



# Advancing Health Equity Through Adult Hepatitis B Vaccination

APRIL 29TH, 2021





**Thank You to Our Cohosts!**



# National Adult Hepatitis B Vaccination Awareness Day

#AdultHepBVaxDay

**The hepatitis B vaccine is  
projected to have  
prevented 310 million  
new infections  
worldwide between  
1990 - 2020!**



## ACHIEVING HEALTH EQUITY

- Increasing testing, vaccination, and linkage to care;
- Encouraging a commitment to increasing adult HBV vaccination rates and maintaining childhood HBV vaccination rates
- and promoting greater awareness among providers and the general public

# Panelists

*Opening Remarks by  
Representative Grace Meng  
(NY-06)*

***Mark K. Weng MD, MSc, FAAP***

Medical Epidemiologist, CDC

***Abby Bownas***

Manager, Adult Vaccine Access Coalition

***Rita Kuwahara, MD, MIH***

Internal Medicine, Connecticut Institute for Communities, Inc.

***Judith Feinberg, MD, FACP, FIDSA***

Professor of Behavioral Medicine and Psychiatry,  
Professor of Medicine/Infectious Diseases, Dr.  
E.B. Flink Vice Chair of Medicine for Research

***Y-Uyen Le Nguyen, MD***

Hepatitis B Program Director,  
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***Patricia Jones, MD***

Assistant Professor of Clinical Medicine, Division of  
Digestive Health and Liver Diseases, Department of  
Medicine, Sylvester Comprehensive Cancer Center,  
University of Miami Miller School of Medicine

***Monde Nyambe, CHES***

Hepatitis B Coordinator, IPHA Americorps Member



# **Representative Grace Meng (NY-06)**

***Co-chair of the Congressional  
Hepatitis Caucus***

# ***Hepatitis B in the United States***



***Mark K. Weng MD,  
MSc, FAAP***

***Medical Epidemiologist,  
CDC***



# Hepatitis B is a persistent, underreported, and costly public health problem

**862k**

people living with  
chronic hepatitis B in the  
United States in 2018

+

**68%**

chronically infected  
patients in the United  
States unaware they are  
infected

**40%**

people infected with  
hepatitis B virus  
develop serious, chronic  
conditions like liver  
cancer or cirrhosis

**\$172k<sup>a</sup>**

per year to treat a chronic  
hepatitis B patient who has  
received a liver transplant

+

**\$143k<sup>a</sup>**

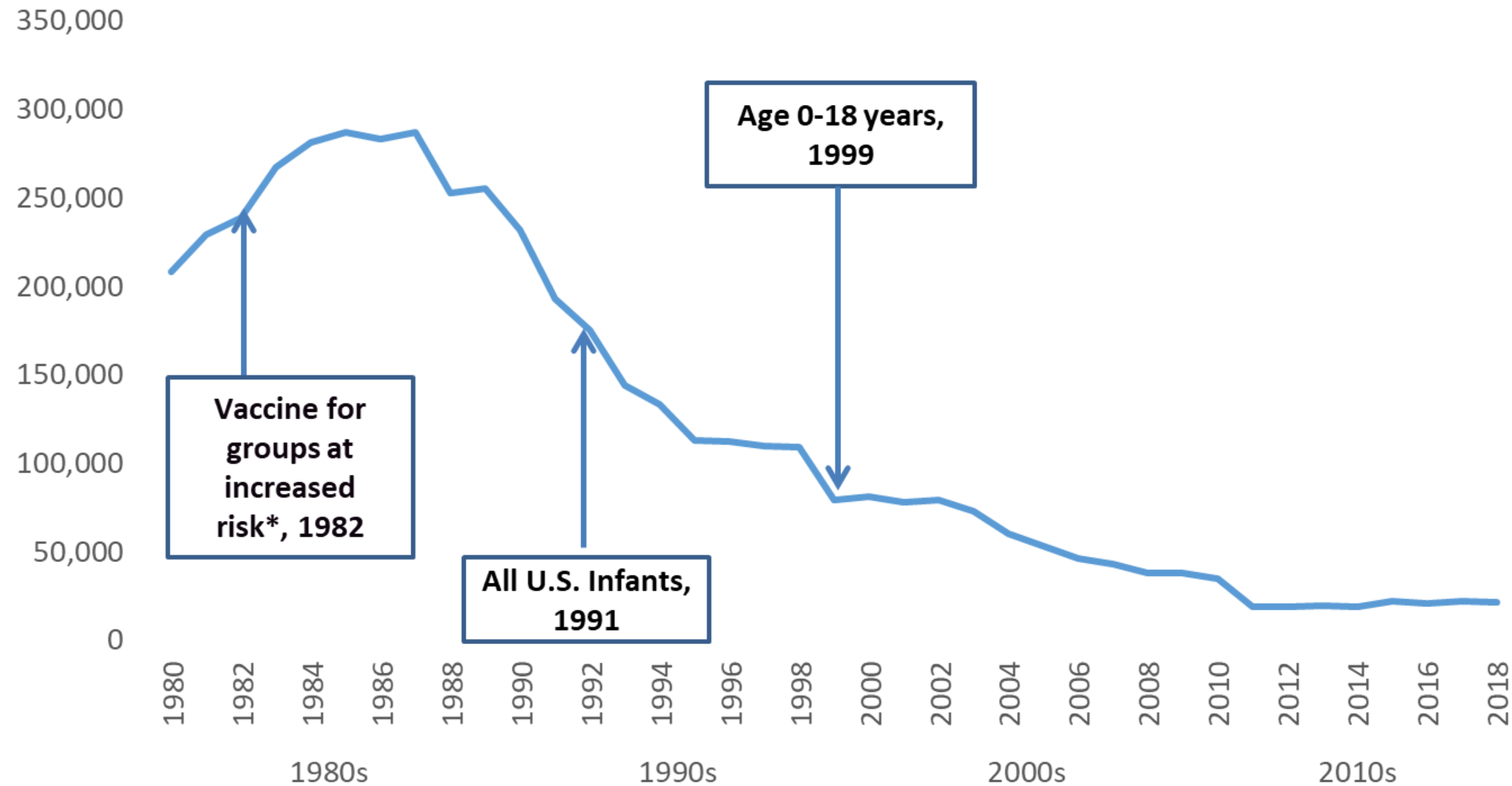
per year to treat a chronic  
hepatitis B patient with  
cirrhosis

+

**\$124k<sup>a</sup>**

per year to treat a chronic  
hepatitis B patient with liver  
cancer

# Acute hepatitis B cases in the United States decreased as vaccine recommendations expanded to more groups between 1980–2018



Source: National Notifiable Diseases Surveillance System (NNDSS)

\*Health care providers, MSM, IDU, hemodialysis patients, household & sexual partners of persons with chronic HBV, persons in certain institutional settings, e.g., inmates of long-term correctional facilities.



# ***Policy Landscape for Adult Vaccines***

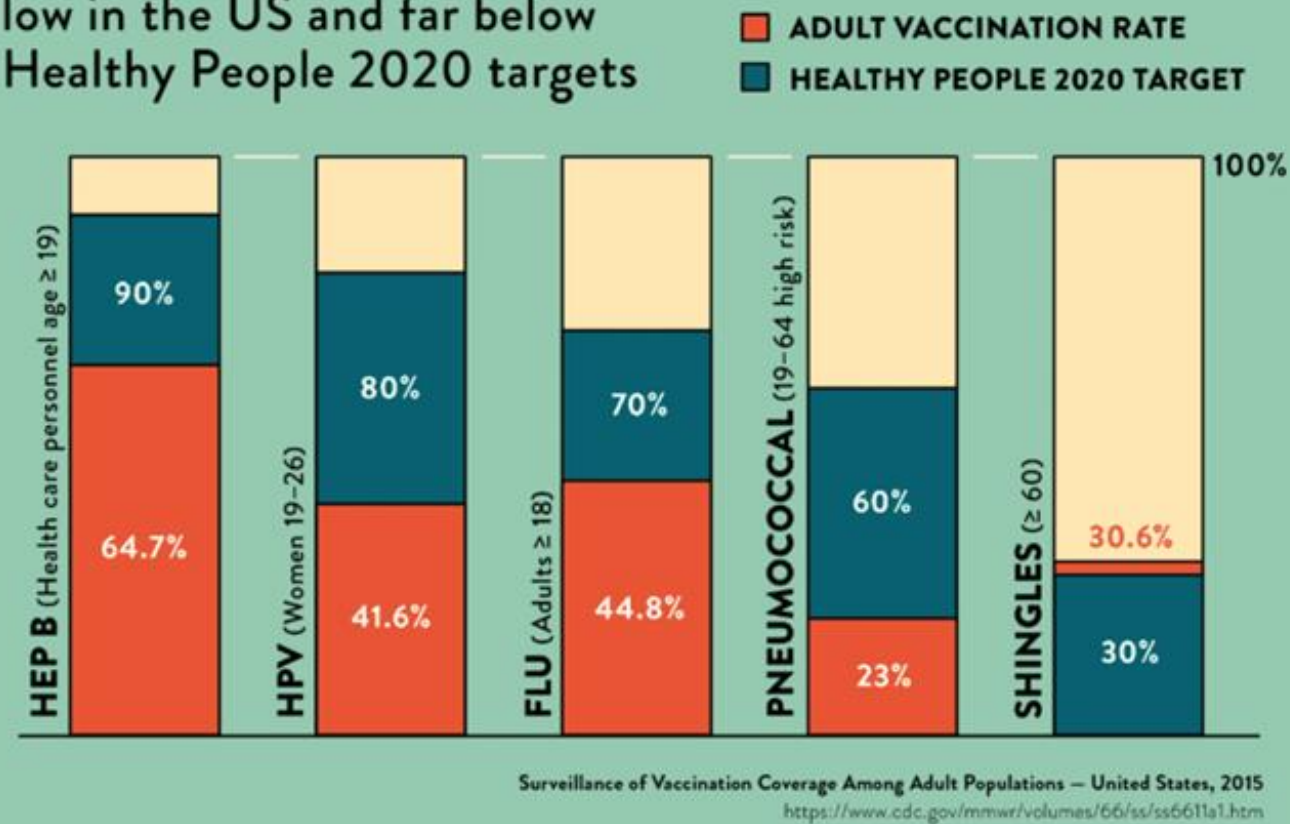


**Abby Bownas,**  
*Manager, Adult  
Vaccine Access  
Coalition*

## Adult Vaccination Rates Are Low

**AVAC**  
ADULT VACCINE  
ACCESS COALITION

Adult vaccination rates remain low in the US and far below Healthy People 2020 targets



# Adult vaccine rates were low, COVID-19 has made them lower...

## There are multiple barriers to accessing adult vaccines...

## Out-of-Pocket Costs Influence Medicare Vaccination Rates


**AVAC**  
ADULT VACCINE  
ACCESS COALITION

Immunization rates for vaccines covered under Medicare Part B are often much higher than vaccines covered under Medicare Part D

■ MEDICARE PART B   
Out-of-pocket expense: \$0

**FLU** (65 years and older)  
70.4%

**PNEUMOCOCCAL** (65 years and older)  
66.9%

■ MEDICARE PART D   
Average out-of-pocket expense: \$14–\$102 per vaccine, depending on plan

**SHINGLES** (65 years and older)  
37.4%

**TETANUS\*** (65 years and older)  
20.4%

Source: <https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/NHIS-2016.html>

\* Including Pertussis

# AVAC is working to promote policies to increase vaccination rates

## - *Saving lives and money*


- Improve vaccine infrastructure
- Create Equity in Vaccine Access
- Reduce Financial Barriers
- Promote High Immunization Rates Across the life course

A strong immunization infrastructure increases and sustains vaccination rates.

