

# Liver Cancer Among Sub-Saharan African Immigrants with Hepatitis B in NYC, 2001-2020

Holly A. Anger, MPH  
Senior Surveillance and Research Scientist, Viral Hepatitis Program

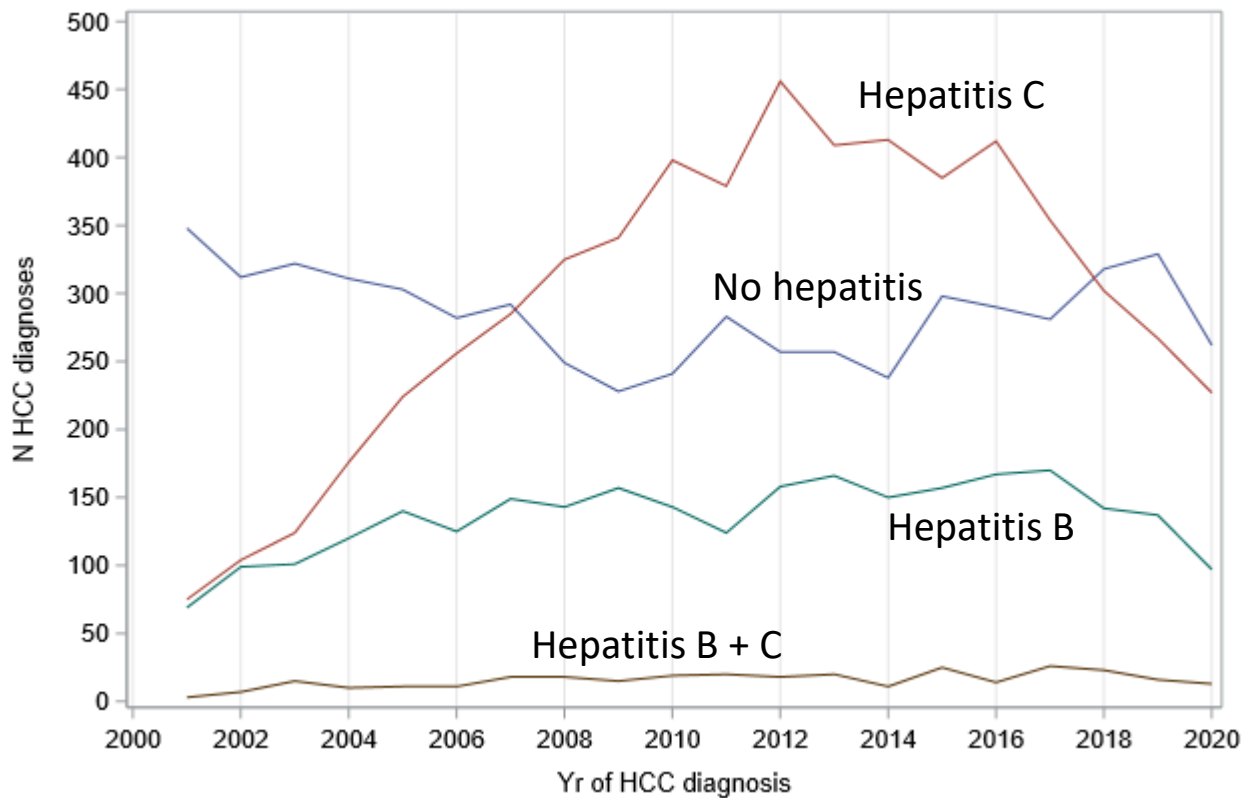
Bureau of Hepatitis, HIV, and Sexually Transmitted Infections

*Envisioning a New York City without transmission or illness related to viral hepatitis, HIV, and sexually transmitted infections.*

# Background: Hepatitis B and Hepatocellular Carcinoma in the US

- Chronic hepatitis B is an important cause of hepatocellular carcinoma (HCC)
- In the US, immigrants from Asia and Sub-Saharan Africa have a disproportionately high occurrence of both chronic hepatitis B and of HCC
- In NYC, overall HCC cases are declining, but no declines for HCC in presence of hepatitis B

