress toward the goals of HBV and HCV elimination by 2030.

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I declare no competing interests.