**AVAC**  
ADULT VACCINE ACCESS COALITION


adultvaccinesnow.org  
@AVACNow

What are the components of the immunization infrastructure?




- State and local immunization programs
- Outreach, education and provider support
- Immunization information systems (IIS)
- Vaccine storage, handling, administration and safety
- Surveillance and outbreak response
- Vaccines for uninsured children and adults
- Quality measures
- Disaster response


Who benefits from a strong immunization infrastructure?



**You and your family**  
Seniors  
Adults  
Adolescents  
Children



**Health care system**  
Doctors  
Nurses  
Pharmacists  
Worksite wellness  
Community health  
Long-term care  
Insurers



**Public health**  
State and local immunization program managers  
Epidemiologists  
Preparedness officials



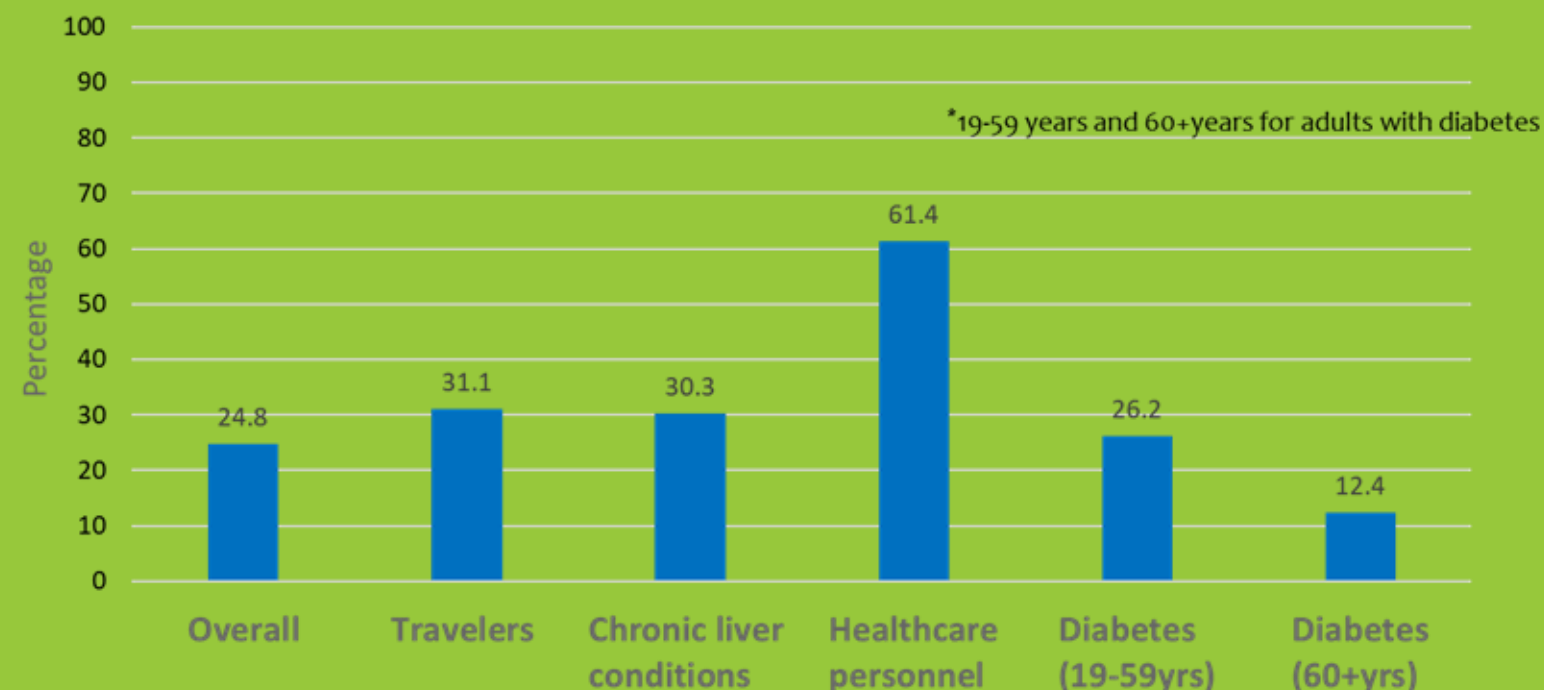
# *Opportunities to Increase Adult Hepatitis B Vaccination in Primary Care*



**Rita K. Kuwahara,**  
**MD, MIH**  
*Primary Care  
Internal Medicine*

## Hepatitis B Vaccination Coverage ( $\geq 3$ Doses) among Adults Aged $\geq 19$ Years\* in the U.S.

National Health Interview Survey–US, 2016

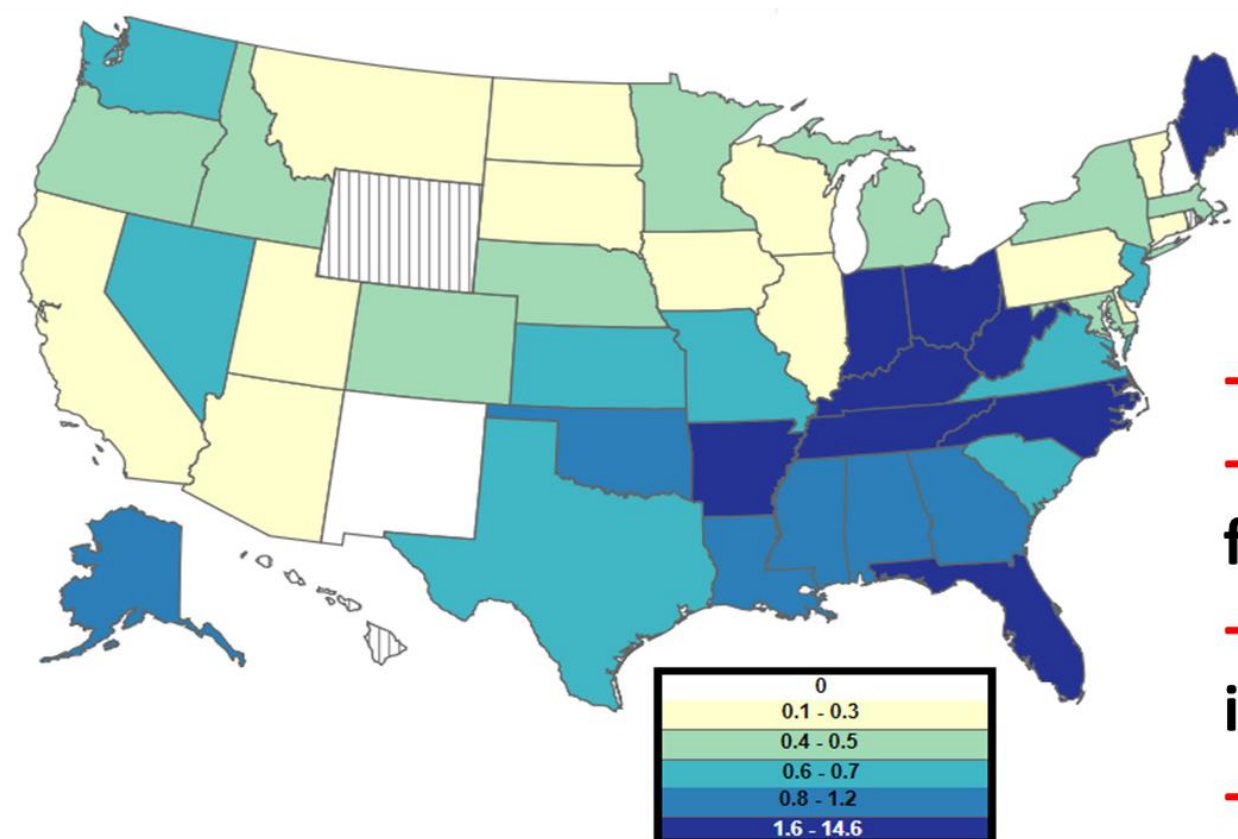


Only 25% of Adults aged >19 years are vaccinated against hepatitis B

National Foundation for Infectious Diseases  
Vaccination Coverage Among Adults in the United States, National Health Interview Survey, 2016.  
[www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/NHIS-2016.html](http://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/NHIS-2016.html)  
Williams et al. MMWR Surveill Summ. 2017;66:1-28.

## Acute Hepatitis B Rate by State – 2016

Universal Childhood hepatitis B vaccination in the U.S. began in the mid-1990s



- **729%** increase in ME from '15-'17
- **114%** increase in KY, TN, WV from '09-'13
- **78%** increase in southeastern MA in 2017
- **62%** increase in NC from '12-'16

## Among PCPs surveyed on HBV vaccination in the United States:



0%

knew the HBV  
vaccination rate  
was 25%

**True Rate**



86%

believed the HBV  
vaccination rate  
was 75%

**False Belief**



29%

had not considered  
vaccinating a  
patient against  
HBV in the last  
month



Reference: Kuwahara RK, et al. Preventing Acute Rises in Hepatitis B Within the Opioid Epidemic: Policy and Primary Care Practice-Based Opportunities to Increase Adult Hepatitis B Vaccination in the United States. Presented at: NFID Annual Conference on Vaccinology Research; June 18-19, 2020 (virtual meeting).

**Adult Primary Care  
Physicians Can Play a Key  
Role in Increasing  
Adult Hepatitis B  
Vaccination**



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- Coinfection with HIV and Viral Hepatitis. Centers for Disease Control and Prevention. 2017. <https://www.cdc.gov/hepatitis/hiv-hepatitis-coinfection.htm>. Accessed April 5, 2019.

