



Updates in hepatitis B treatment and cure 2026

Chari Cohen, DrPH, MPH

President, Hepatitis B Foundation

Professor, Baruch S. Blumberg Institute



What do we mean by Hepatitis B Cure?

Answered by: Dr. Thomas Tu,
*Founder & Director, HepBCommunity.org,
President, Australian Centre for Hepatitis Virology,
Group Leader, Westmead Institute for Medical Research*





Current treatments

- Nucleos(t)ide Analogues: Interfere with viral DNA polymerase used for HBV replication
- Long-term oral antiviral medications (tenofovir, entecavir, TAF)
- Suppress the virus from replicating
- HBV DNA levels go down
- Integrated HBV DNA can still make HBsAg (HBsAg still +)
- Suppression is not complete (residual viral replication can occur)
- Better health outcomes for most
 - Some (about 60%) HCC risk reduction
 - Some fibrosis/cirrhosis risk reduction or reversal
- Lower transmission risk
- Positive quality of life impact



Future treatments

Combination therapy: remove infection, suppress virus, activate immune system



Partial cure – benefit of current antivirals with finite duration therapy (i.e. more potent antiviral); benefits continue after treatment ends; no HBsAg loss

Functional cure – partial cure plus HBsAg loss – equivalent of immune system naturally clearing the virus; associated with better disease outcomes

Complete cure – functional cure plus stopping virus from making cccDNA; eliminates risk of viral reactivation

Sterilizing cure – complete cure plus eliminating HBV DNA that is integrated into our DNA – essentially like never being exposed to the virus; should lead to complete risk reduction



Targeting the Virus

Strategies that target the virus and interfere with the HBV replication process

- Silencing RNAs (siRNA) – interferes with and destroys viral RNA
 - 7 in phase II
- Entry Inhibitors: Interferes with HBV getting into liver cells
 - 1 in phase II
- Capsid or Core Inhibitors: Interferes with the viral DNA protein shield
 - 2 in phase I, 2 in phase II
- HBsAg Inhibitors: Interferes with production of HBV surface antigen (sAg)
 - 1 in phase II
- Antisense Molecules: Binds to the viral mRNA to prevent it from turning into viral protein
 - 1 preclinical, 1 in phase III, 1 FDA Fast Track designation (GSK, bepirovirsen)
- Gene Editing: Intended to destroy or repress HBV DNA
 - 3 in phase I, 1 in phase I/II



Targeting the immune system

- Therapeutic Vaccine Technology used to stimulate the immune system as a treatment
 - 2 preclinical, 6 in phase I, 3 in phase II
- Compounds that activate the innate immune system
 - 0
- Monoclonal Antibodies: Neutralize or bind the HBV proteins to reduce infection
 - 1 in phase I, 1 in phase II
- Checkpoint Inhibitors: Stimulate exhausted T-cell recognition of HBV-Infected cells
 - 1 in phase I



bepirovirsen

- B-Well phase 3 data (week 72)
- 19% functional cure in the overall study population (HBsAg $\leq 3,000$ IU/ml) and 26% in patients with lower viral activity (HBsAg $\leq 1,000$ IU/ml) compared to 0% with standard of care only
- 49% of bepirovirsen recipients achieved a quantitative hepatitis B surface antigen (qHBsAg) of ≤ 100 IU/mL one year after the end of treatment

<https://www.gsk.com/en-gb/media/press-releases/bepirovirsen-achieves-unprecedented-functional-cure-rates-with-potential-to-redefine-treatment-for-chronic-hepatitis-b/>

