



Educating Frontline Clinicians to Reduce Missed Opportunities for HBV Screening

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Learning Objective 1

Implement universal HBV screening with triple panel testing to accurately identify patients with active HBV infection.

CME
OUTFITTERS



Learning Objective **2**

Link patients with HBV infection to appropriate medical care based on interpretation of serological test results.



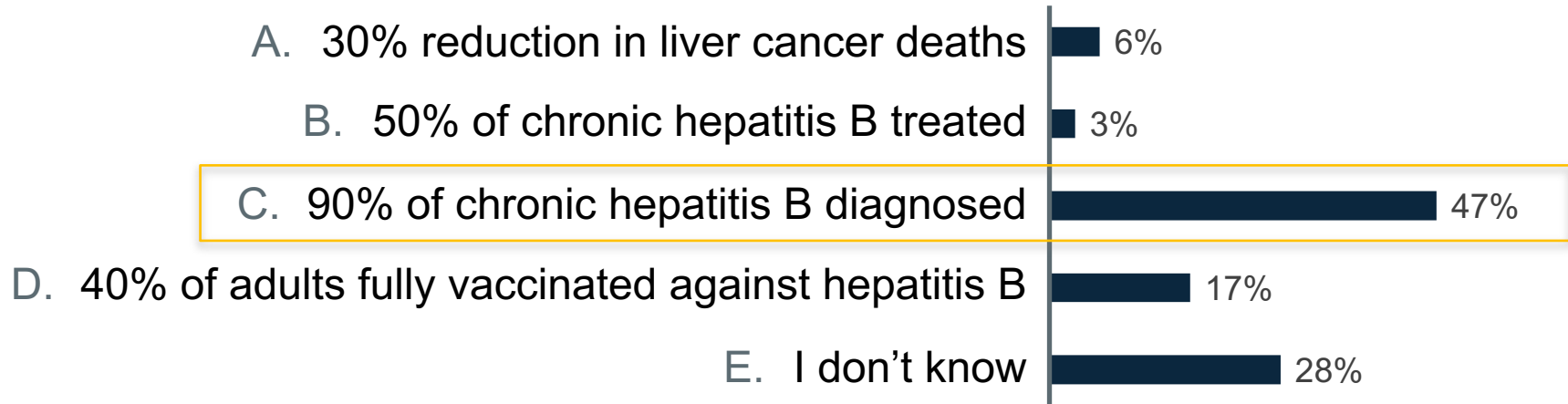
Audience Response

Which of the following 2030 targets are included in the World Health Organization plan to eliminate viral hepatitis?

- A. 30% reduction in liver cancer deaths
- B. 50% of chronic hepatitis B treated
- C. 90% of chronic hepatitis B diagnosed
- D. 40% of adults fully vaccinated against hepatitis B
- E. I don't know

Audience Response

Which of the following 2030 targets are included in the World Health Organization plan to eliminate viral hepatitis?



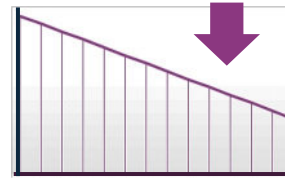
HBV Elimination: Targets and Tools

Eliminating HBV by 2030 Targets:



90% diagnosed

80% treated



65% reduction
in mortality

Tools to Help Eliminate HBV:

Awareness



Screening + Testing



Immunization



Linkage to Care



Treatment



HBV = hepatitis B virus

Viral hepatitis national strategic plan for the United States: a roadmap to elimination (2021–2025). U.S. Department of Health and Human Services (HHS) Website. <https://www.hhs.gov/sites/default/files/Viral-Hepatitis-National-Strategic-Plan-2021-2025.pdf>. Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030. World Health Organization (WHO) Website. 2022. <https://www.who.int/publications/i/item/9789240053779>.