# ***Opioid Epidemic and Hepatitis B: A Close Look at West Virginia***



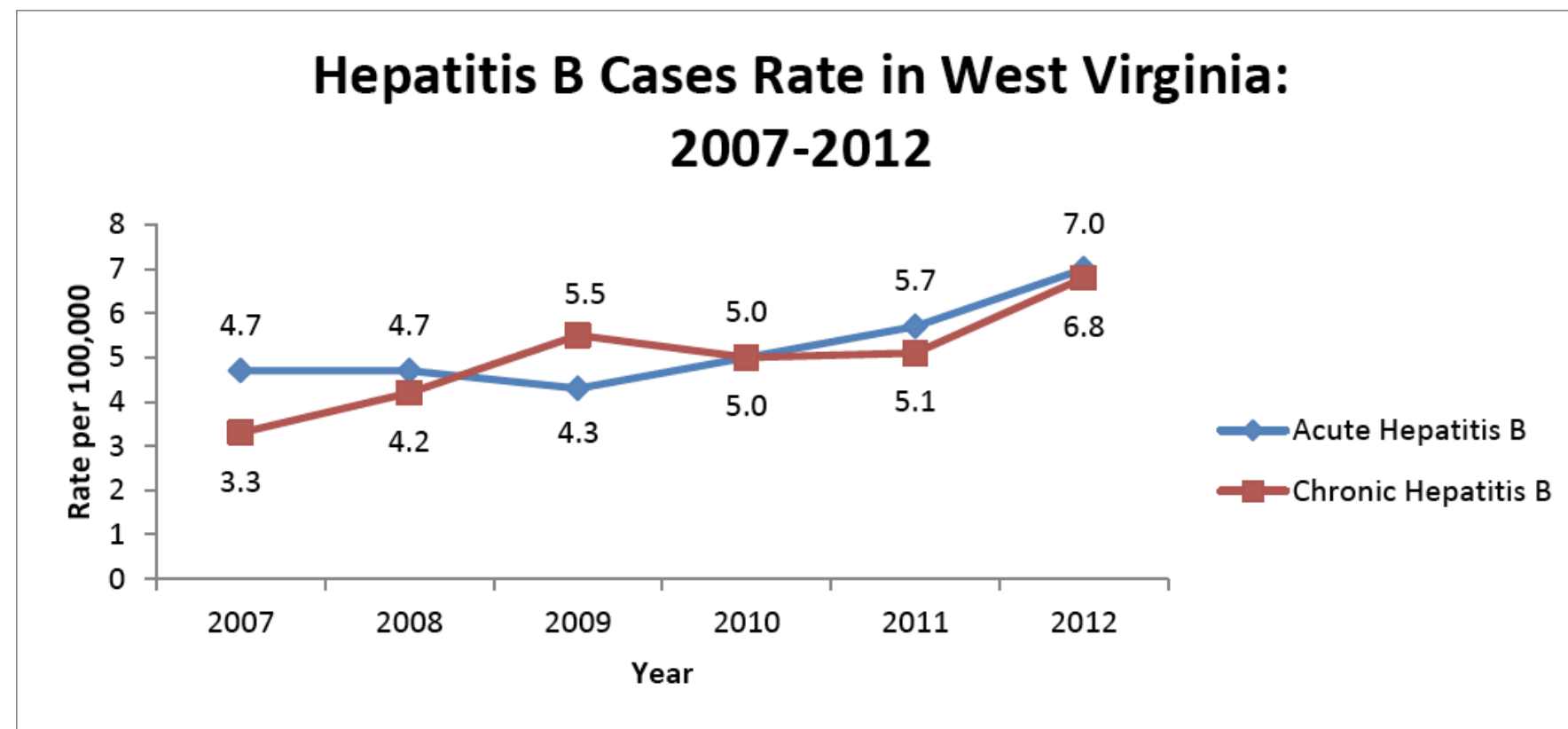
**Judith Feinberg,  
MD, FACP, FIDSA**

*Professor of Behavioral  
Medicine and Psychiatry,*

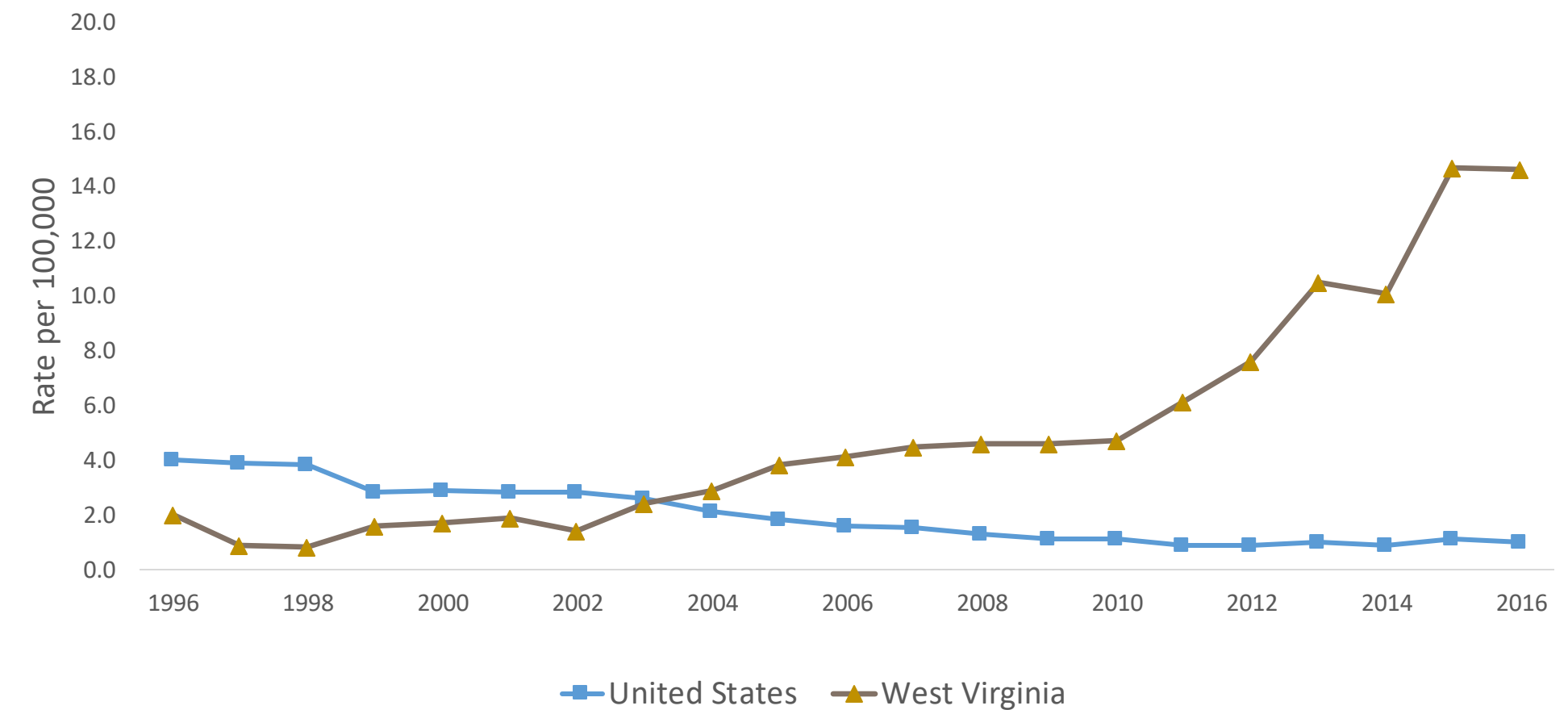
*Professor of  
Medicine/Infectious Diseases,  
Dr. E.B. Flink Vice Chair of  
Medicine for Research*

# Hepatitis B in West Virginia

## Hepatitis B Case Rates WV, 2007-2021



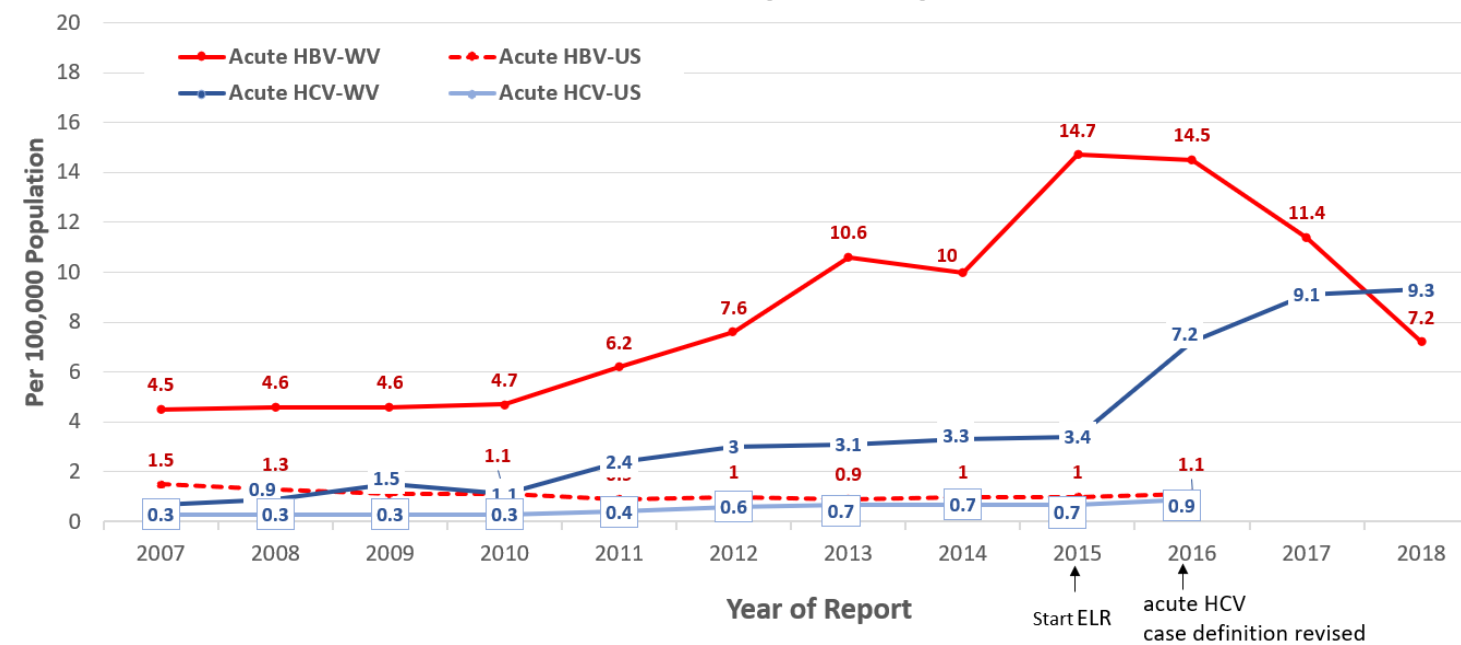
## Acute Hepatitis B Incidence, 1996-2016