# N of people diagnosed with HCC in NYC by Viral Hepatitis Infection, 2001-2020

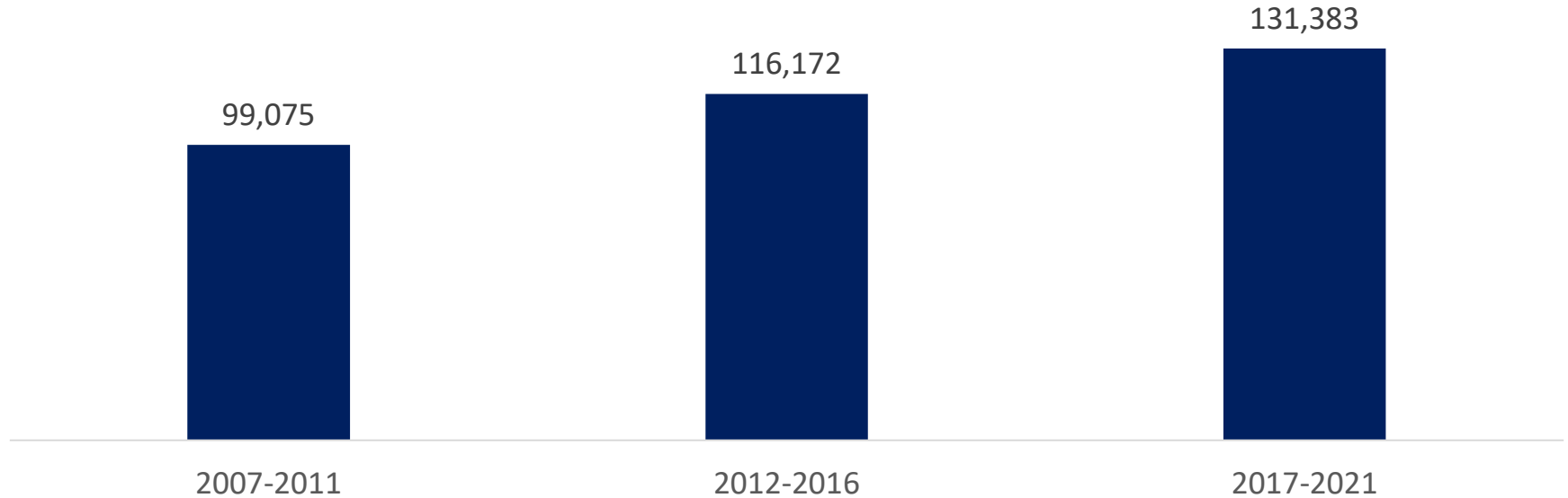


# HCC Screening Recommendations for Individuals with Hepatitis B

- For people with chronic hepatitis B and without cirrhosis, regular HCC screening is generally recommended beginning at age 40
- AASLD 2019 guidelines recommend screening starting at **age 20** for all **African-born & North American Black individuals** with chronic hepatitis B
- **Lack of large and/or population-based studies** to better understand this phenomenon
- Screening guidelines can only work to improve outcomes if people know they have hepatitis B
  - Many people **aren't diagnosed with hepatitis B until they already have HCC**

# The Sub-Saharan African Population in NYC is Increasing

Sub-Saharan African population in NYC, American Community Survey 5-year estimates



# Some Key Questions

- Compared to other populations with hepatitis B and HCC, are Sub-Saharan African immigrants with hepatitis B and HCC more likely to:
  - Be diagnosed with HCC at earlier ages?
  - Be diagnosed with hepatitis B and HCC at the same time?

# Overview of Analysis

## Design

- **Descriptive**, cross-sectional analysis

## Population

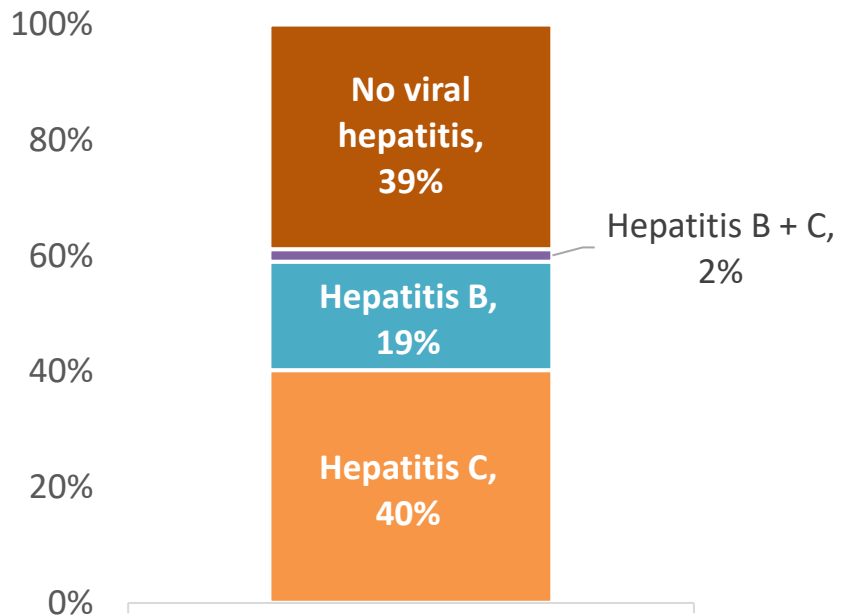
- People with **chronic hep B** reported to NYC Department of Health and identified as having **HCC** via match with the NY Cancer registry

