

Halting Universal Hepatitis B Vaccination for Newborns Could Have Dire Consequences

Ending the universal HBV vaccine birth dose recommendation will lead to more cases of hepatitis B and complications such as cirrhosis and liver cancer.

May 5, 2026 By [Liz Highleyman](#)

Omitting the birth dose of the hepatitis B virus (HBV) vaccine, which has been recommended for all babies within the first hours of life, could lead to hundreds of extra infant hepatitis B infections and cost millions of dollars, according to two studies published in JAMA Pediatrics.

Withdrawal of the long-standing Centers for Disease Control and Prevention (CDC) universal birth dose recommendation “will have a negative impact on the health of infants and children in the U.S. and result in greater healthcare costs,” Grace Lee, MD, of Stanford University, wrote in [an editorial](#) accompanying the studies.

HBV is a blood-borne virus that spreads through direct contact with blood and via objects such as needles for injecting drugs and household items like razors and toothbrushes. HBV can also be transmitted during sex and from pregnant women to their babies. However, in about a third of cases, the transmission route is unknown. Around 90% of infants infected with HBV at birth will develop chronic hepatitis B, which can lead to serious complications, including [cirrhosis](#) and [liver cancer](#). Vaccination offers effective protection against HBV infection and its consequences. Chronic hepatitis B can be treated with antiviral medications, but there is no cure.

Since 1991, the Centers for Disease Control and Prevention (CDC) has recommended that all infants should receive the first dose of the three-shot HBV vaccine series within 24 hours after birth. After this policy was adopted, hepatitis B infections among children and adolescents fell by more than 90%. Numerous studies and real-world evidence show that the vaccine is safe and generally well tolerated. Serious side effects are rare, and studies have not confirmed a link to autoimmune conditions or autism.

Last December, a CDC advisory committee voted to [stop recommending the birth dose](#) for all newborns, calling instead for shared decision-making between parents and doctors if the mother tests negative for HBV. In March, a federal court [temporarily blocked the policy change](#).

Some proponents of the change suggested—incorrectly—that hepatitis B is only a concern for people who inject drugs, sex workers, gay men and immigrants. Opponents argued that some pregnant women do not get prenatal care that includes HBV testing, some may be in the acute phase of infection when the test doesn't detect the virus and some acquire HBV after testing negative.

The CDC “should not close that window to avoid preventable outcomes using a vaccine that is extremely low risk and generates good protection at birth,” Demetre Daskalakis, MD, MPH, who headed the CDC's National Center for Immunization and Respiratory Diseases until [his resignation](#) last August, told Hep at the time.

The new reports shed further light on the consequences of omitting the HBV vaccine birth dose.

In the [first study](#), Margaret Lind, PhD, of Boston University School of Public Health, and colleagues, assessed the impact of replacing the universal birth dose recommendation with a targeted recommendation limited to infants born to mothers who test positive for HBV or whose status is unknown.

Even under the existing universal birth-dose recommendation, some 1,300 infants acquire HBV annually. Given the current maternal HBV screening rate (86%), a risk-based vaccine recommendation could lead to 628 extra newborn infections if only 10% of infants born to unscreened mothers are vaccinated at birth, the researchers estimated. More than 100,000 additional pregnant women would need to be screened to offset this increase. In contrast, the model predicted 69 additional HBV infections if 80% of these infants are vaccinated, mirroring levels under a universal birth-dose recommendation.

“Findings from this study indicate that the targeted birth-dose vaccine recommendation will likely increase neonatal infections unless maternal screening rises substantially or vaccination coverage among infants of unscreened mothers exceeds current levels,” the study authors concluded. “As historic data show such improvements are unlikely, these findings underscore the continued importance of universal screening and vaccination as complementary safeguards.”

In the [second study](#), Eric Hall, PhD, MPH, of the Oregon Health & Science University School of Public Health, and colleagues looked at the economic impact of changing the infant HBV vaccination schedule. They modeled eight scenarios in which the first HBV vaccine dose was delayed by various intervals (two months to 12 years) for infants born to mothers who tested HBV negative or had unknown status.

All delayed vaccination scenarios resulted in more HBV infections, worse health outcomes and higher costs. For example, delaying the first dose to two months of age for one annual cohort of infants born to HBV-negative mothers led to an additional 90 acute (recent) infections, 76 chronic (long-term) infections, 30 more cases of cirrhosis, 21 more cases of liver cancer and 29 HBV-related deaths, resulting in approximately \$16 million in added lifetime costs. Delaying the first vaccine dose to 12 years of age resulted in an additional 190 acute infections, 50 related deaths

and nearly \$30 million in added costs. Delaying vaccination of infants born to mothers of unknown status or imperfect adherence to the vaccination schedule amplified all these negative outcomes.

“Results of this economic evaluation quantified the potential impact of changing ACIP recommendations,” the authors concluded. “Even brief delays in [HBV] vaccine initiation were associated with a substantial increase in HBV infections, adverse health outcomes and health care costs.”

Professional organizations including the American Association for the Study of Liver Diseases, the Infectious Diseases Society of America and the American Academy of Pediatrics, as well as several state health departments, continue to recommend a universal HBV vaccine birth dose, but experts fear that inconsistent guidelines will lead to confusion and ultimately reduce the number of infants who get vaccinated.

“As health systems and health care professionals are keenly aware, implementation is not about intent, it is about friction,” Lee wrote. “With enough friction, it becomes easier to not vaccinate than to vaccinate.”

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