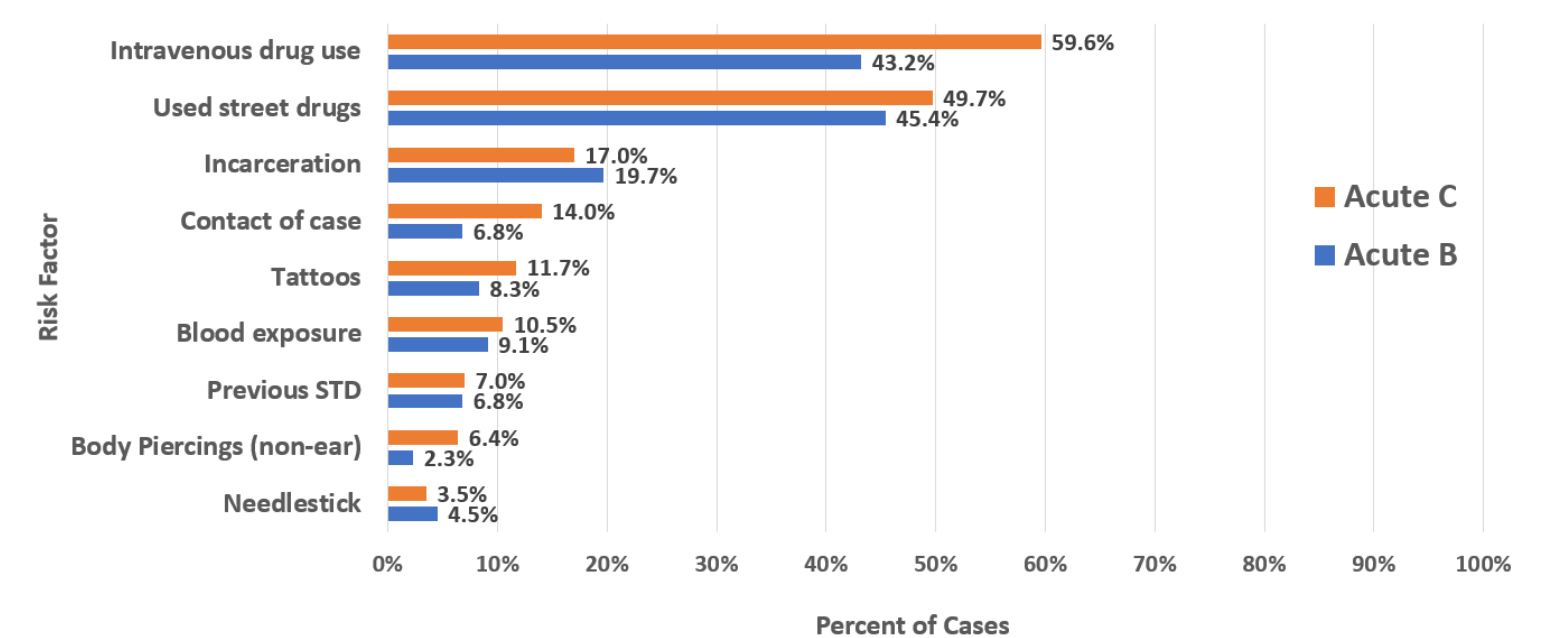


# HBV and HCV Infection, West Virginia

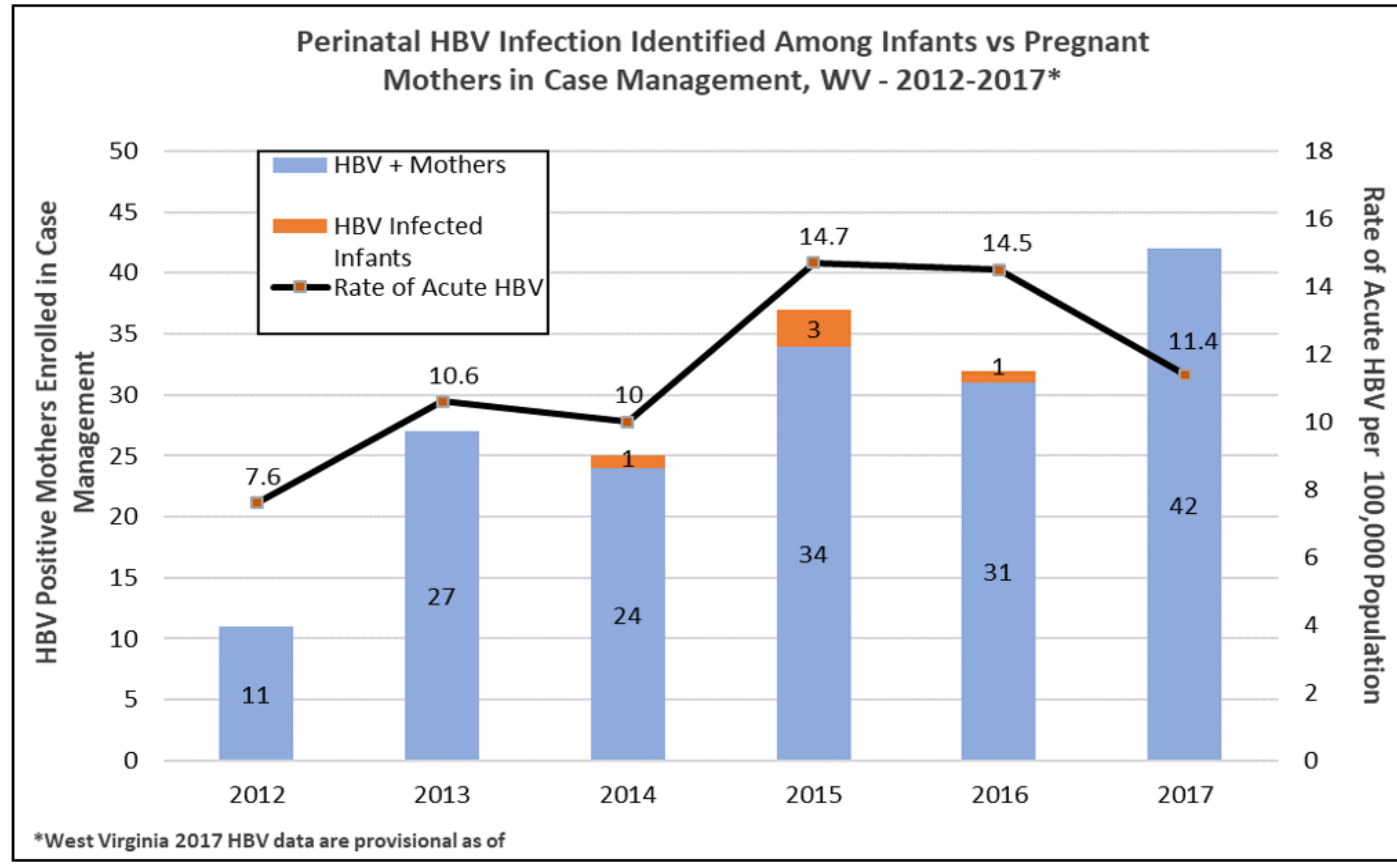
Incidence of Acute HBV and HCV in WV compared with the US,  
2007-2018 (N=2,751)



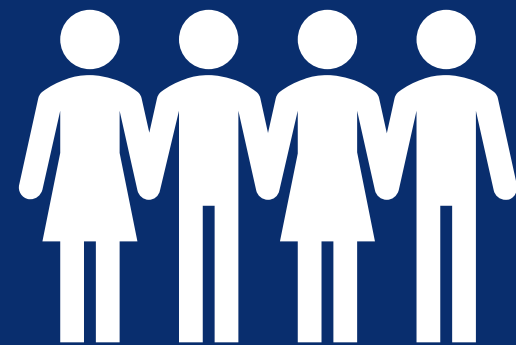
Percent of Acute HBV and HCV Cases Reporting Risk Factors,  
West Virginia in 2018 (HBV N=132, HCV N=171)



# Perinatal HBV in West Virginia



# ***Hepatitis B in Asian Americans and Pacific Islanders***



**Y-Uyen Le Nguyen, MD**  
*Hepatitis B Program  
Director,  
Charles B Wang  
Community Health Center*



# CHARLES B. WANG COMMUNITY HEALTH CENTER



- Federally Qualified Health Center (FQHC) in New York City
- Primarily serve the low-income, Asian immigrant community –
  - 79.8% best served in languages other than English
  - 63% of patients uninsured or on Medicaid
- Multidisciplinary care – Internal Medicine, Pediatrics, OB/GYN, Mental Health, Social Work, and Dental

# HEPATITIS B IN ASIAN AMERICAN AND PACIFIC ISLANDERS(AAPI) COMMUNITY

- More than 50% of cases of chronic hepatitis B in the US are AAPI adults
- Approximately 10% of AAPI adults have chronic Hepatitis B
- 1 in 4 will die prematurely from liver conditions related to Hepatitis B if unmonitored or untreated
- Based on a study of Asian American patient population at our health center from 1997 to 2017 -
  - 52.1% were ever infected
  - 33.4% immune from vaccination
  - 14.5% susceptible

# CHARLES B. WANG HEPATITIS B PROGRAMS

- Universal Hepatitis B screening for all adult patients
- Free screening for community members
- Educational materials in English, Cantonese/Mandarin, Vietnamese
- Free or affordable Hepatitis B vaccination for uninsured patients
- Hepatitis B Care Program – care management for uninsured high-risk chronic hepatitis B patients
  - Educate patients about their condition and screening contacts
  - Coordinate care and assist patient with free/low cost options for antiviral treatment
- Hep B Mom Program – prevention of perinatal HBV transmission
  - Educate pregnant women with chronic Hepatitis B about antiviral treatment, HBIG and vaccination at birth to prevent vertical transmission; and screening contacts
  - Tracking vaccination record of infants

# ***Barriers to Care in Florida***



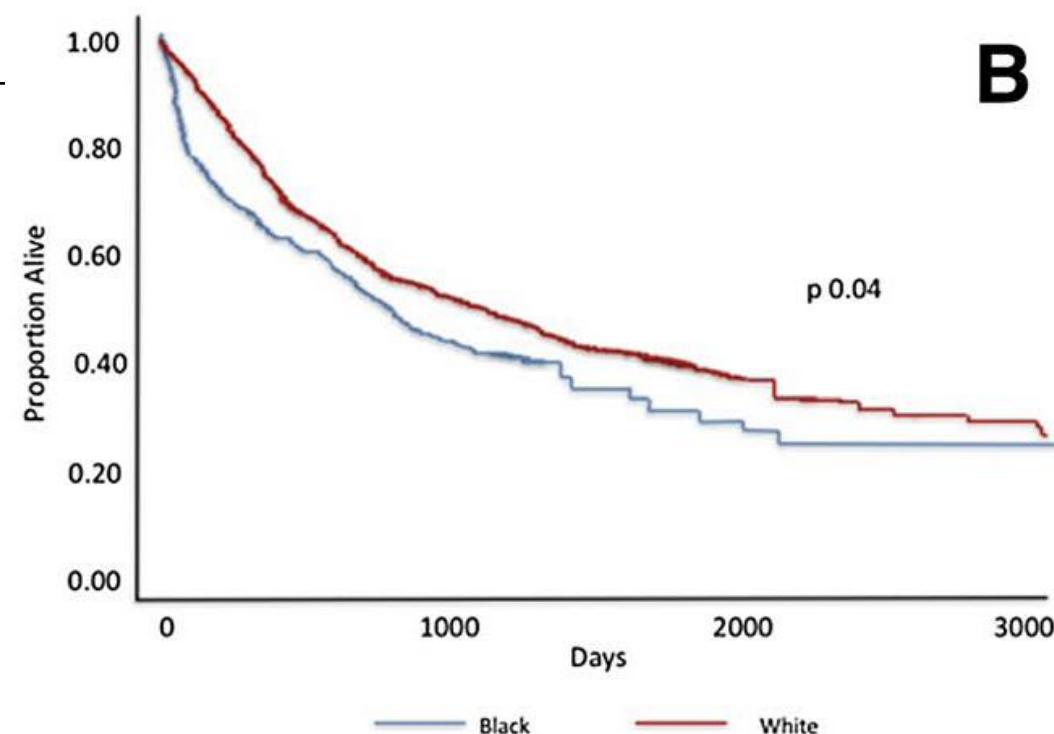
## **Patricia Jones, MD**

*Assistant Professor of Clinical  
Medicine, Division of Digestive  
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Department of Medicine, Sylvester  
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University of Miami Miller School  
of Medicine*



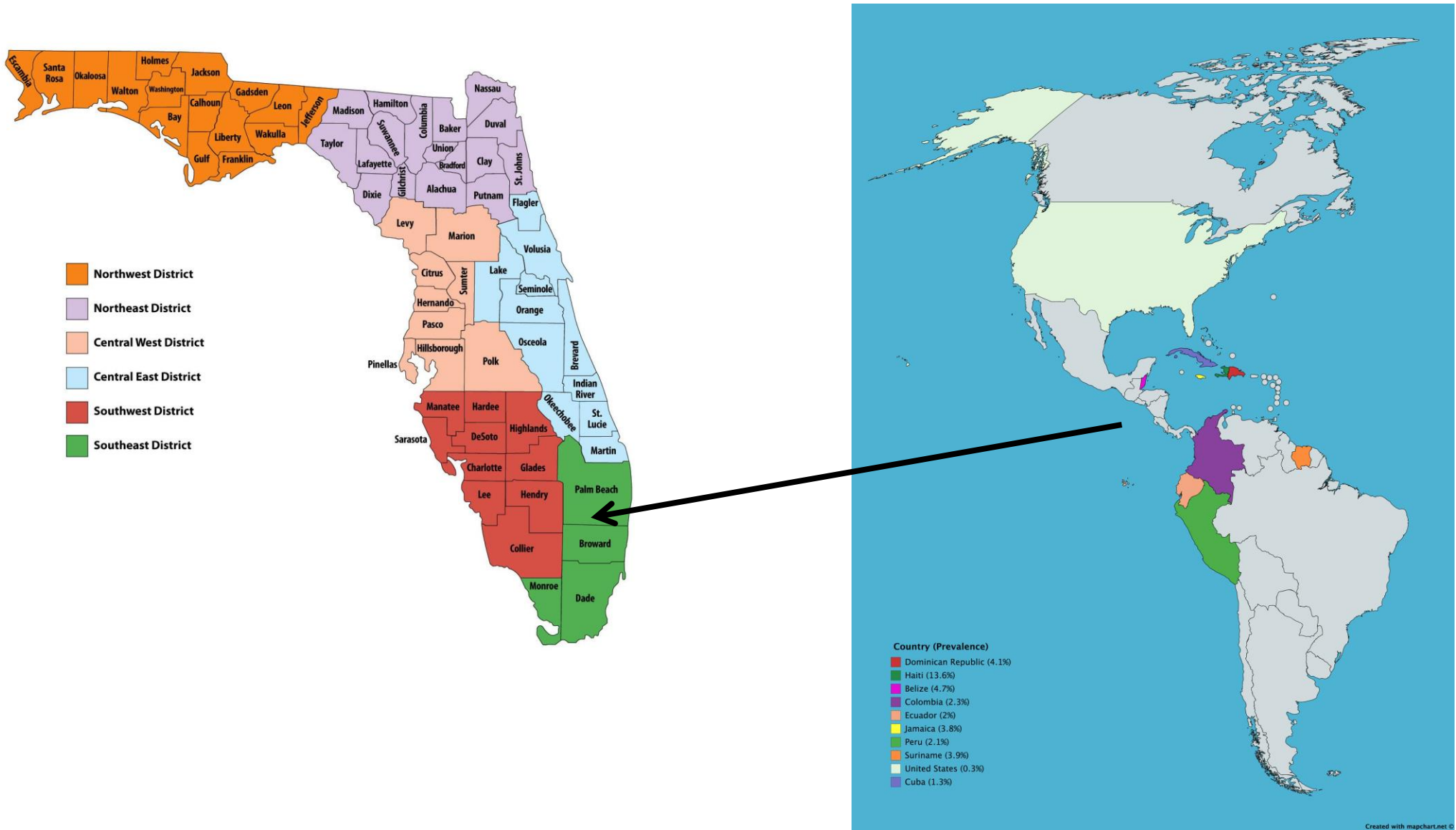
# Hepatitis B is a Leading Cause of Liver Cancer