HBV Elimination: Targets and Tools

Elimination



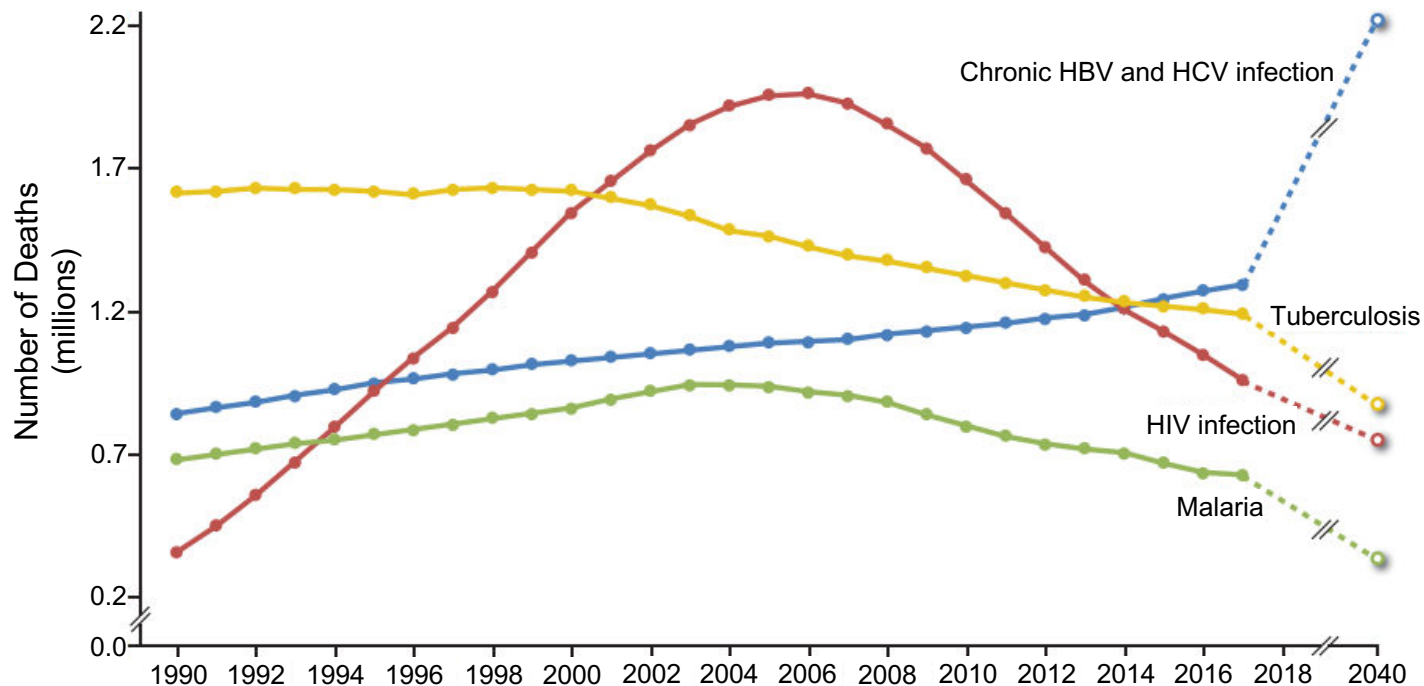
Tools

Available

Why?

- Liver cancer risk increased 25-30x with chronic HBV infection
- ~ 1 million adults in United States currently living with chronic HBV...most don't know it
- ~ 60 million considered high risk and lack protective immunity
- Major sources of transmission include mother-to-child, close household contact, and unprotected sexual contact
- Hepatitis B is preventable and treatable – we have the tools!**

Global Deaths from Viral Hepatitis Now Exceed HIV, TB, and Malaria



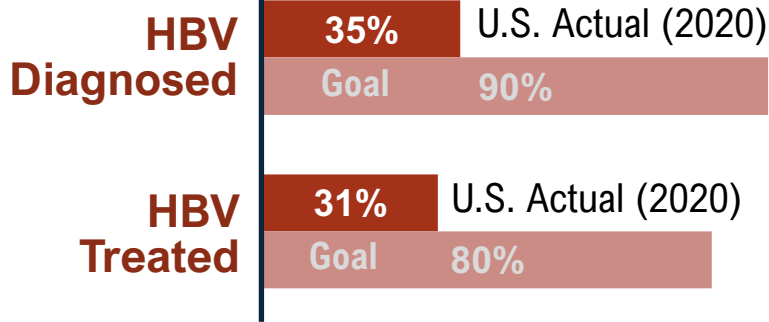
“The world has ignored hepatitis at its peril. It is time to mobilize a global response to hepatitis.”

