

# ADDRESSING MYTHS AND MISCONCEPTIONS ABOUT HEPATITIS B AMONG AFRICAN IMMIGRANT COMMUNITIES AROUND THE UNITED STATES

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**Olorunseun O. Ogunwobi, M.D., Ph.D.**

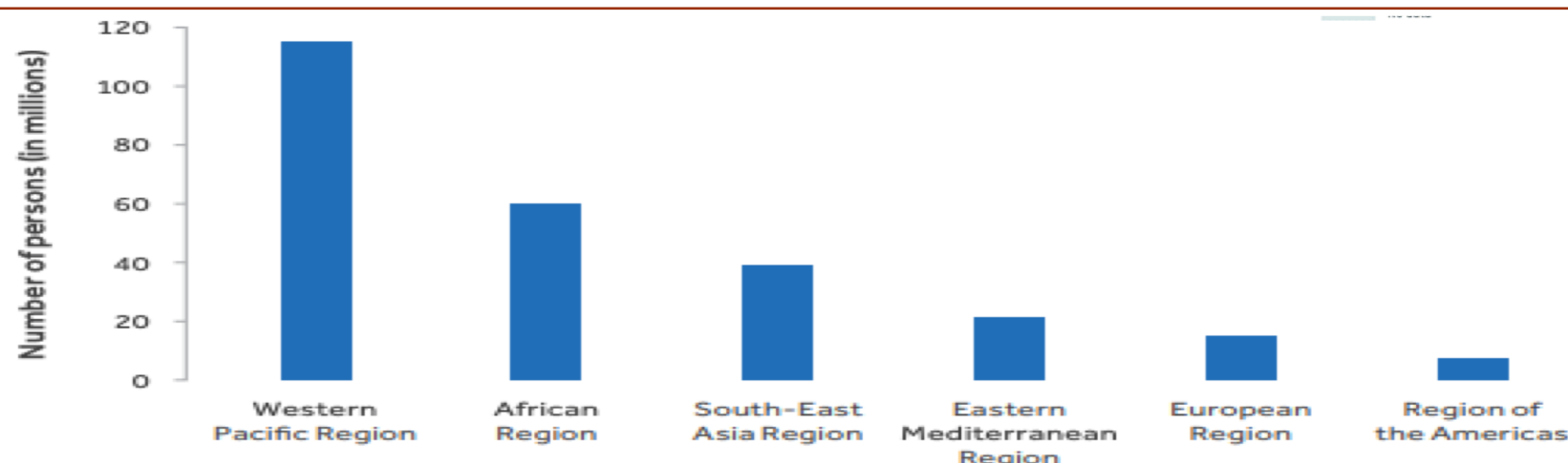
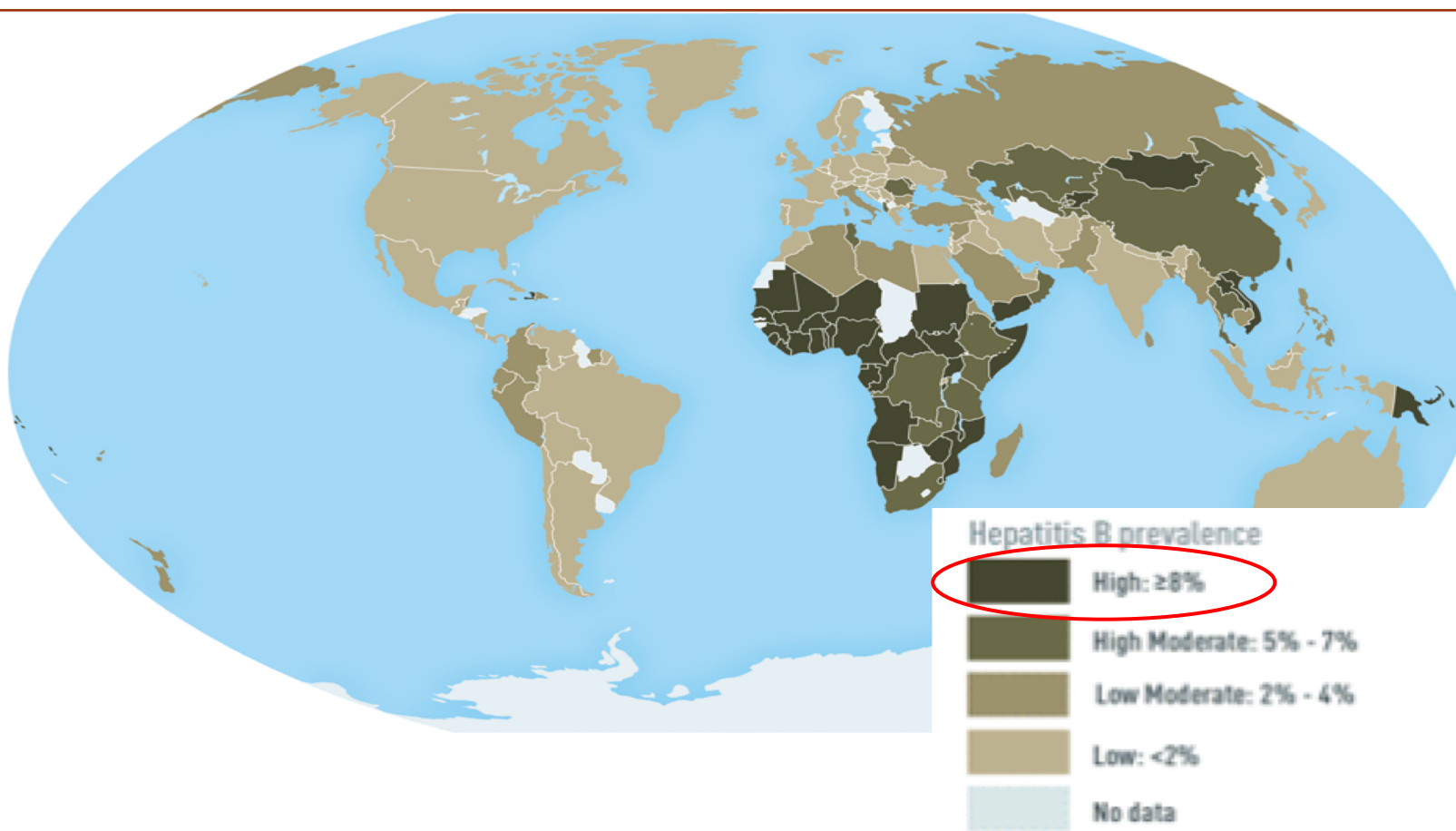
**Director, Hunter College Center for Cancer Health Disparities Research**

