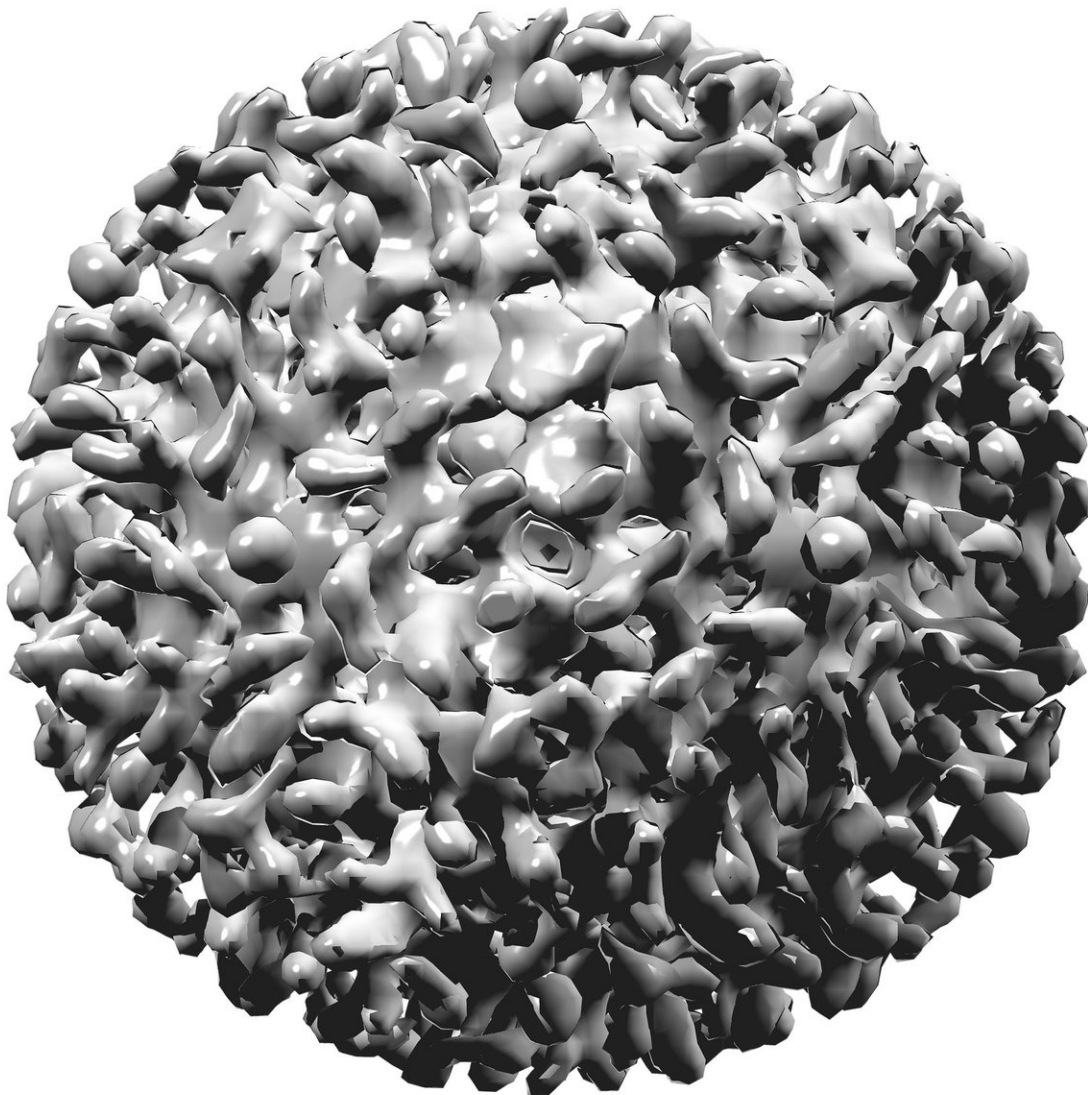


Current hepatitis B prevention and treatment strategies are inadequate to meet Ontario's targets

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A new University of Waterloo study shows that current Hepatitis B vaccination, screening, and treatment strategies in Ontario will leave the province well short of its goal to reduce preventable infections that afflict 1,000 Ontarians annually.

The report's authors developed a computer model simulating the long-term effects of existing Hepatitis B virus (HBV) prevention and treatment strategies in Ontario. "We found that even if current strategies were increased, Ontario would continue to struggle to eliminate new HBV cases and decrease liver-related deaths and HBV-induced cancers," said William W.L. Wong, a professor at Waterloo's School of Pharmacy and the study's lead researcher.

While there is a vaccine to prevent HBV and antiviral treatments to suppress the virus if the patient develops chronic (long-lasting) hepatitis B, vaccination, screening, and treatment strategies are often logistically challenging and expensive.

Several high-income countries, including Canada, have committed to achieving World Health Organization (WHO) goals to decrease new cases of HBV by 95 percent and to decrease HBV-related deaths by 65 percent by 2030.

"We found that existing HBV prevention and [treatment strategies](#) in Ontario would only decrease cases of acute hepatitis by 64.5 percent, decrease HBV-related decompensated cirrhosis by 9.4 percent and decreases [liver cancer](#) by 10.5 percent between 2015 and 2030," Wong

said. "However, the incidence of chronic HBV would increase by 26.6 percent, and liver-related deaths would increase by one percent in the same time frame."

The WHO recommends vaccinating children shortly after birth against HBV. In Canada, there is no universal birth-dose HBV policy. In many provinces, including Ontario, HBV vaccination is implemented for seventh-grade students.

"Policies like this can leave gaps, as [young children](#) have the highest risk of developing chronic hepatitis B if exposed to HBV," Wong said. "The [computer model](#) we've developed helps identify gaps like this."

The study's findings have implications for [health policy](#), future drug development and even immigration. Currently, there is no treatment to completely cure HBV. The researchers feel new antiviral medications are needed to eliminate HBV.

"Additionally, countries like Canada, which receive immigrants from countries where HBV is prevalent, should consider how best to support these newcomers," Wong said. "Working with members of these communities, we can develop screening policies that do not lead to stigmatization or impact immigration opportunities, while also ensuring newcomers receive health-care support."

The study was recently published in the *Journal of Hepatology*.

More information: Feng Tian et al, Feasibility of hepatitis B elimination in high-income countries with ongoing immigration, *Journal of Hepatology* (2022). [DOI: 10.1016/j.jhep.2022.04.014](https://doi.org/10.1016/j.jhep.2022.04.014)

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