-Dr. Margaret Chan, former WHO Director

HCV = hepatitis C virus; HIV = human immunodeficiency virus; TB = tuberculosis

Thomas DL. *N Engl J Med.* 2019;380(21):2041-2050. Foreman KJ, et al. *Lancet.* 2018;392(10159):2052-2090.

HBV Elimination: Lack of U.S. Progress



8 deaths per day
from HBV liver disease

> 30% increase
expected by 2030

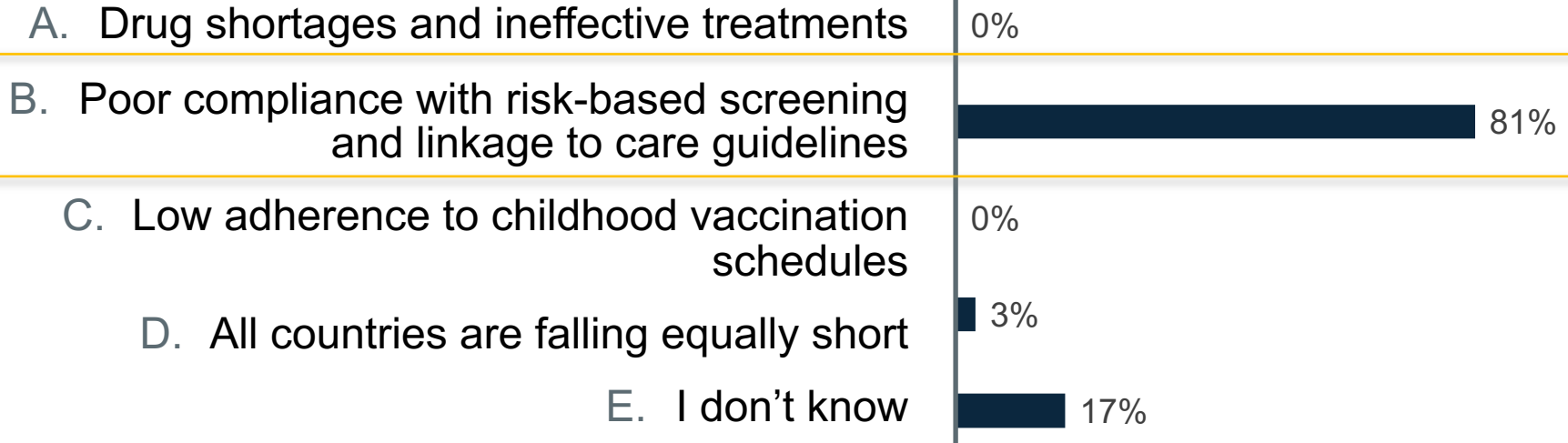
Audience Response

What factors are most responsible for the lack of progress towards HBV elimination targets in the United States?

- A. Drug shortages and ineffective treatments
- B. Poor compliance with risk-based screening and linkage to care guidelines
- C. Low adherence to childhood vaccination schedules
- D. All countries are falling equally short
- E. I don't know

Audience Response

What factors are most responsible for the lack of progress towards HBV elimination targets in the United States?



HBV Elimination: Lack of U.S. Progress

HBV
Diagnosed

HBV
Treated



1 in 5
after chro.

Why?

Risk-based
HBV screening:

- Inaccurate
- Stigmatizing
- Complex
- NOT DONE**

Linkage to HBV
care barriers:

- Lack of knowledge
- Language/culture
- Fear of stigma
- Access/cost

2018

se
infections

er day
er disease

ase
2030



Panel Discussion:

How can we improve U.S. progress towards HBV elimination?