**Associate Professor, Department of Biological Sciences**

**Hunter College of The City University of New York**



# GLOBAL PREVALENCE OF CHRONIC HEPATITIS B

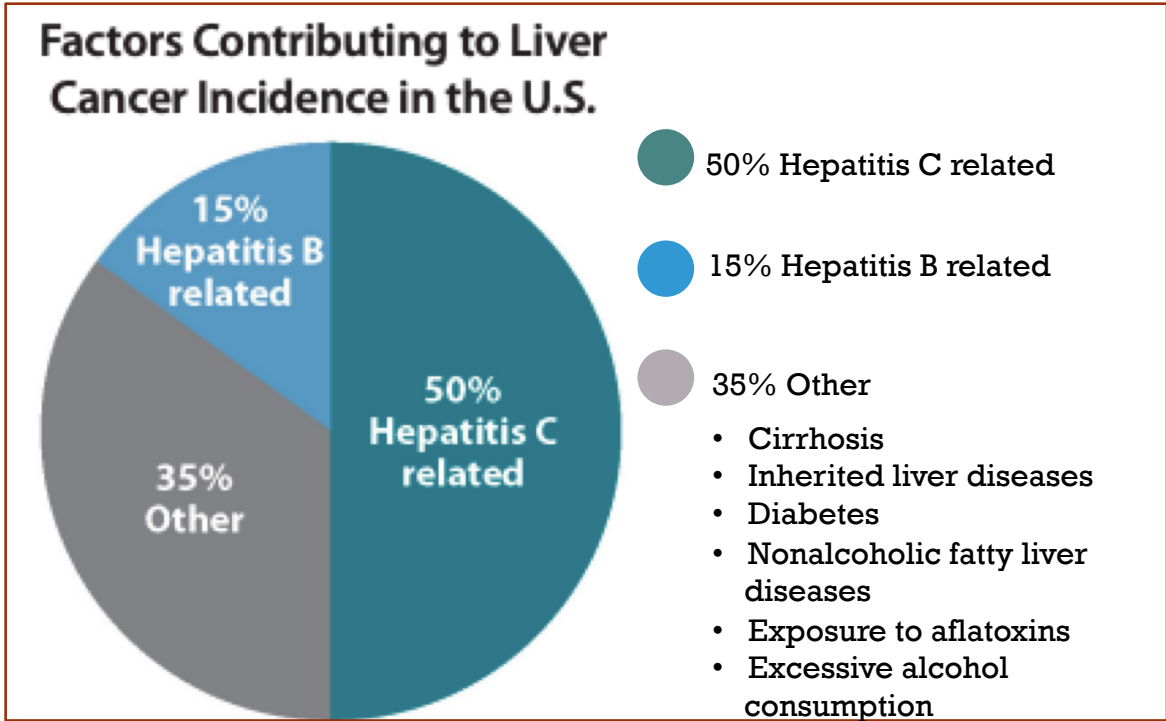
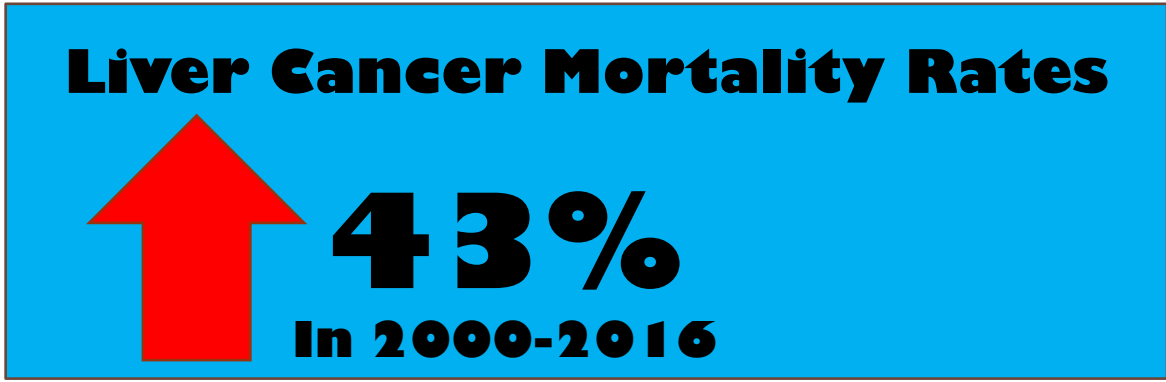
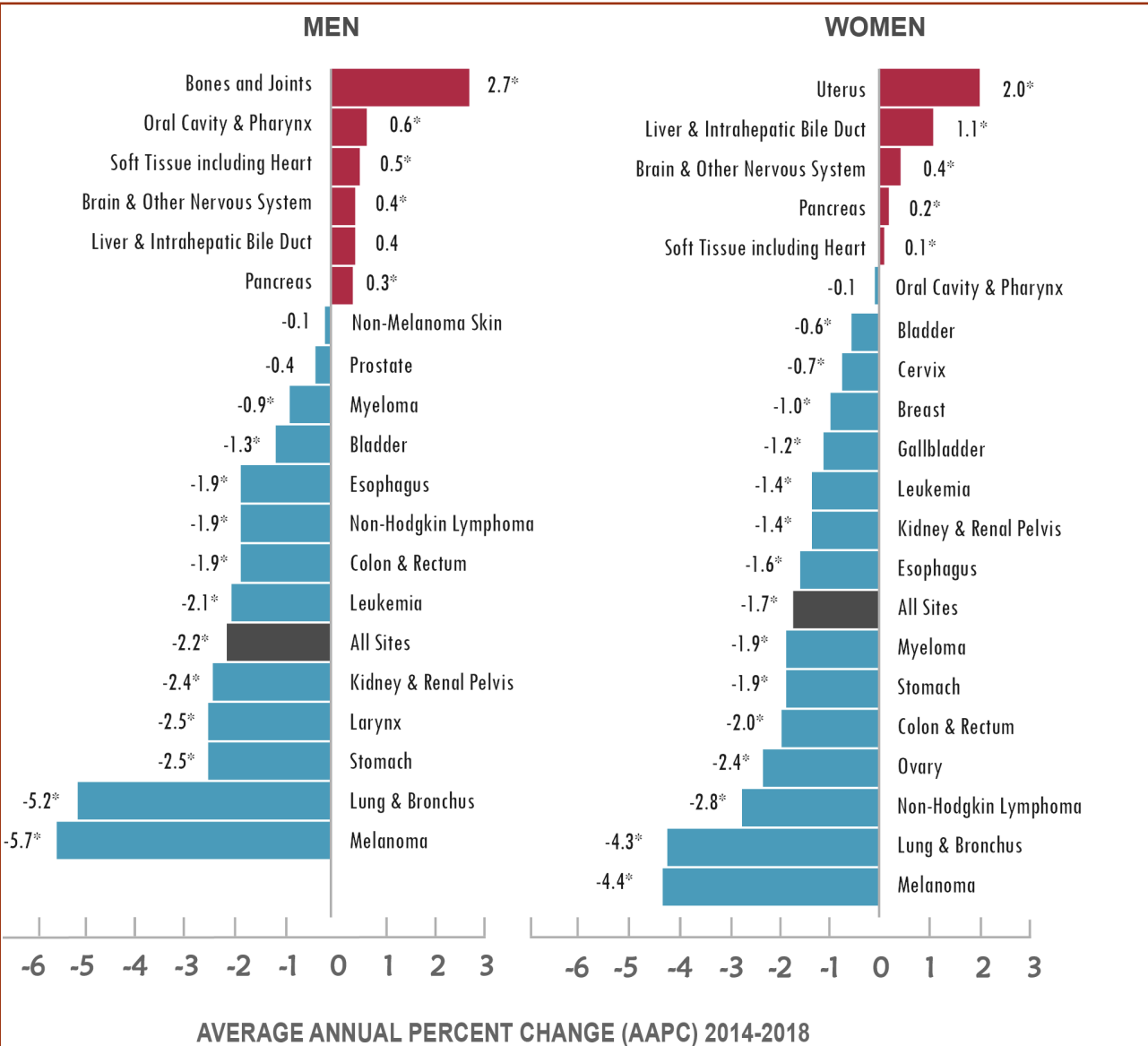


