Universal Screening, More Treatment Needed to Meet WHO Hepatitis C Elimination Targets

The hep C mortality reduction goal will not be met by any state, according to recent projections.

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In order to reach the World Health Organization (WHO) hepatitis C elimination targets for 2030, universal screening needs to be implemented and treatment rates need to be improved in the United States. But no states will be able to reach the mortality reduction goal. These findings were presented at The Liver Meeting Digital Experience.

“We need to implement universal screening of all adults in different subpopulations to meet the target of 90% diagnosis by 2030,” Madeline Adee, MPH, of the Massachusetts General Hospital, in Boston, said during her presentation. “Policymakers need to implement programs that can increase the uptake of universal screening in different populations.”

Some 2.4 million people in the United States have hepatitis C, with around 50% being unaware of their condition. WHO elimination targets call for a 90% drop in new hep C infections and a 65% drop in the death rate by 2030, in comparison to numbers in 2015. Further, 90% of individuals with chronic hep C need to be diagnosed and 80% of those who are eligible for therapy need to be treated.

Based on data from the National Health and Nutrition Examination Survey, which represent household populations, hepatitis C care appears to be improving. But for incarcerated or unhoused populations, hep C diagnosis and care seems to be poor.

Adee and colleagues used a simulation model, called HEP-SIM, that recreated historic trends of disease burden for hepatitis C in the United States; the model had already been tested to project future disease burden across the nation. Using multiple databases, the team took into account a variety of parameters such as the natural history and prevalence of hep C among subpopulations in different states, such as people insured by Medicare, Medicaid or private insurance, the uninsured and incarcerated people. For every state, they considered various combinations of screening rates, policies regarding access to treatment and treatment rates to assess which ones would help meet the WHO targets by 2030.

The researchers assumed that annual incidence rates for hepatitis C between 2017 and 2028 would follow the same upward trajectory seen between 2006 and 2016. Thereafter, these rates are expected to stabilize and plateau.

Treatment rates were found to vary depending on the insurance status: Those with insurance tended to report a 50% annual treatment rate and those without, a 10% annual rate.

The team found that no states are going to be able to meet WHO targets if current screening and treatment rates are maintained.

The researchers conducted two screening scenarios: the status quo annual screening rate of 9% for a birth cohort and a universal screening rate, which varied across states. They found that universal screening would be necessary to meet the elimination target for diagnosis across all states.

To begin with, all states would need to perform universal screening at a yearly rate between 9% and 15%, with a national average rate of 10%, in order to meet the diagnosis target.

Next, the researchers ran three treatment scenarios: the status quo treatment, 80% treatment rate for the insured and 20% for the uninsured and, lastly, 80% treatment rate for all. All of these treatment strategies would aid in meeting the WHO treatment target.

But these different treatment strategies would differently impact mortality reduction. Status quo treatment would lead to a national mean reduction in deaths of only 9% by 2030. But the second scenario would lead to a 17% drop. If the 80% treatment rate for all were attained, mortality reduction would reach 40% in some states.

While universal treatment at 80% annually would improve population-level health outcomes such as liver cirrhosis, liver cancer and deaths from hep C, none of these schemes would help the states meet the mortality reduction target. So no states will be able to meet the goal of reducing mortality from liver-related conditions by 65%. But combining universal screening with the right treatment strategy would have a major impact on mortality.

“Our model predicts that even maximizing screening and treatment would not achieve the WHO HCV-related mortality target, potentially due to low baseline HCV-related mortality rates and a high number of persons with HCV who already have advanced liver disease,” wrote the researchers. “Implementing more aggressive screening and treatment policies could allow states to reach the WHO 2030 HCV diagnosis and treatment targets.”

Click here to read the study abstract from The Liver Meeting Digital Experience.

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