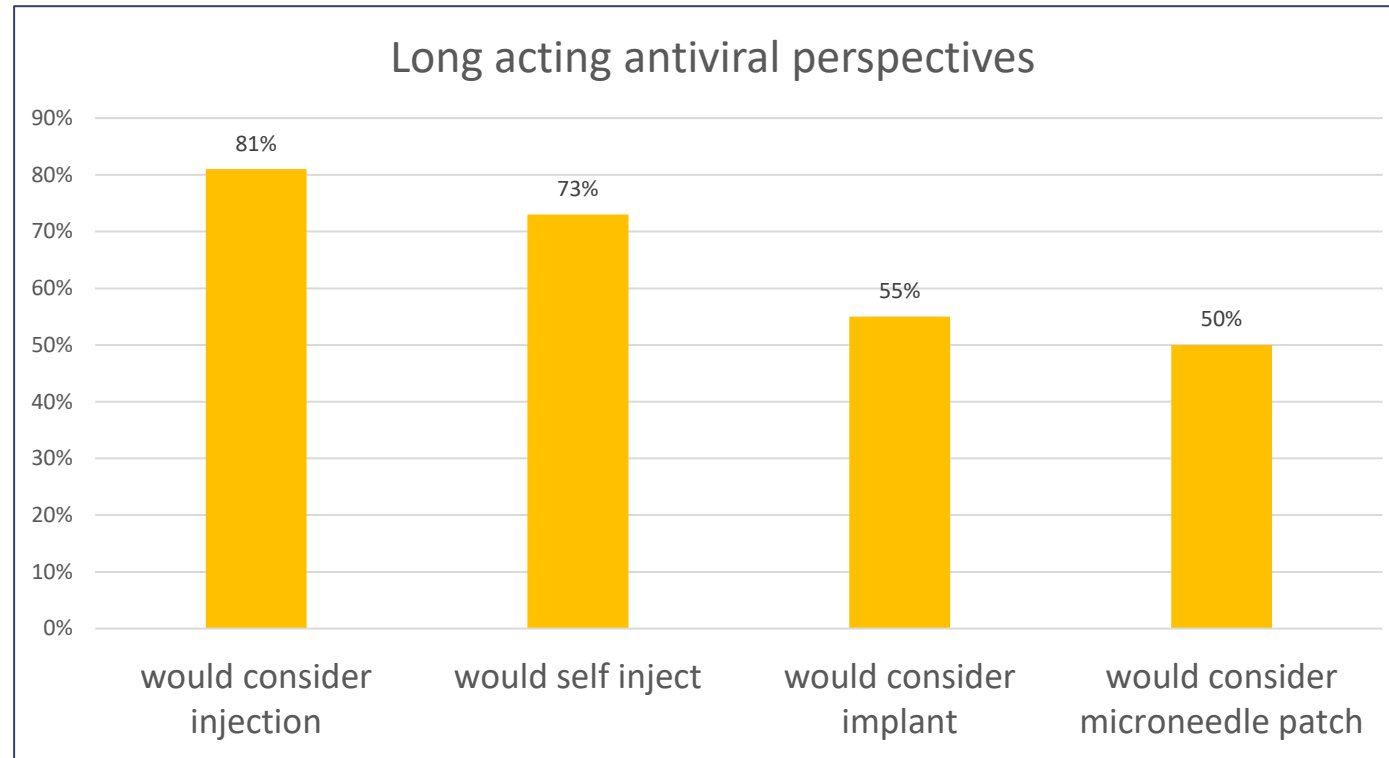


Hepatitis delta

- Bulevertide (Hepcludex) granted FDA approval May 22, 2026
- Treat chronic hepatitis delta virus (HDV) in adults without cirrhosis or with compensated cirrhosis.
- First FDA approved therapy for HDV
- At week 48, 20% of the Hepcludex group had undetectable HDV RNA compared with 0% in the delayed treatment group.
- At weeks 96 and 144, the rate of undetectable HDV RNA increased to 36% and 50% in the Hepcludex group.



Long acting antivirals





Timeline and community impact

Having functional cure as a therapeutic option will be transformative for the community

- Proof of progress
- More development in the diagnostic space
- More support to scale up testing and diagnosis

What does the community need to get ready?

What do providers need?

What will we need to improve access?

What is your role?



Together we can eliminate hepatitis B!

Thank you – chari.cohen@hepb.org