## Time period

- People diagnosed with HCC from **2001-2020**

# People diagnosed with HCC by Viral Hepatitis Infection in NYC, 2001-2020

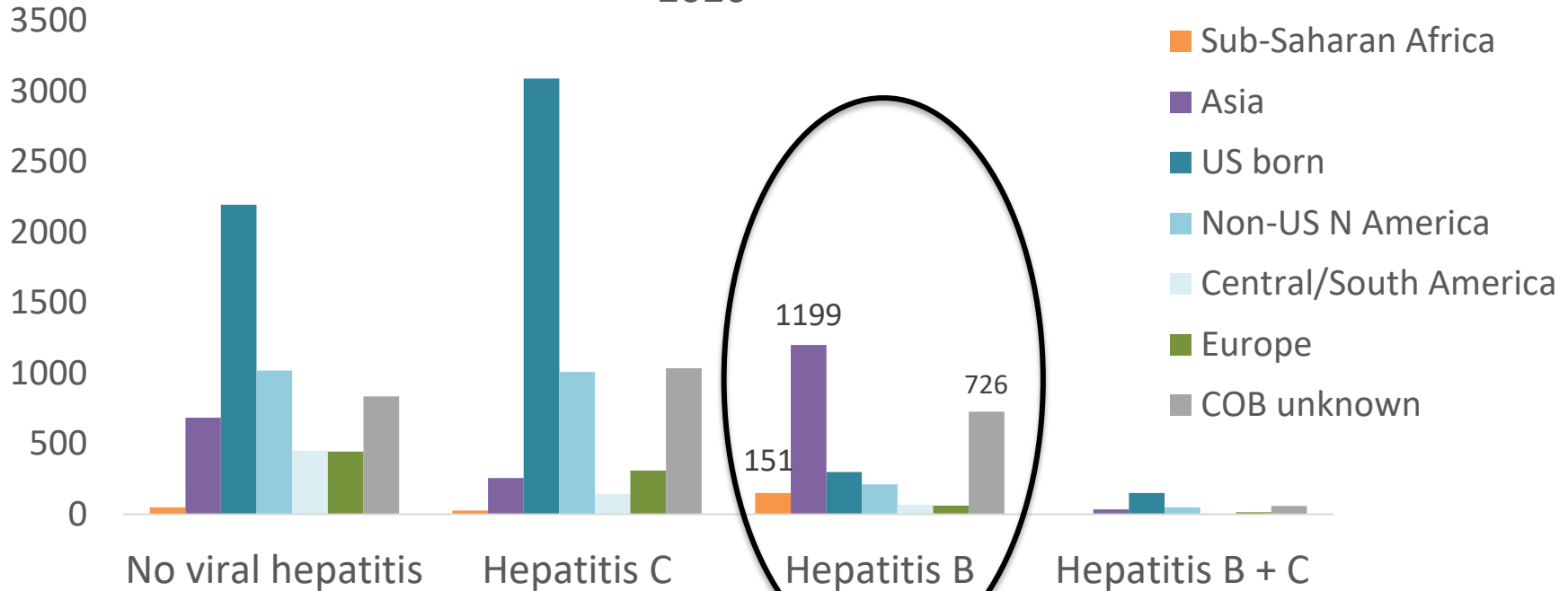
People diagnosed with HCC in NYC, 2001-2020 (N=14,639)





