NIH Updates Hepatitis B Strategic Research Plan

The roadmap includes improved strategies for vaccination, screening and follow-up care.

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The National Institutes of Health has updated its Strategic Plan for NIH Research to Cure Hepatitis B, a roadmap for ending the hepatitis B epidemic, focused on developing a cure as well as improved strategies for vaccination, screening and follow-up care.

The revised plan incorporates lessons from the COVID-19 pandemic and recent advances in technology. The plan aligns with the Department of Health and Human Services' Viral Hepatitis National Strategic Plan and is designed to be a part of the agency's ongoing response to the effects of this disease.

Hepatitis B virus (HBV) is transmitted through contact with infected bodily fluids, such as via sexual contact or sharing needles or from a mother to her baby at birth. Most people with HBV infection experience short-term illness and some may not have any symptoms. However, other people, especially those infected early in life, will develop a chronic infection and may suffer from liver-related complications, including cirrhosis, liver failure or liver cancer. Left untreated, these complications can be life-threatening. While there is no cure for hepatitis B, highly effective vaccines can prevent HBV infection, and oral antiviral agents and other therapeutics can slow the progression of hepatitis B complications.

In 2019, NIH issued its first strategic plan for hepatitis B research, created by a collaborative working group of science and policy experts from across the agency. The working group is led by the National Institute of Allergy and Infectious Diseases and now includes representatives from the National Institute of Diabetes and Digestive and Kidney Diseases; the National Cancer Institute; the National Institute on Minority Health and Health Disparities; the National Institute on Alcohol Abuse and Alcoholism; the National Institute on Drug Abuse; and the NIH Office of the Director.

The updated plan details three priorities:

- Improve understanding of the biology of hepatitis B: Discoveries about how the virus is transmitted and causes disease will contribute to next-generation therapeutics and vaccines essential to achieving a cure for HBV and control of the virus.

- Develop tools and resources to fight hepatitis B: With NIH support, researchers can develop new cell culture systems (as well as cell-free systems) and animal models to advance hepatitis research. Identifying better biomarkers and developing improved diagnostics would allow researchers to track disease progression in people with hepatitis B and enhance clinical research. The plan highlights global research networks supported by NIH that can participate in conducting large, coordinated clinical studies and contribute to biorepositories to facilitate open data sharing.
- Create strategies to cure and prevent hepatitis B: Through partnerships with academic and industry partners and leveraging basic research and resources in the first two priorities, researchers can develop promising therapeutics and vaccines for hepatitis B and develop strategies to effectively test these regimens. Such efforts will include expanding clinical research capacity and developing culturally appropriate strategies to reach diverse populations. Using strategies learned from the COVID-19 pandemic to reach and evaluate treatments in at-risk populations, including racial and ethnic minority groups, NIH can conduct clinical trials that are relevant to individuals most in need of a hepatitis B cure.

Through this updated plan and with ongoing coordination between institutes, NIH aspires to make significant progress in the scientific understanding of hepatitis B to discover a cure and end the epidemic.

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