	Black	White	Hispanic	Asian
Percentage of Liver Cancer Patients with HBV	35%	6.1%	8%	60%
Percentage of Patients with HBV who received treatment prior to Liver cancer diagnosis	39%	68.2%	31.8%	75%



- Undiagnosed and untreated HBV contributes to late diagnosis of liver cancer and contributes to decreased survival.
- HBV vaccination is **critically important** to prevent transmission, especially in those communities that are disproportionately affected by HBV and liver cancer.

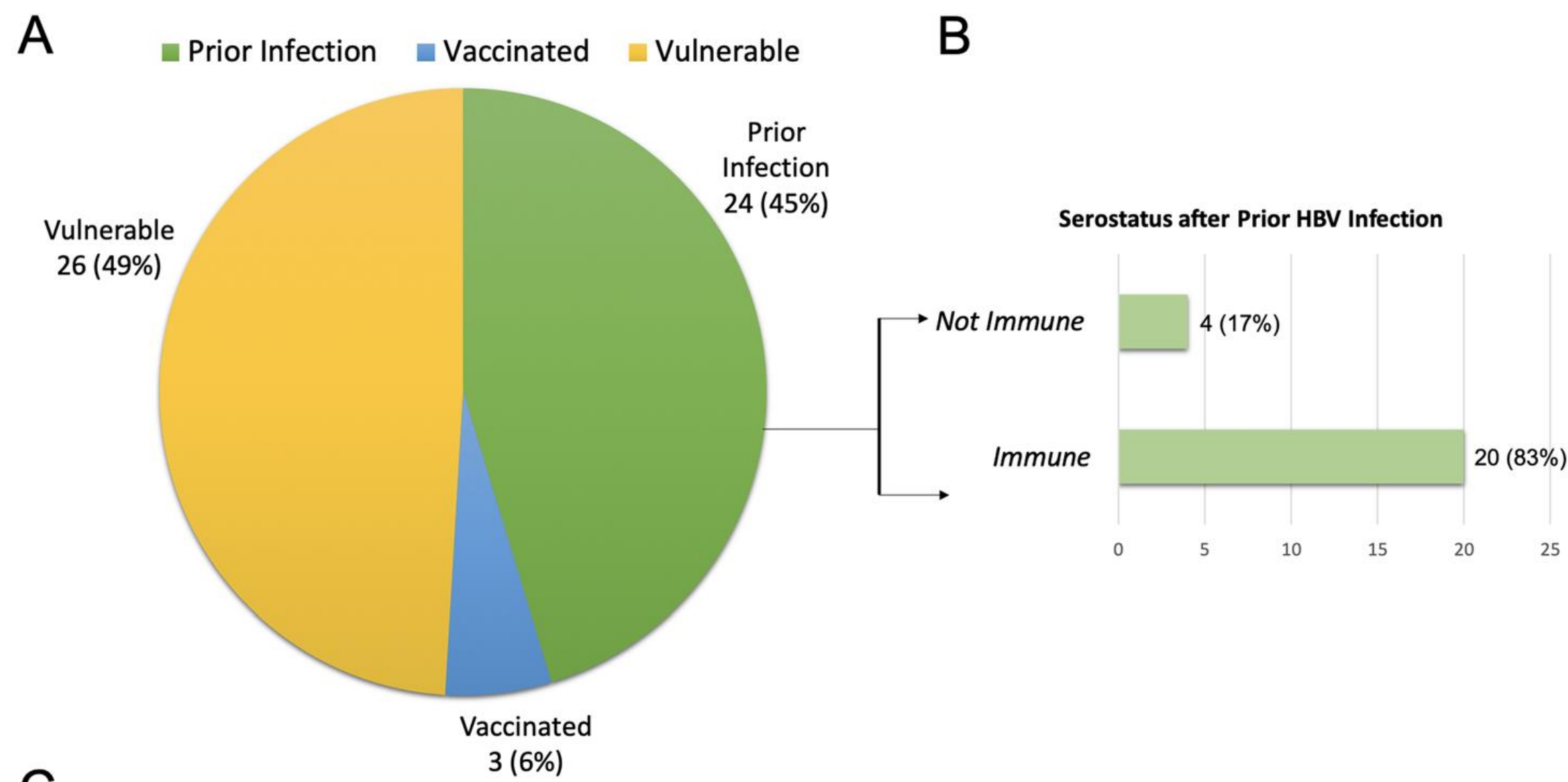
# Vulnerable Communities in our Catchment Area are Not Informed about HBV Risk



Countries Relevant to Our Catchment Area  
with High or Intermediate HBsAg  
Seroprevalence

	Born in the US	Born in Haiti
Percent who had heard of HBV	76.9%	44%
Percent who know a person with HBV	19.2%	14.8%

# Community-Based HBV Screening is Both Acceptable and Feasible



Jones et al. *J Immigr Minor Health* . 2021 Mar 9. doi: 10.1007/s10903-021-01165-z. Online ahead of print

# *Challenges in Illinois*



**Monde Nyambe, CHES**

*IPHA AmeriCorps Member,  
Hepatitis B Outreach  
Coordinator*



# Disparities Amongst African Immigrants (AI) as it Relates to Hepatitis B

Prioritizing treatment of people with viral hepatitis

Training and awareness among clinical staff

Cultural and linguistic barriers

Information on this presentation was obtained from The Hepatitis National Strategic Plan. A roadmap to Elimination for the United States 2021-2025

# Improving vaccination rates in the AI communities

Developing trust with members of the AI community

Differentiated Service Delivery (DSD)

Improve linkage to care process

Implementing point-of-care, testing in outreach settings

Develop rapid and home-based testing

## Challenges Regarding Hepatitis B Vaccine

Availability

Accessibility

Affordability

Availability

Adaptability

# DISCUSSION





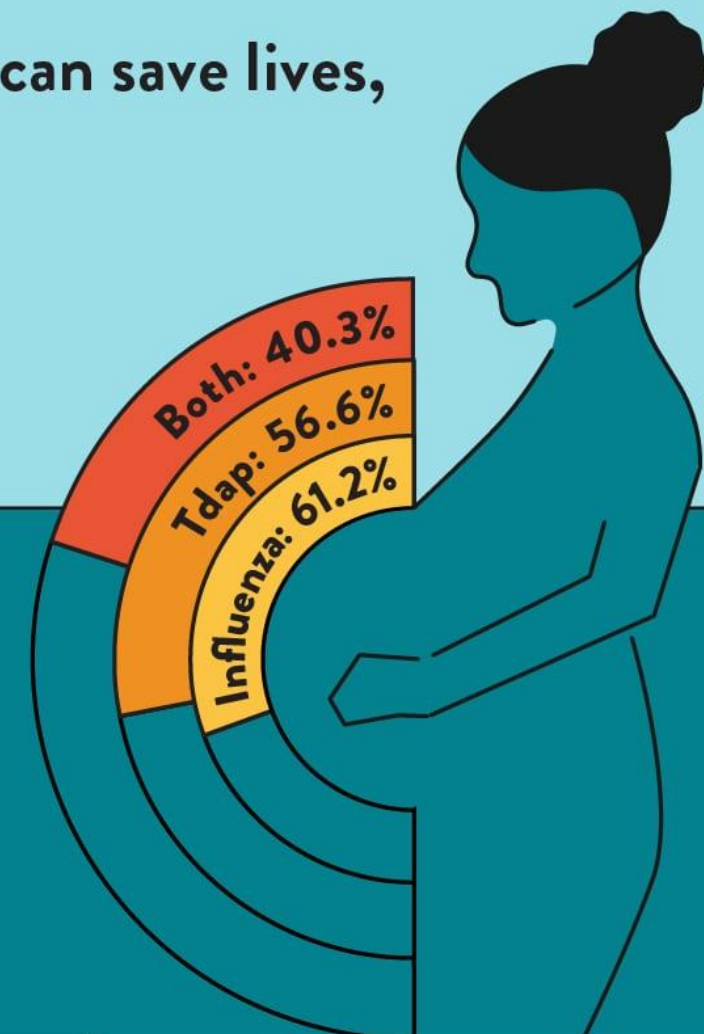
# What can Congress do?

- Immunization Infrastructure Modernization Act (H.R.550)
- Protecting Seniors Through Immunization Act (H.R.1978/S.912)
- Helping Adults Protect Immunity Act (HAPI) (S.581 /H.R.2170 )
- Community Immunity Through Covid 19 Act (H.R.736/S.167)

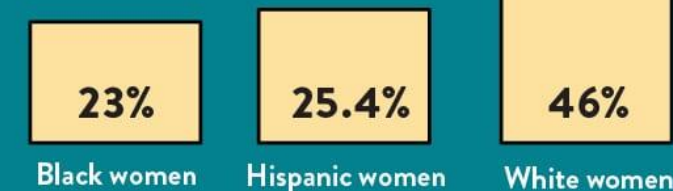
[www.adultvaccinesnow.org](http://www.adultvaccinesnow.org)

## Maternal immunizations can save lives, but disparities exist.

Many pregnant women and nursing moms do not receive all recommended vaccines to protect themselves and their infants from influenza and pertussis infection, even when vaccination is offered.



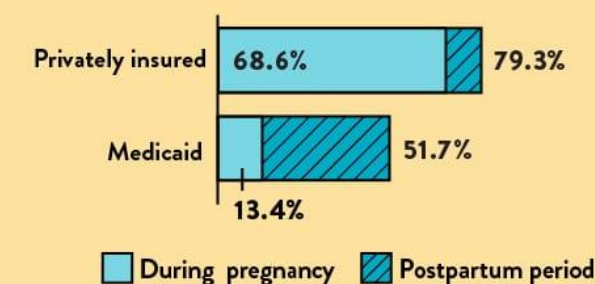
Maternal populations of color are less likely to be vaccinated than their white counterparts:



Source: [https://www.cdc.gov/mmwr/volumes/69/wr/mm6939a2.htm#T1\\_down](https://www.cdc.gov/mmwr/volumes/69/wr/mm6939a2.htm#T1_down)

Maternal populations on Medicaid have lower vaccination rates than privately insured due to costs to the patient, vaccine hesitancy, low reimbursement rates, or lack of strong recommendation from providers.