- Increases risk of:
  - Chronic Hepatitis
  - Cirrhosis
  - Hepatocellular Carcinoma (HCC)
    - Up to 1.2 million deaths annually
- Prevalent in sub-Saharan African countries
- Vaccine coverage remains low in Africa (~70%)
  - African adults with chronic HBV is ~5-10%
  - 8% of population are chronic carriers

<https://apps.who.int/iris/bitstream/handle/10665/255016/9789241565455-eng.pdf>  
<https://wwwnc.cdc.gov/travel/yellowbook/2020/travel-related-infectious-diseases/hepatitis-b>

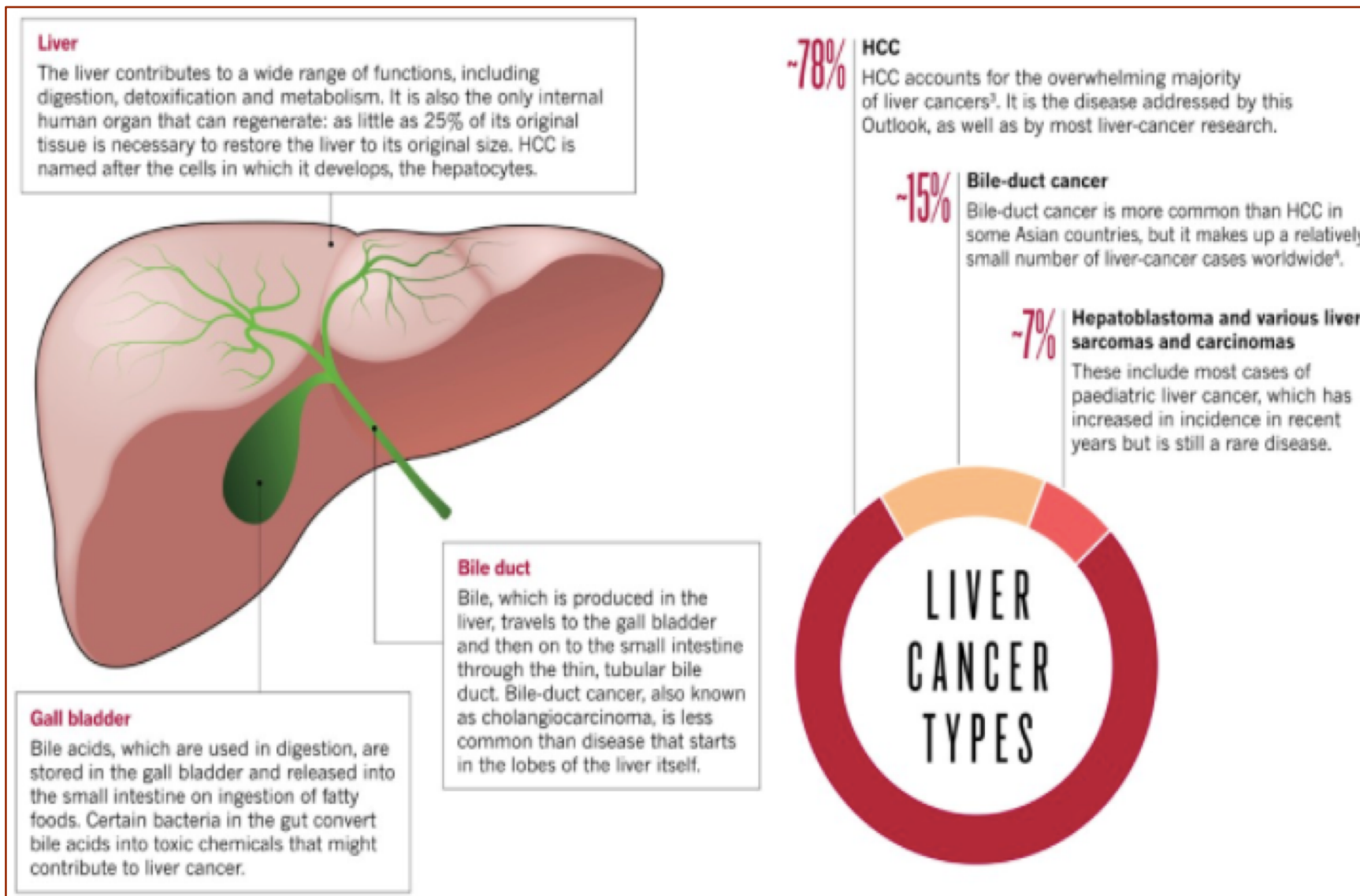


# National Trends in Cancer Death Rates in US:



\*AAPC is significantly different from zero (p<.05).