# Most Individuals with HCC and Hepatitis B are Asian-born

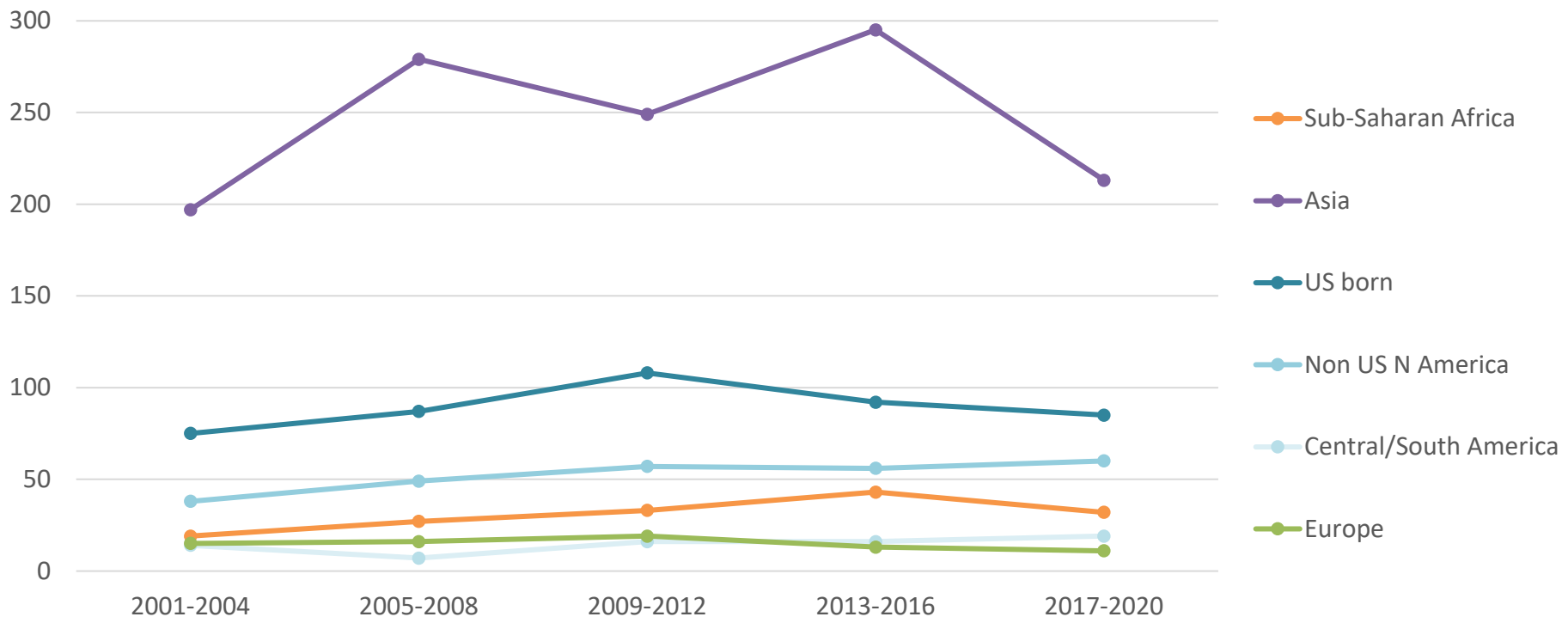
People with HCC by viral hepatitis infection and region of birth, 2001-2020