### TDAP VACCINATION RATES



Source: Merritt TA, Rasmussen SA, Bright MA, et al. Variation in Tdap and Influenza Vaccination Coverage Among Pregnant Women by Insurance Type – Florida, 2016–2018. MMWR Morb Mortal Wkly Rep 2020;69:72–76. DOI: <http://dx.doi.org/10.15585/mmwr.mm6903a4>. Accessed 15 February 2021.

Possible reasons why data around maternal vaccination rates are lacking:

- We don't always know pregnancy status of people who receive vaccines
- Data is self-selected and self-reported
- Sample sizes are small and do not represent all populations (including people of color, those without reliable internet access)
- Claims data is incomplete
- Vaccination rates have declined overall as fewer people sought care during COVID

**AVAC** ADULT VACCINE ACCESS COALITION

# Knowledge about HBV Risk is a Barrier in Community Members and Health Care Providers

- Only 59% correctly estimated national HBV prevalence; 25% correctly estimated global prevalence.
- Trainees recognized which countries or populations had increased risk of HBV 30-50% of the time.
- **Universal vaccination** partly circumvents this knowledge gap in that it does not rely on healthcare providers to recognize who is at risk and screen and vaccinate.

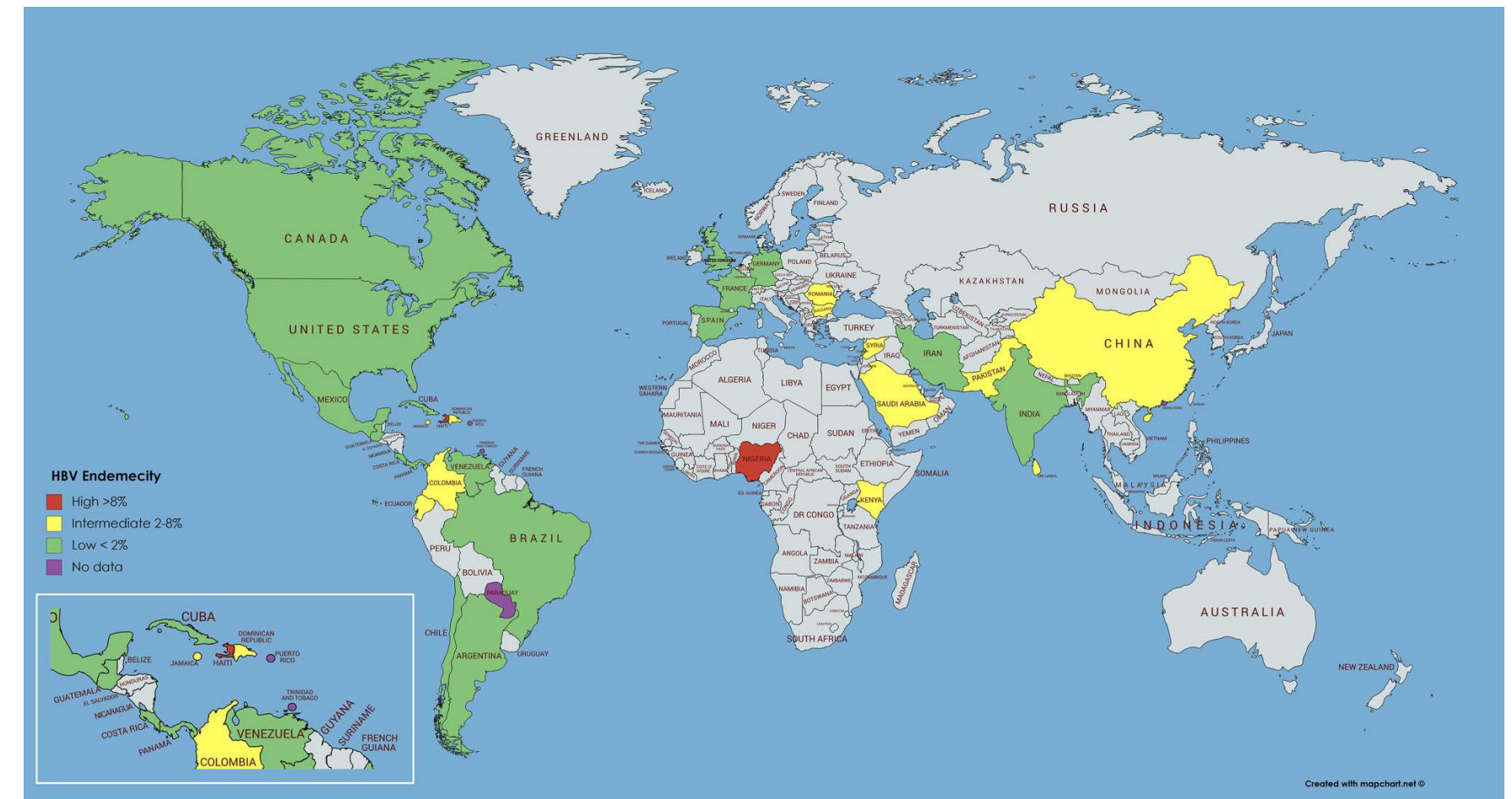


Fig. 1 Birthplace of survey respondents from three diverse training programs, color-coded by hepatitis B (HBV) endemicity

# ACUTE HEPATITIS B, 2018

3,322

New  
cases  
reported

1.0

Reported  
cases per  
100,000  
population

21,600\*

Acute  
infections  
estimated

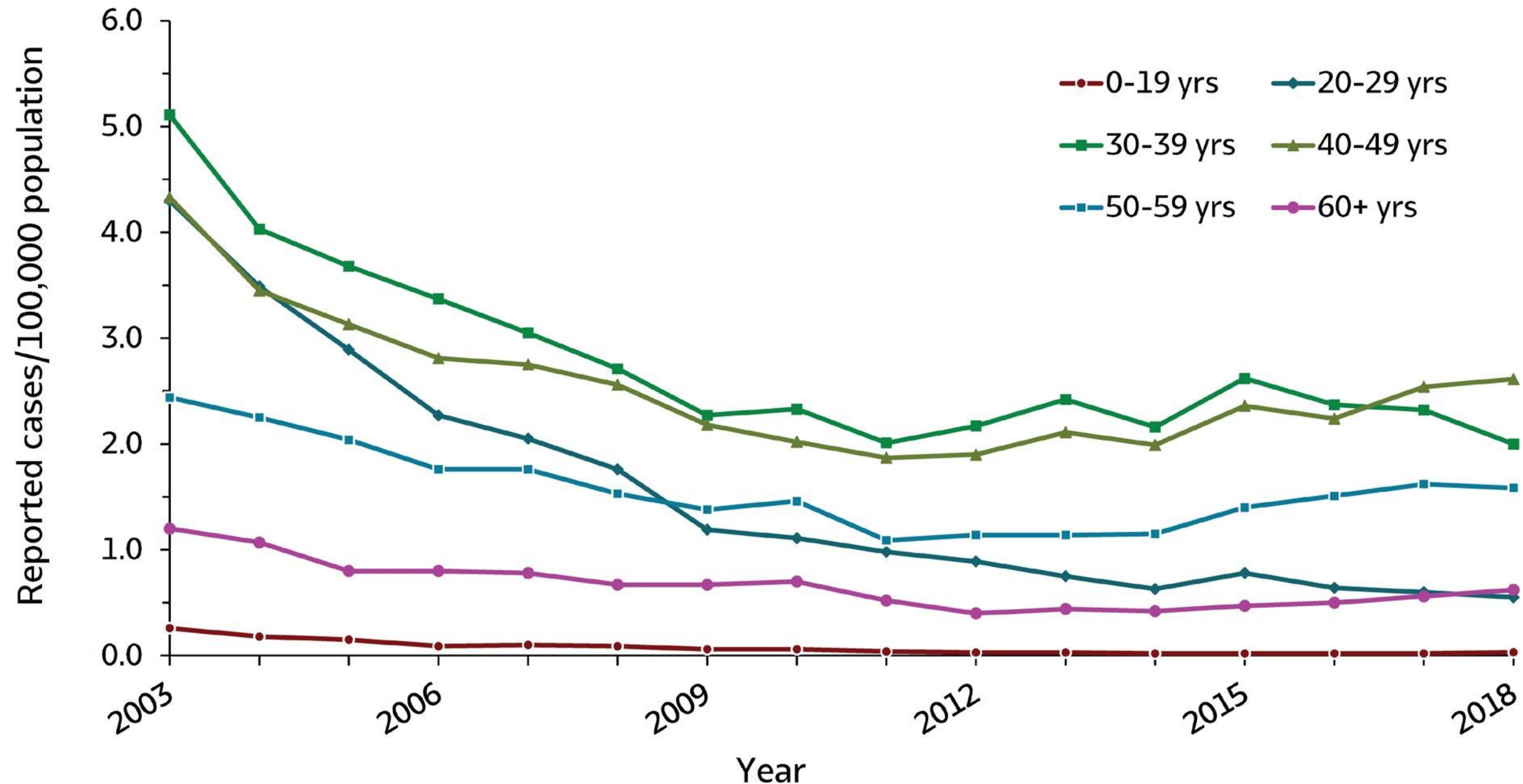
## AT A GLANCE ACUTE HEPATITIS B in 2018

Rates of acute hepatitis B remained low in children and adolescents, likely due to childhood vaccinations. However, **over half** of acute hepatitis B cases reported to CDC in 2018 were among persons aged **30–49 years**.