NEW Universal HBV Screening

2023 CDC guidelines recommend universal HBV screening!

- HBV screening **at least once in a lifetime** for all adults age ≥ 18 **NEW!**
- During HBV screening, test for:
 - Hepatitis B surface antigen (HBsAg)
 - Antibody to hepatitis B surface antigen (anti-HBs)
 - Total antibody to hepatitis B core antigen (anti-HBc) **NEW!**
- Screening with **three tests** (“triple panel”) can identify people who:
 - Have a current HBV infection
 - Have resolved infection who may be susceptible to reactivation
 - Are susceptible and need vaccination
 - Are vaccinated with immunity

HBV Triple Panel Serology

HBsAg <i>Surface Antigen</i> INFECTION	Anti-HBs <i>Surface Antibody</i> IMMUNITY	Anti-HBc <i>Core Antibody</i> EXPOSURE	Interpretation	Action Needed
-	+	+	Resolved infection	Counsel on reactivation risk
-	+	-	Immune due to vaccination	Ensure full series completed
-	-	-	Susceptible to infection	Vaccinate
+	-	+ (IgM)	Acute infection	Link to care for more testing
+	-	+ (IgG)	Chronic infection	Link to care for treatment

IgG = immunoglobulin G; IgM = immunoglobulin M

Weinbaum CM, et al. *MMWR Recomm Rep*. 2008;57(RR-8):1-20. Understanding your test results. Hepatitis B Foundation Website. 2023. <https://www.hepb.org/prevention-and-diagnosis/diagnosis/understanding-your-test-results/>.



Opportunities for HBV Screening and Linkage to Care

Episodic Care and HBV Screening

Opportunities to support HBV elimination efforts in episodic care (EC):

Retail Health



Urgent Care



Telehealth



Universal one-time screening

STI risk/screening/treatment

Occupational exposure risk

Travel to/from endemic areas

History of injection drug use

Pregnant/planning to conceive

Known or suspected liver disease

STI = sexually transmitted infection

Weng MK, et al. *MMWR Morb Mortal Wkly Rep.* 2022;71:477-483.

Capabilities and Limitations of EC

Capabilities of EC:

- Medical records linked with major EHR platforms
- Local and accessible
- Collaboration with local health departments
- In-house lab draws
- Well-stocked vaccine inventory
- Co-located pharmacy

Limitations of EC:

- HBV testing provided may not be triple panel
- Cannot provide HBV treatment and ongoing management
- Requires follow-up with PCP and/or health department
- Time-limited visits with incomplete patient history



Gaps in Hepatitis B Care

Many evidence-based guidelines...but are they being followed?

CDC Chronic Hepatitis Cohort Study (CHeCS) for Hepatitis B, 2006-2013

- Review of 2338 patients with chronic HBV across 4 large health systems:
 - 78% had ≥ 1 ALT per year
 - 37% ≥ 1 HBV per year, 18% never had HBV DNA
- Of those with cirrhosis:
 - 54% had HBV DNA done annually, 11% never had HBV DNA done
 - 53% had at least 1 hepatic imaging, 27% had annual imaging
 - 56% prescribed antiviral therapy

To achieve hepatitis B elimination, we need to decentralize care.

Primary Care and Hepatitis B

Hepatitis B Management: Guidance for the Primary Care Provider

<https://www.hepatitisb.uw.edu/>

The purpose of this document is to provide simplified, up-to-date, and readily accessible guidance for primary care medical providers related to the prevention, diagnosis, and management of hepatitis B virus (HBV) infection, including hepatocellular carcinoma surveillance.

About the HBV Primary Care Workgroup

This guidance was developed by the Hepatitis B Primary Care Workgroup, a multidisciplinary panel of national experts in the field of viral hepatitis B, including representation from hepatology, infectious diseases, pharmacy, primary care, public health, and other national organizations. The workgroup was organized by the National Taskforce on Hepatitis B in partnership with the San Francisco Hep B Free — Bay Area and Project ECHO™ and did not receive any outside funding.

Collaboration with University of Washington

This guidance was produced in collaboration with the University of Washington's National Hepatitis Training Center (HTC). The UW HTC will host and feature the most current version of these guidelines on the free *Hepatitis B Online* website ([hepatitisb.uw.edu](https://www.hepatitisb.uw.edu)). The UW HTC is funded by the Centers for Disease Control and Prevention (CDC).

