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One-time universal screening for hepatitis B could save 23K lives, nearly \$600 million

A one-time, universal screening for chronic hepatitis B infection could prevent 23,000 additional deaths from chronic HBV-related liver disease and save almost \$600 million, according to a study in *Clinical Infectious Diseases*.

“The study was prompted by the Division of Viral Hepatitis at the CDC to assess the economic and population health impact of a recommendation potentially to screen all adults in the United States for [chronic hepatitis B infection](#) (CHB),” Samuel So, MBBS, FACS, who founded the liver cancer program at the Stanford Cancer Center, told Healio.

A one-time universal screening of adults for chronic hepatitis B infection would save:



An estimated

\$596 million

Healio 

Source: Toy M, et al. *Clin Infect Dis*. 2021;doi:10.1093/cid/ciab405..

So said current national HBV screening recommendations for asymptomatic, nonpregnant adults are based on whether a person was born in an endemic country with an HBsAg prevalence of 2% or more, was not vaccinated as an infants with a parent from a high endemic country, and a long list of risks categories. This makes them difficult to implement in practice “because risk factors including country of birth or parent’s country of birth are not collected by the health system,” So said.

As a result, and despite screening being covered by Medicaid, Medicare and Affordable Care Act-compliant health plans, current testing recommendations have not led to significant increases in HBV testing, diagnosis and treatment of CHB, So said.



Samuel So

For their study, So and colleagues used a Markov model to calculate the costs, population health impact and cost-effectiveness of one-time universal screening and CHB monitoring and treatment compared with current practices. According to the study, a sensitivity analysis one that assumed testing would be performed during routine health care visits and that

generic tenofovir or entecavir would be dispensed for treatment was performed on model parameters to identify thresholds for cost savings or cost-effectiveness based on willingness to pay \$50,000/quality-adjusted life-year.

The study demonstrated that at an estimated 0.24% prevalence of undiagnosed CHB, universal HBsAg screening in adults aged 18 to 69 years is cost-saving compared with current clinical practices if antiviral treatment drug costs remain below \$894 per year. Additionally, the researchers found that, compared with current practice, universal screening would avert an additional 7.4 cases of compensated cirrhosis, 3.3 cases of decompensated cirrhosis, 5.5 cases of hepatocellular carcinoma, 1.9 liver transplants and 10.3 HBV-related deaths at a savings of \$263,000 per 100,000 adults screened.

Compared with the current risk-based screening recommendation and based on a National Health and Nutrition Examination Survey prevalence estimate of 840,000 persons living with CHB in the U.S., So and colleagues calculated that a one-time universal screening of adults for CHB would prevent an additional 23,000 deaths from liver disease and liver cancer at an estimated cost saving of \$596 million.

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“Primary health care providers should incorporate into their electronic medical records system to offer a one-time voluntary screening test for chronic hepatitis B infection in adults who have no record of prior testing,” So said. “The study provides convincing evidence in support of a national recommendation for universal screening of adults in the U.S. for chronic [hepatitis B infection](#).”

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