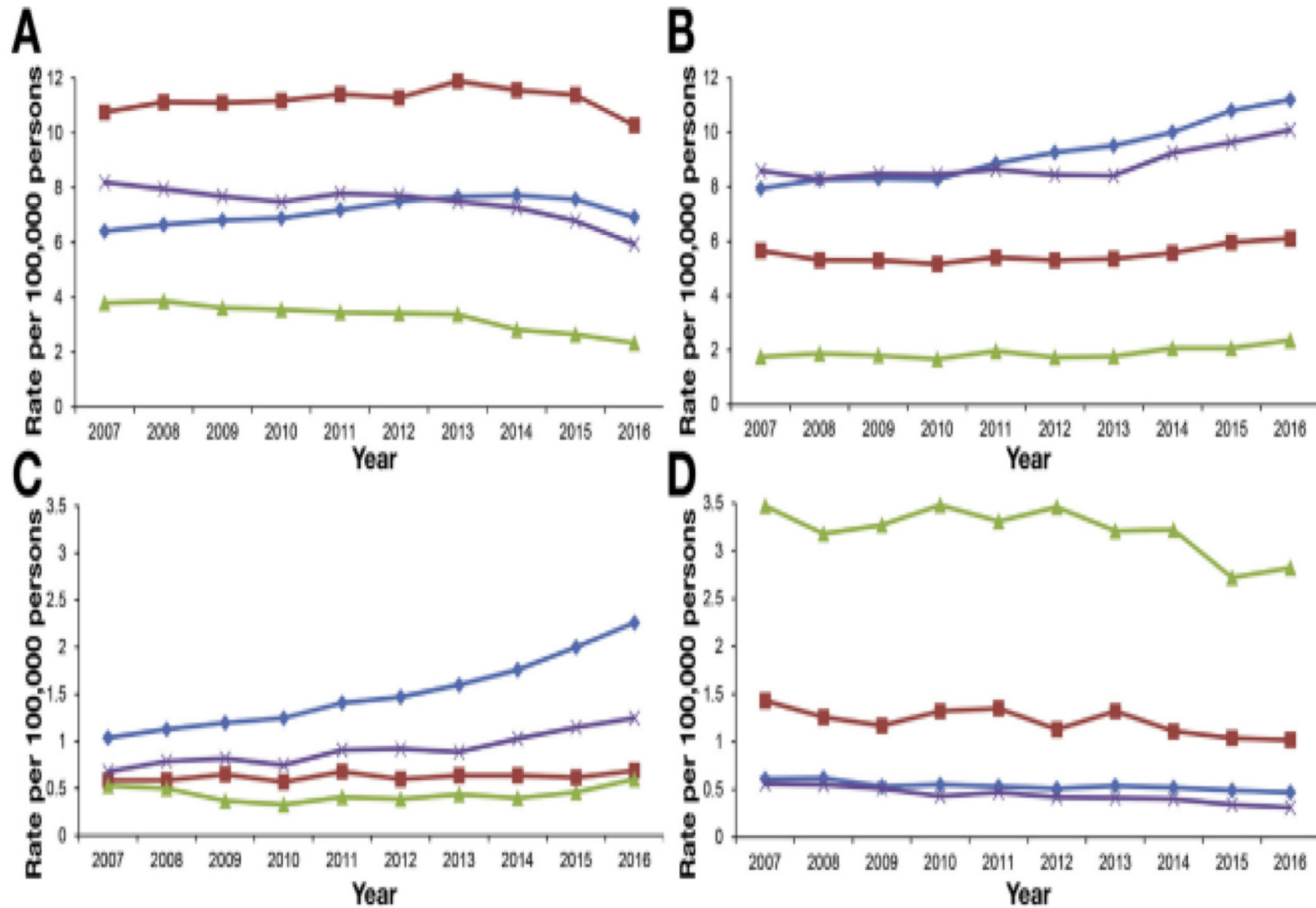
# Dominant subtypes of liver cancer:



**70%**  
**OF LIVER  
CANCER IS  
PREVENTABLE**



# RACIAL DISPARITIES FOR CHRONIC LIVER DISEASES IN U.S.



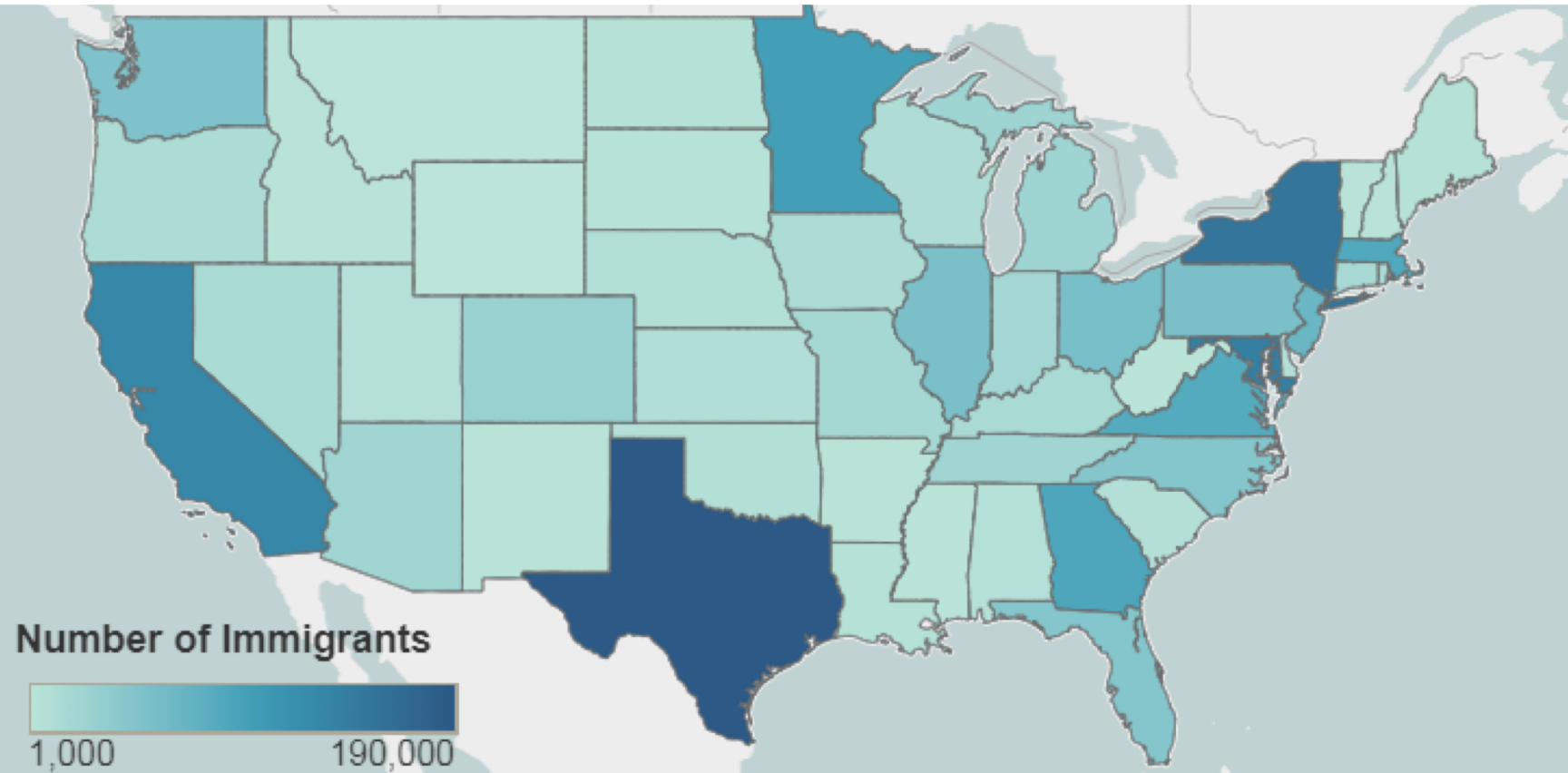
**Figure 3.** Annual age-standardized and race- and ethnicity-based mortality rates for chronic liver disease in the United States from 2007 through 2016. (A) Hepatitis C virus infection. (B) Alcoholic liver disease. (C) Nonalcoholic fatty liver disease. (D) Hepatitis B virus infection. *Blue diamond line*, non-Hispanic whites; *red square line*, non-Hispanic blacks; *green triangle line*, non-Hispanic Asians; *purple x line*, Hispanics.

This figure demonstrates the racial and ethnic health disparities in mortality rate for chronic liver disease in the United States. Non-Hispanic blacks have a higher mortality rate for HCV, while they have the second highest mortality rate for HBV.

Kim D, Li AA, Gadiparthi C, et al. Changing Trends in Etiology-Based Annual Mortality From Chronic Liver Disease, From 2007 Through 2016. *Gastroenterology*. 2018;155(4):1154-1163.e3. doi:10.1053/j.gastro.2018.07.008



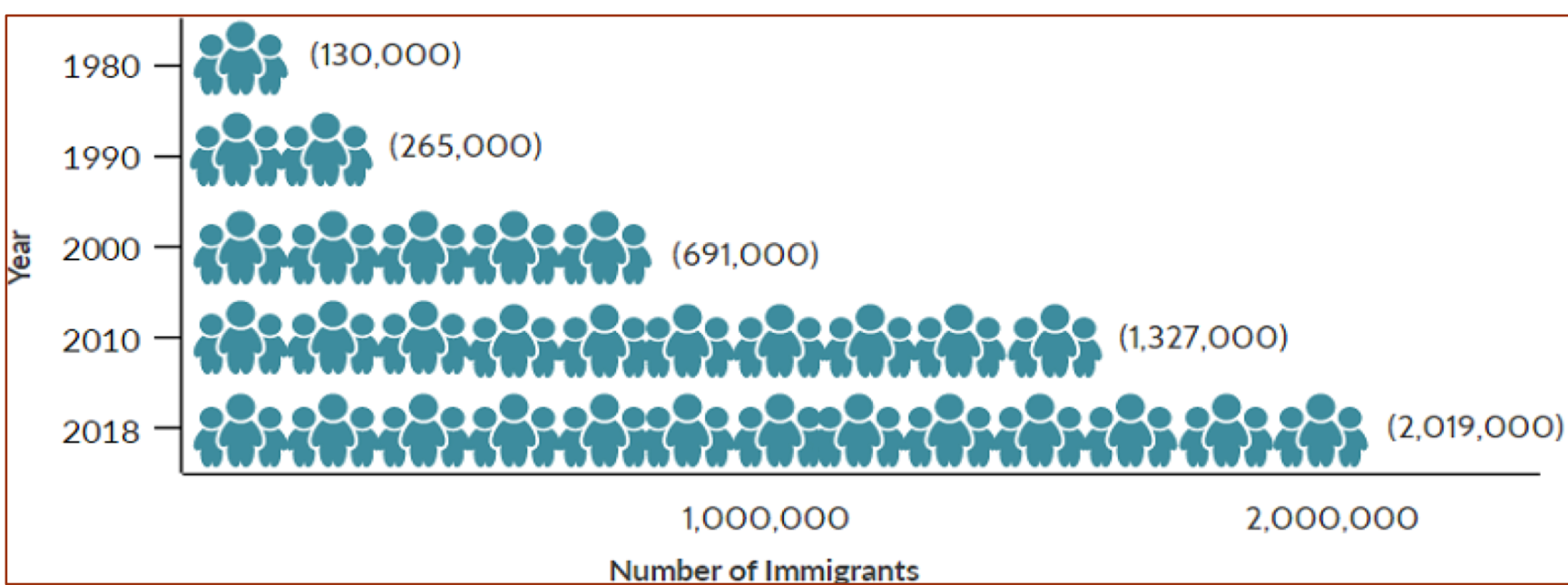
# DISTRIBUTION OF AFRICAN IMMIGRANTS BY STATE