Suggested citation. Tang AS, Thornton K, and HBV Primary Care Workgroup. Hepatitis B Management: Guidance for the Primary Care Provider. February 25, 2020. <https://www.hepatitisb.uw.edu/hbv-pcw/guidance>

Last updated February 25, 2020

HBV Primary Care Workgroup

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Management of the HBsAg(+) Patient¹

Cirrhosis	HBV DNA (IU/mL)	ALT (U/L)	Management
YES	Any	Any	<ul style="list-style-type: none"> > TREAT with antiviral medication (page 6) > Monitor HBV DNA and ALT every 6 months > Refer to specialist for screening endoscopy and, if needed, for other cirrhosis-related complications > HCC surveillance, including in persons who become HBsAg(-) (page 7) > All patients with decompensated cirrhosis² should be promptly referred to a hepatologist
NO	>2,000	Elevated ³	<ul style="list-style-type: none"> > TREAT with antiviral medication (page 6) > Monitor HBV DNA and ALT every 6 months > Monitor HBeAg and anti-HBe every 6 months in patients who are HBeAg+ at time of treatment initiation to evaluate for seroconversion from HBeAg(+)/anti-HBe(-) to HBeAg(-)/anti-HBe(+) > Check HBsAg annually if/when HBeAg negative
	≤2,000	Normal	<ul style="list-style-type: none"> > Monitor HBV DNA and ALT every 6 months > Liver fibrosis assessment every 2 to 3 years
		Elevated ³	<ul style="list-style-type: none"> > Evaluate other etiologies for elevated ALT > Monitor HBV DNA and ALT every 6 months
		Normal	<ul style="list-style-type: none"> > Monitor HBV DNA and ALT every 6 months and HBsAg every 1 year for seroclearance

Panel Discussion:

How can we better integrate
HBV screening and linkage to
care into practice workflows?

Pharmacist Roles in HBV Elimination

- Collaborate with prescribers to identify guideline-directed, cost-effective therapy
- Recommend alternatives due to cost, tolerability, or efficacy
- Manage and prevent side effects, drug interactions, and medication errors
- Recommend and administer vaccines
- Follow-up with patients regarding tolerability, questions, and refills
- Connect patients to affordability programs
- Counsel on topics including indication, adherence, side effects, self-monitoring, etc.

HBV Prevention and Treatment

Adult HBV Vaccines			
Vaccine Brand Name	Typical Dosing Schedule		Comments
Hepelisav-B	2 doses (0 and 1 month)		Newest option
Engerix-B	3 doses (0, 1, and 6 months)		Yeast hypersensitivity
Recombivax HB	3 doses (0, 1, and 6 months)		Generic available
Twinrix	3 doses (0, 1, and 6 months)		Includes hepatitis A + B
First-Line Antiviral Medications for Hepatitis B			
Generic Name	Brand Name	Typical Dose	Comments
Entecavir (ETV)	Baraclude	0.5 to 1 mg orally once daily	Generic available
Tenofovir (TDF)	Viread	300 mg orally once daily	Generic available
Tenofovir alafenamide (TAF)	Vemlidy	25 mg orally once daily	Less bone, renal toxicity
Peginterferon alfa-2a	Pegasys	180 µg subcutaneously once weekly	Finite treatment (48 weeks)

Pharmacists Navigating Barriers

Financial Assistance

- Manufacturer patient assistance programs (PAP)
- Grant copay assistance programs
- Mail-order discount / fixed-price pharmacies
- Prescription discount cards

Patient Counseling

- Expectations of therapy
- Side effect management
- Monitoring requirements
- Adherence assistance
- Drug interactions
- Liver/Renal health

Panel Discussion:

How can we overcome
language and cultural barriers
in HBV screening and care?

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

- Incorporate one-time universal HBV screening for all adults into routine practice to increase detection and diagnosis of hepatitis B.
- Collaborate with front-line, episodic care, public health, primary care, and specialist practitioners and pharmacists as needed to ensure continuity of care from screening and vaccination to treatment and long-term management of hepatitis B.
- Ensure that HBV patient education and care are delivered with cultural humility and language congruency whenever possible.

CME Outfitters

AFTER
THE SHOW

Questions & Answers





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Infectious Disease Hub

Free resources and education to educate health care professionals and patients on HBV

<https://www.cmeoutfitters.com/infectious-disease-hub/>

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