# Rates of reported acute hepatitis B, by age group

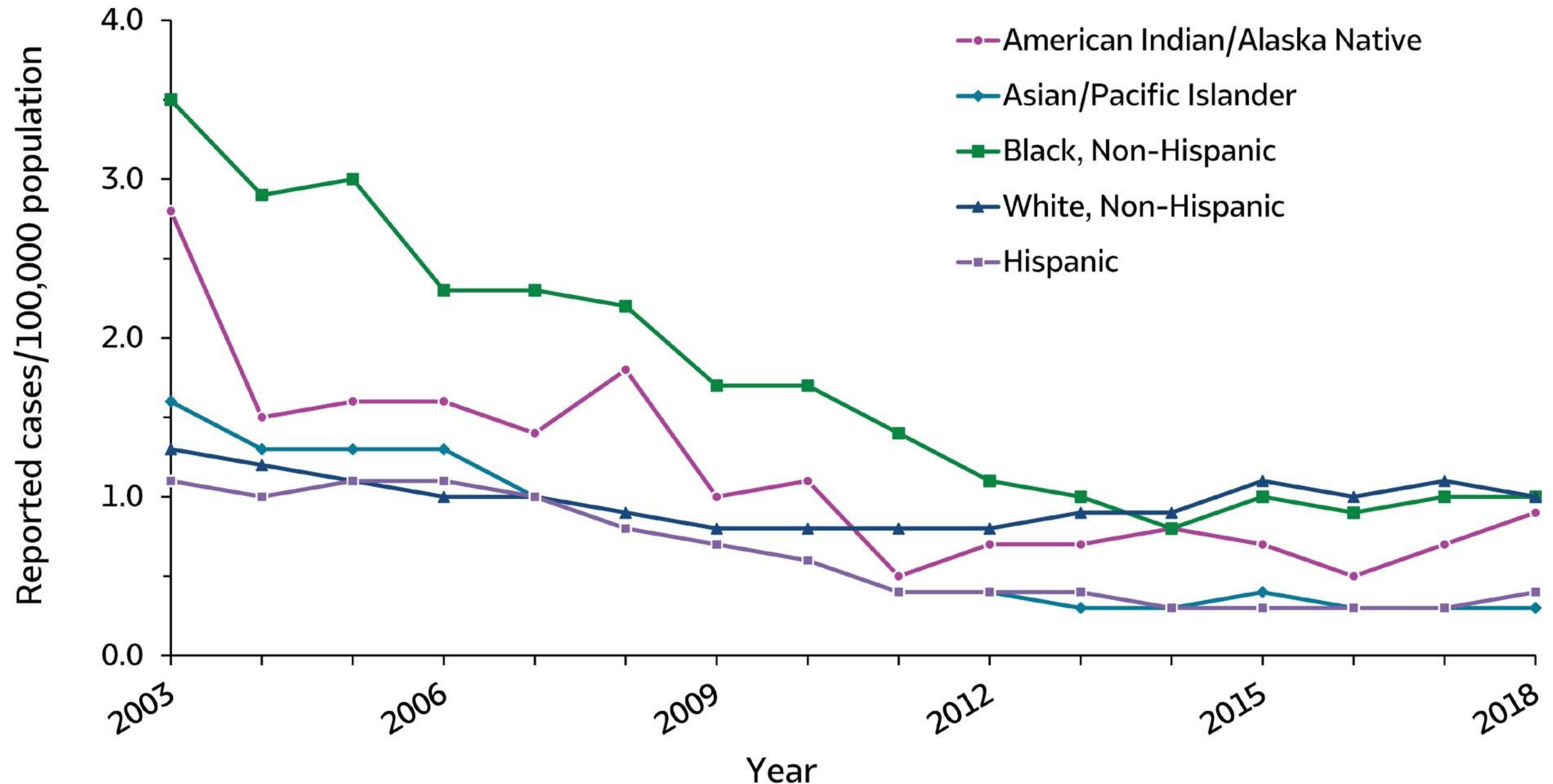
United States, 2003–2018



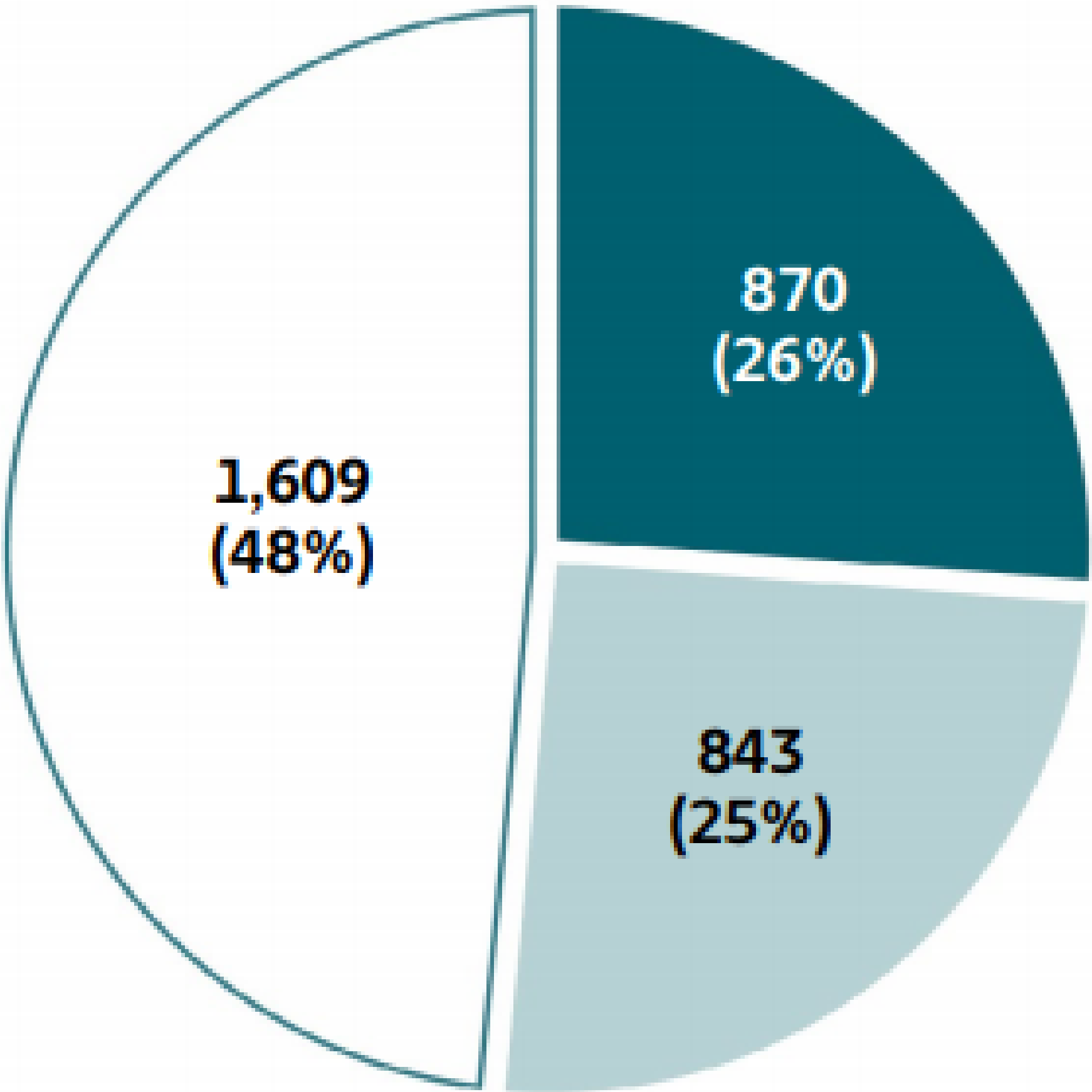


# Rates of reported acute hepatitis B, by race/ethnicity

United States, 2003–2018

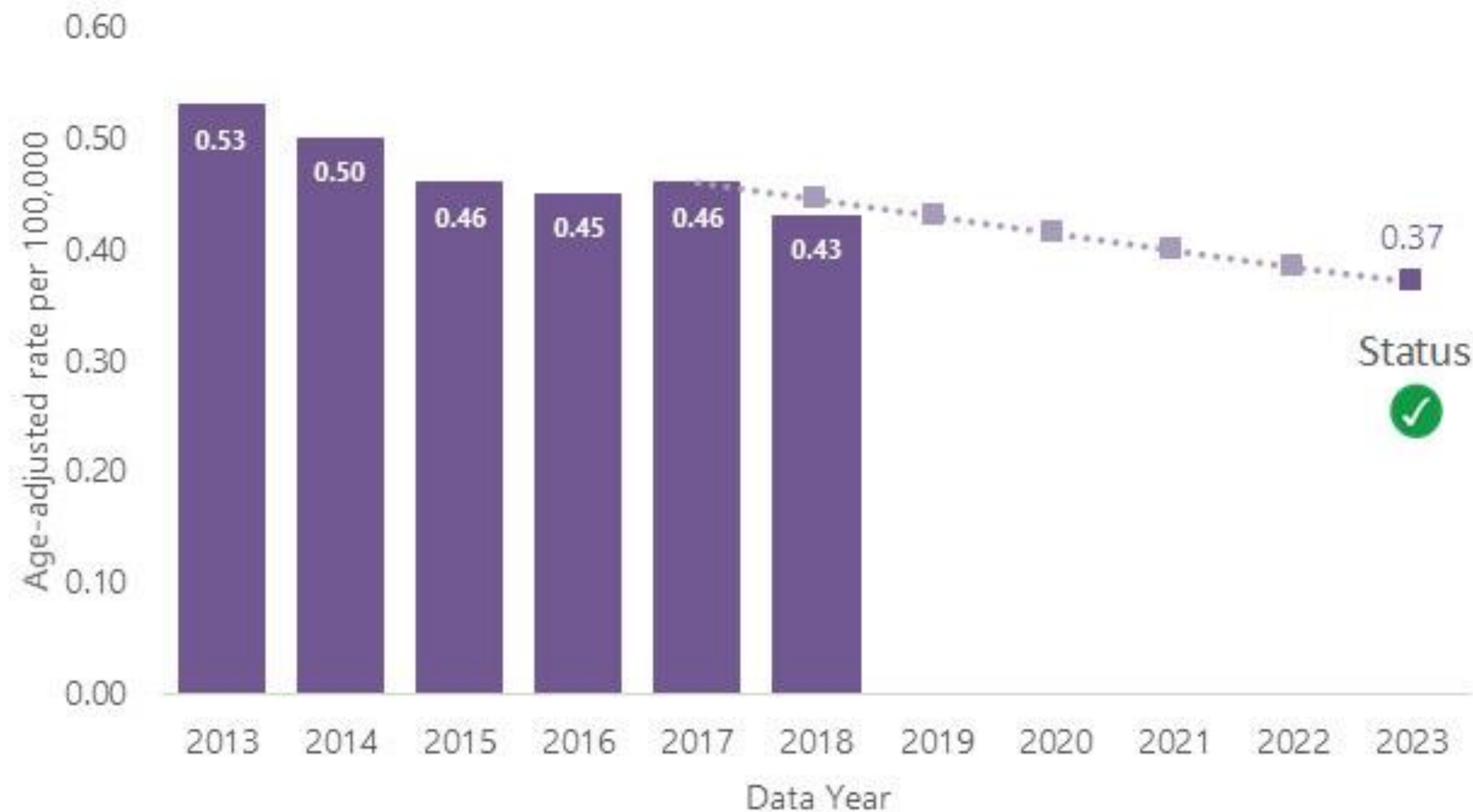


**Figure 2.7. Availability of information on risk behaviors/ exposures\* associated with reported cases of acute hepatitis B — United States, 2018**



Source: CDC, National Notifiable Diseases Surveillance System, <https://www.cdc.gov/hepatitis/statistics/2018surveillance/index.htm>