- Between 2013-2017 most immigrants from sub-Saharan Africa settled in **New York (9 %)**, Texas (8 %), and Maryland (8 %).
- The top four counties with sub-Saharan African immigrants were Montgomery County in Maryland, **Bronx County in New York**, Prince George's County in Maryland, and Hennepin County in Minnesota.
  - Together, the four counties accounted for about 12 percent of the total sub-Saharan immigrant population in the United States



# CHRONIC HBV INFECTION THROUGHOUT NYC

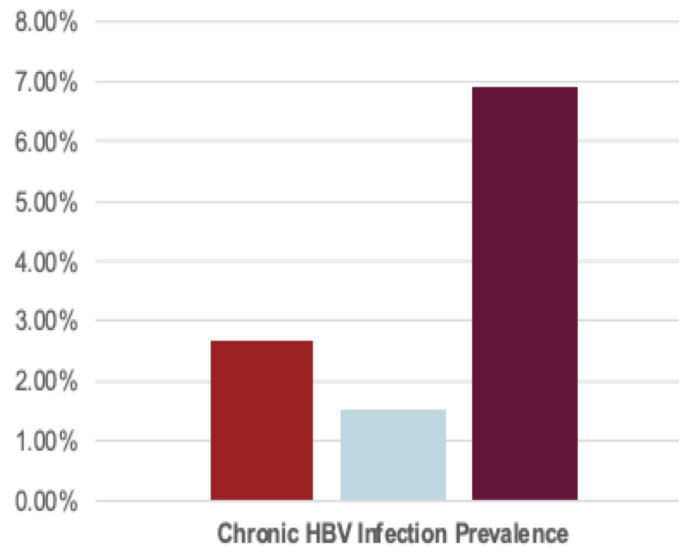
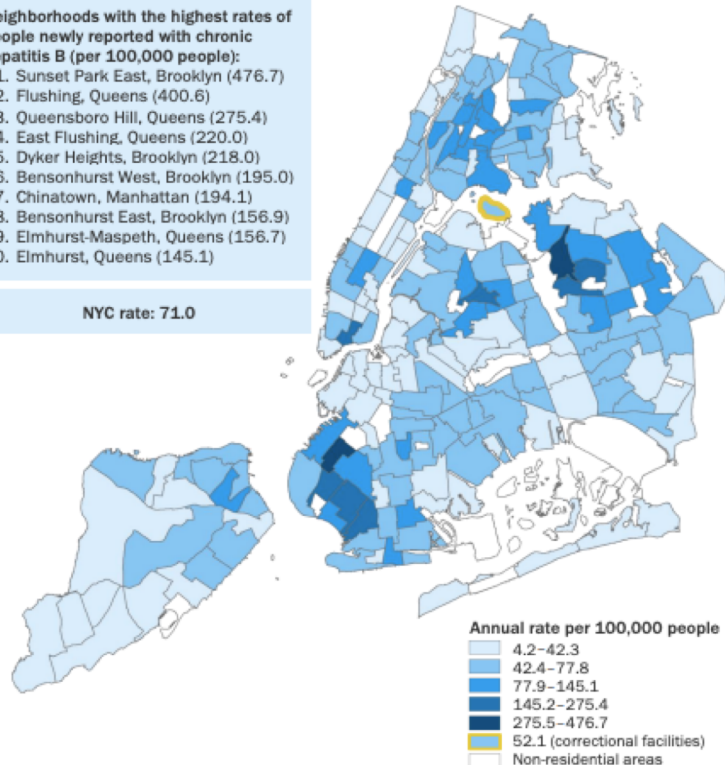


- In 2018, ~2 million immigrants from sub-Saharan Africa, lived in the U.S. (4.5%)
  - ~11.3% of foreign born African immigrants live in New York
- Geographic distribution of HBV throughout NYC (2019)
- Surveillance based prevalence in NYC was 1.2% (excluding undiagnosed infection)
- Updated estimates for 2016 shows 2.7% of residents and 6.9% residents born outside the US
  - 46.2% of African population in NYC was undiagnosed

Neighborhoods with the highest rates of people newly reported with chronic hepatitis B (per 100,000 people):

1. Sunset Park East, Brooklyn (476.7)
2. Flushing, Queens (400.6)
3. Queensboro Hill, Queens (275.4)
4. East Flushing, Queens (220.0)
5. Dyker Heights, Brooklyn (218.0)
6. Bensonhurst West, Brooklyn (195.0)
7. Chinatown, Manhattan (194.1)
8. Bensonhurst East, Brooklyn (156.9)
9. Elmhurst-Maspeth, Queens (156.7)
10. Elmhurst, Queens (145.1)

NYC rate: 71.0



- All NYC residents prevalence, including undiagnosed infection representing approximately 230 000 persons
- Diagnosed chronic HBV infection prevalence
- Non-US-born residents estimated prevalence

Ogunwobi, O.O., et al. (2019). Hepatitis B Virus Screening and Vaccination in First-generation African Immigrants: A Pilot Study. *J Community Health* 44, 1037-1043

<https://www1.nyc.gov/assets/doh/downloads/pdf/cd/hepatitis-abc-annual-report-2019.pdf>

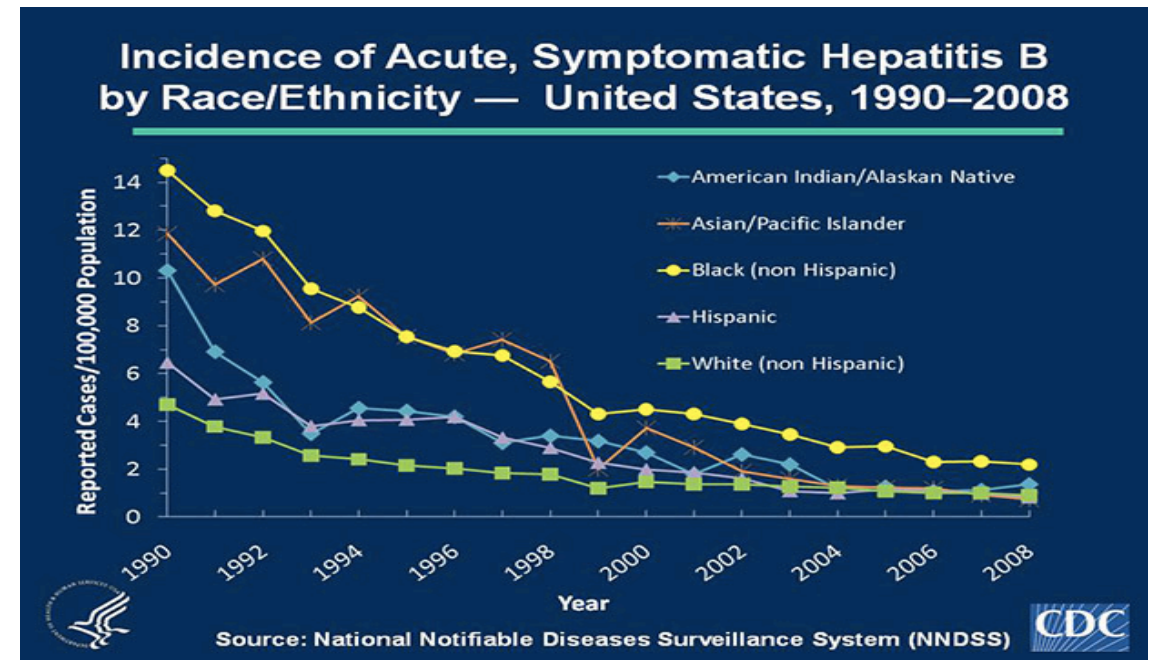
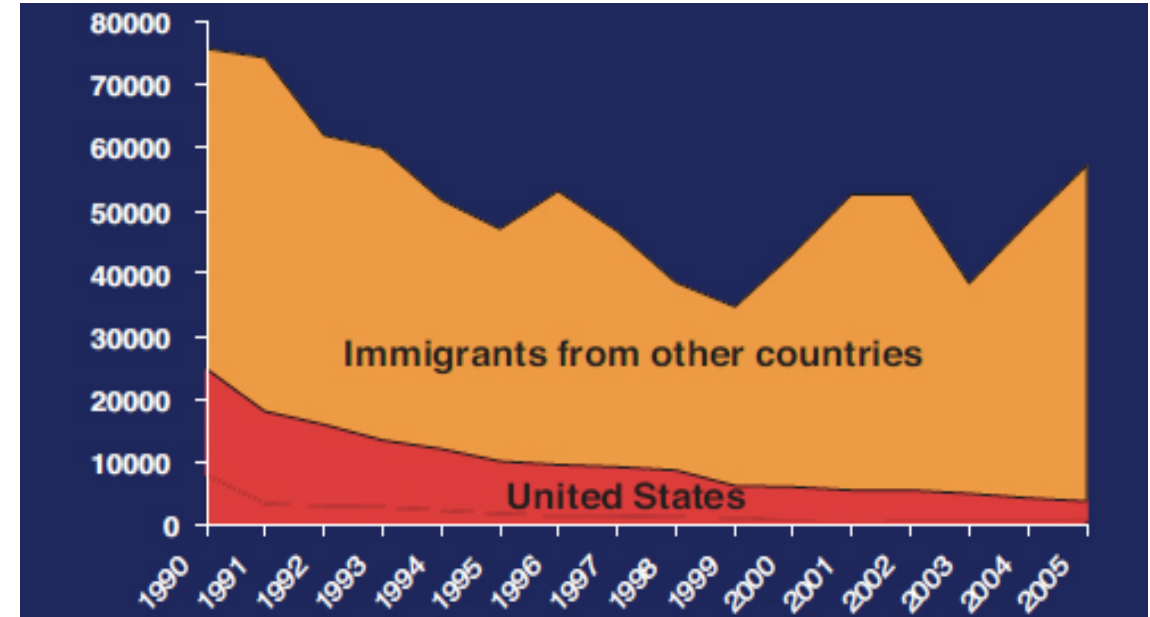
Moore, M. S., Bocour, A., & Winters, A. (2019). Surveillance-Based Estimate of the Prevalence of Chronic Hepatitis B Virus Infection, New York City, 2016. *Public Health Reports*, 134(6), 695-702.

<https://www.migrationpolicy.org/article/sub-saharan-african-immigrants-united-states>

# African Born Immigrants with HBV in the U.S:

Previous research have reported:

- 9.1-11.8% of sub-Saharan African immigrants in the U.S. has HBV
- 73.9% of African immigrants were previously exposed to HBV
  - 9.6% had current, chronic or long-term infections
  - HBV infection was exacerbated by:
    - Relatively high poverty
    - Poor health insurance coverage
    - A reduced likelihood to act upon health concerns
- Mortality is linked with HBV-associated increase in **liver cancer risk**
  - HBV infection is present in 75% of Black Africans with HCC



Kew, M., (2010) Hepatocellular carcinoma in African Blacks: Recent progress in etiology and pathogenesis. *World Journal of Hepatology*, 2(2): 65-73

Ogunwobi, O.O., et al. (2019). Hepatitis B Virus Screening and Vaccination in First-generation African Immigrants: A Pilot Study. *J Community Health* 44, 1037-1043

Rossi, C., et al. (2012). Seroprevalence of chronic hepatitis B virus infection and prior immunity in immigrants and refugees: A systematic review and meta-analysis. *PLoS ONE*, 7(9), e44611.


<https://you.stonybrook.edu/teamhbv/at-risk/>

Shankar, H., et al. (2016). A novel collaborative community-based hepatitis B screening and linkage to care program for african immigrants. *Clinical Infectious Diseases*, 62, 289-297



# HBV Screening and Vaccination in First-generation African Immigrants: A Pilot Study

## Hepatitis B Virus Screening and Vaccination in First-generation African Immigrants: A Pilot Study

Olorunseun O. Ogunwobi<sup>1</sup> · Omar Dibba<sup>1</sup> · Lin Zhu<sup>2</sup> · Adeodat Ilboudo<sup>1</sup> · Yin Tan<sup>2</sup> · Marilyn A. Fraser<sup>3</sup> · Grace X. Ma<sup>2,4,5</sup> 

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Knowledge of HBV burden, management, screening, and vaccination among African immigrants is limited.