# The U.S. is on track to meet CDC's 2025 goal of reducing reported hepatitis B-related deaths by $\geq 20\%$

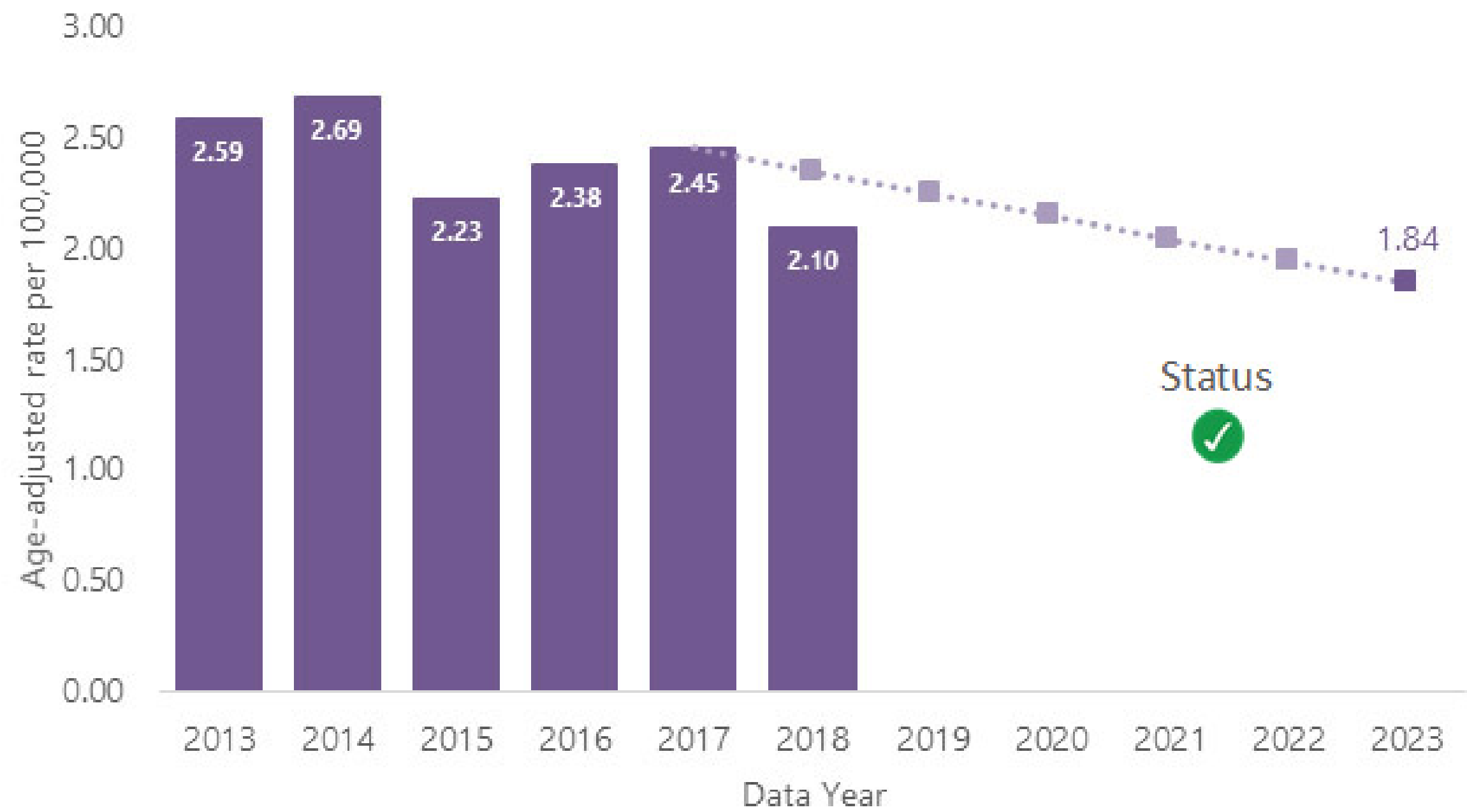


**Source:** CDC, National Vital Statistics System ([1](#))

\*Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

†Cause of death is defined as the underlying cause of death or one of the multiple causes of death and is based on the International Classification of Disease, 10<sup>th</sup> Revision (ICD-10) codes B16, B17.0, B18.0, or B18.1 ([2](#)).

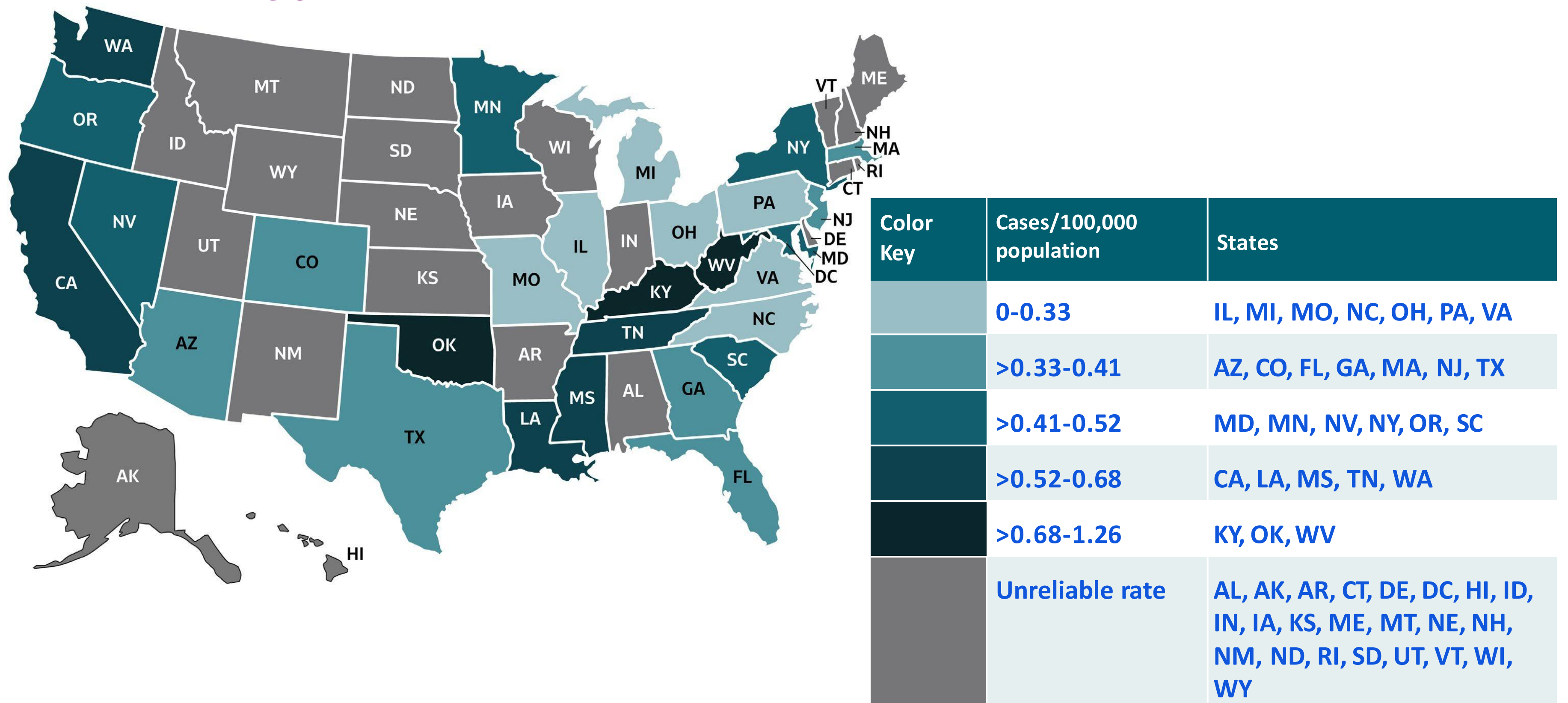
# The U.S. is on track to meet CDC's 2025 goal of reducing reported hepatitis B deaths among Asians and Pacific Islanders by $\geq 25\%$



**Source:** CDC, National Vital Statistics System (1)  
\*Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.  
†Cause of death is defined as the underlying cause of death or one of the multiple causes of death and is based on the International Classification of Disease, 10<sup>th</sup> Revision (ICD-10) codes B16, B17.0, B18.0, or B18.1 (2).



# Rates of death with hepatitis B listed as a cause of death among U.S. residents, by jurisdiction, 2018



Source: CDC, National Center for Health Statistics, Multiple Cause of Death 2018 on CDC WONDER Online Database.  
Note: Unreliable rates where death counts were less than 20 were not displayed due to the instability associated with those rates.

# Discussion

Up to 70% of chronic Hepatitis B infections in the United States are among non-U.S.-born populations

Highest prevalence among people from Asia (58%) and Africa (12%)

Under or uninsured

Health Literacy

# Recommendations for increasing Vaccination Rates

Language

Healthcare structure and system

CHW

Racism as a Public Health Issue

# Addressing low immunization rates

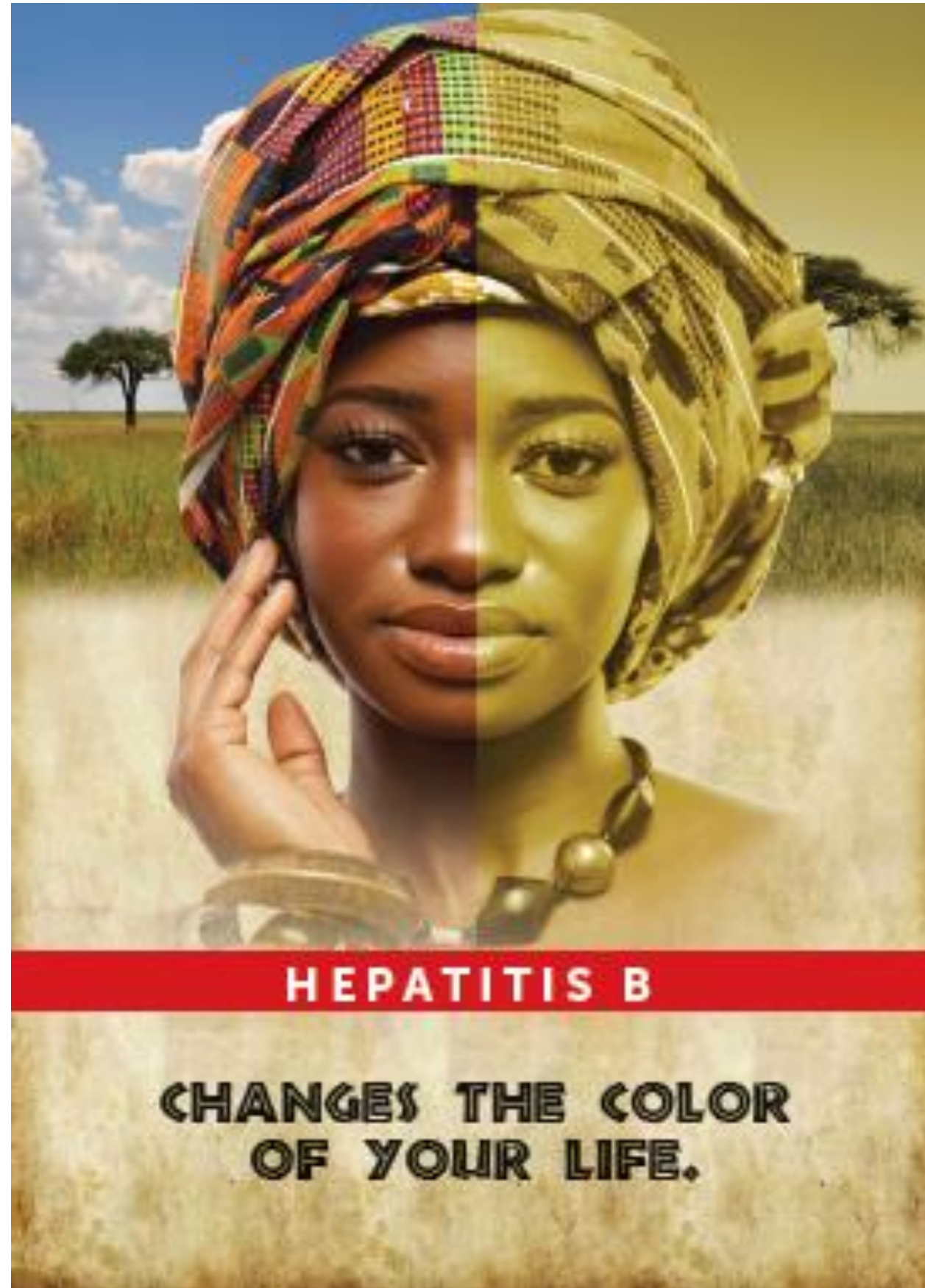
Diversity-Do we have a diverse staff

Inclusion-Culturally and Linguistically responsive

Representation-Increase utilization of Social media platforms targeting AI communities

Equity-CHW from AI communities





# HEPATITIS B

CHANGES THE COLOR  
OF YOUR LIFE.

## HEPATITIS B CARD

Hepatitis B is an infection of the liver. It can last a lifetime and can cause serious medical problems, including death.

### ■ HOW CAN I GET HEPATITIS B?

Exposure to blood, semen and vaginal fluids from a person infected with hepatitis B.  
Spread from mother to child during birth.



### ■ AM I AT RISK TO GET INFECTED?

If you use contaminated needles to inject drugs, to get a tattoo or skin piercing.  
If you have sex with an infected person or a person whose hepatitis status you do not know.  
If you are exposed to blood or body fluids of an infected person.  
If you share shaving tools, toothbrushes or contaminated hygiene products.

### ■ HOW DO I KNOW IF I HAVE HEPATITIS B?

I am always tired  
Fever  
Body aches  
My eyes and skin have a yellowish color (jaundice)  
Loss of appetite, nausea, stomach pain and vomiting  
My urine is dark yellow and my stools are light colored



### ■ IS THERE ANY TREATMENT? YES!

### ■ IS THERE A VACCINE? YES!

For more information, contact:



# Thank you!

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*Michaela Jackson,  
Hepatitis B Foundation*

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THE AIDS INSTITUTE