### The goals of this study:

- Assess HBV screening and vaccination prevalence
- Identify predictors of these behaviors
- Generate implications for public health interventions to promote HBV screening and vaccinations in African immigrants

## METHODOLOGY

### Data Source

- Cross-sectional survey among 71 first generation African immigrants
- 25 survey questions that took ~15-20 minutes to administer

### Measures

- Knowledge of HBV status of family members
- Knowledge of how HBV is transmitted
- Sociodemographic factors
- Immigration-related factors

### Statistical Analysis

- Univariate analysis
- Chi square test
- Student's t-test
- Binary logistic regression








# Study Findings:

- HBV screening (55.7%) and vaccination (50.8%) are low among first-generation African immigrants
- Two-thirds of participants reported having never received any recommendation for HBV screening or vaccination from their doctors
- Knowledge of HBV transmission was low
  - Sharing needles (56.3%)
  - Mother to child (40.85%)
  - Toothbrush (30.9%)
- Marriage and having a college degree were predictors for HBV screening
- Health insurance was a sole predictor for HBV vaccination

# Study Limitations:

- Small sample size
- Assessment of few measures

 <p><b>SURVEILLANCE</b></p>	 <p><b>VACCINATION</b></p>	
<p><i>State- and national-based surveillance systems provide essential data for program planning.</i></p> <ul style="list-style-type: none"> <li>▪ Use cancer registry data to:           <ul style="list-style-type: none"> <li>◦ Describe disease burden</li> <li>◦ Identify disease trends to inform patterns of access to care</li> </ul> </li> <li>▪ Use National Notifiable Diseases Surveillance System and Viral Hepatitis Surveillance Program to:           <ul style="list-style-type: none"> <li>◦ Describe infection of disease</li> <li>◦ Monitor trends in incidence and prevalence of risk factors for disease</li> <li>◦ Follow the CDC Guidelines for Viral Hepatitis Surveillance and Case Management</li> </ul> </li> </ul>	<p><i>95% of hepatitis B infections can be prevented with immunization, and promising practices.<sup>7</sup></i></p> <ul style="list-style-type: none"> <li>▪ Identify individuals recommended for <u>hepatitis B vaccination</u></li> <li>▪ Administer vaccination as part of routine services</li> </ul>	
 <p><b>SCREENING</b></p>	 <p><b>TREATMENT</b></p>	 <p><b>POLICY, SYSTEMS &amp; ENVIRONMENTAL (PSE) CHANGE</b></p>
<p><i>Early detection is key.</i></p> <ul style="list-style-type: none"> <li>▪ Identify patients who are at high risk for <u>hepatitis B</u> or <u>hepatitis C</u> infections</li> <li>▪ Test according to age- and risk-based guidelines</li> <li>▪ Assess for risk factors for liver cancer, including:           <ul style="list-style-type: none"> <li>▪ Heavy alcohol use</li> <li>▪ Obesity</li> <li>▪ Type II diabetes<sup>1</sup></li> </ul> </li> </ul>	<p><i>Viral hepatitis is curable, and treatment could prevent 90,000 liver cancer deaths by 2030.<sup>8</sup></i></p> <ul style="list-style-type: none"> <li>▪ Ensure those infected with <u>hepatitis B</u> or <u>hepatitis C</u> receive appropriate care and treatment</li> <li>▪ Partner with insurers to develop solutions to lower cost of treatment</li> </ul>	<p><i>PSE change leads to broader impact and sustainability.</i></p> <ul style="list-style-type: none"> <li>▪ Build infrastructure that allows the identification, follow-up and monitoring of individuals with hepatitis B and hepatitis C infections</li> <li>▪ Work with stakeholders to support improvements in research, prevention, screening, diagnosis and care<sup>8</sup></li> </ul>

Take Action Today!



# Common myths and misconceptions about HBV:

- **There is no treatment for chronic hepatitis B**
  - While there is no cure yet for hepatitis B infection, it is a manageable disease that can be treated.
- **Hepatitis is hereditary/genetic and can be passed from parent to child**
  - Hepatitis is not genetic and can not be inherited. While hepatitis B can be passed from mother to child during the birthing process, this is due to contact with fluids, not a genetic factor.
- **You can contract hepatitis through casual contact like kissing, sharing meals, shaking hands, or drinking out of the same cup or bottle.**
  - Hepatitis can be contracted through intimate contact like sharing body fluids through unprotected sex or coming into contact with blood.
- **“It is not safe to breastfeed if I have Hep B?”**
  - Breastfeeding is safe. Hepatitis B is typically not transmitted to the baby through breast milk. Vaccination of the newborn will reduce any risk of mother to child transmission. If you have cracked or bleeding nipples then there is risk of hepatitis B transmission.
- **Hepatitis B is a fatal disease.**
  - Yes, but there are 20 to 40 million infected individuals in India who are living normal lives, and the majority of whom will live till old age. The infection does not kill every one.
- **If you are vaccinated, you can still get infected with hepatitis B.**
  - In some cases, immunity may wear off over time. If you have been vaccinated and are at risk of exposure to the virus, it may be worthwhile to have a blood test to determine if a booster shot is required
- **“I got hepatitis B. I was told I can’t get married or have kids.**
  - There is no reason why you could not get married or have a family, though it is strongly recommended that those close to you are vaccinated.
- **Hepatitis B can be transmitted by mosquito bites:**
  - Hepatitis B cannot be transmitted by any insect bites, including mosquitos. Mosquitoes transmit diseases such as yellow fever and malaria.



# Additional myths and misconceptions about HBV:

- Related to religious beliefs
- Related to culture
- Cultural focus on treatment rather than prevention of health problems
- Total or partial lack of knowledge about hepatitis B virus
- Stigmatization of hepatitis B virus infection
- Various superstitious beliefs



# ACKNOWLEDGEMENT



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- Community outreach education initiatives on hepatitis B virus infection (Yin Tan, MD and Ming-Chin Yeh, PhD)