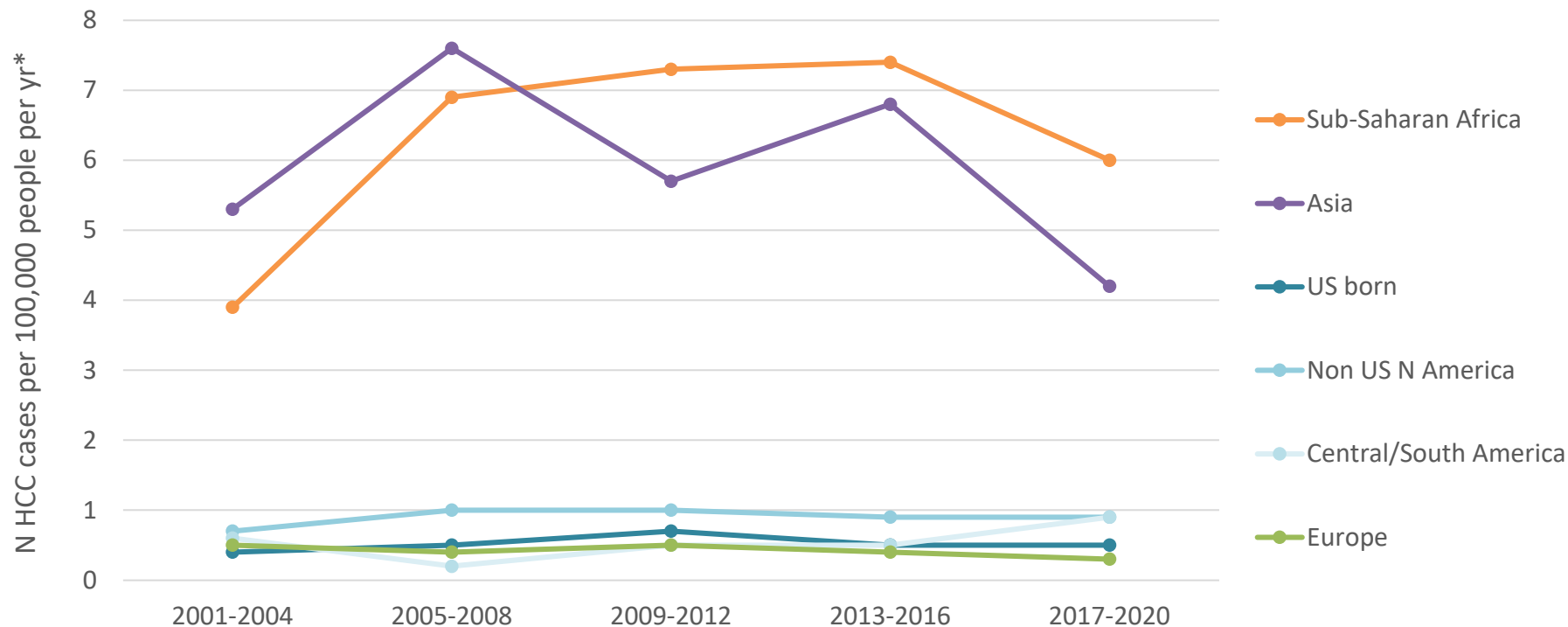
# Countries Represented Among Sub-Saharan African Immigrants with Hepatitis B and HCC, 2001-2020 (n=154)

- Top three countries represented:
  - Ghana (n=17)
  - Nigeria (n=12)
  - Guinea (n=11)
- Other countries represented (less than 7 reported cases):
  - Burkina Faso, Cameroon, Cotes d'Ivoire, Gabon, the Gambia, Mali, Mauritania, Niger, Senegal, Sierra Leone, Somalia, South Africa, Sudanese countries, Togo
- African country not specified (n=75, including 59 of non-specified West African country)

# The Number of People with HCC and Hepatitis B was Highest Among Asian Immigrants

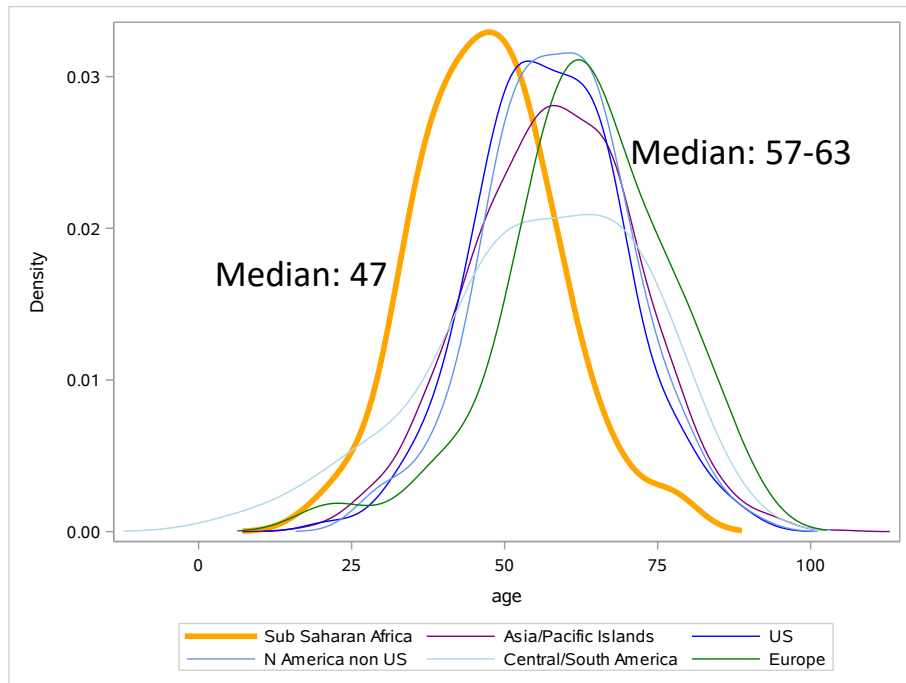


# ...but the Rate of People with HCC and Hepatitis B was Highest Among Sub-Saharan African Immigrants in Recent Years

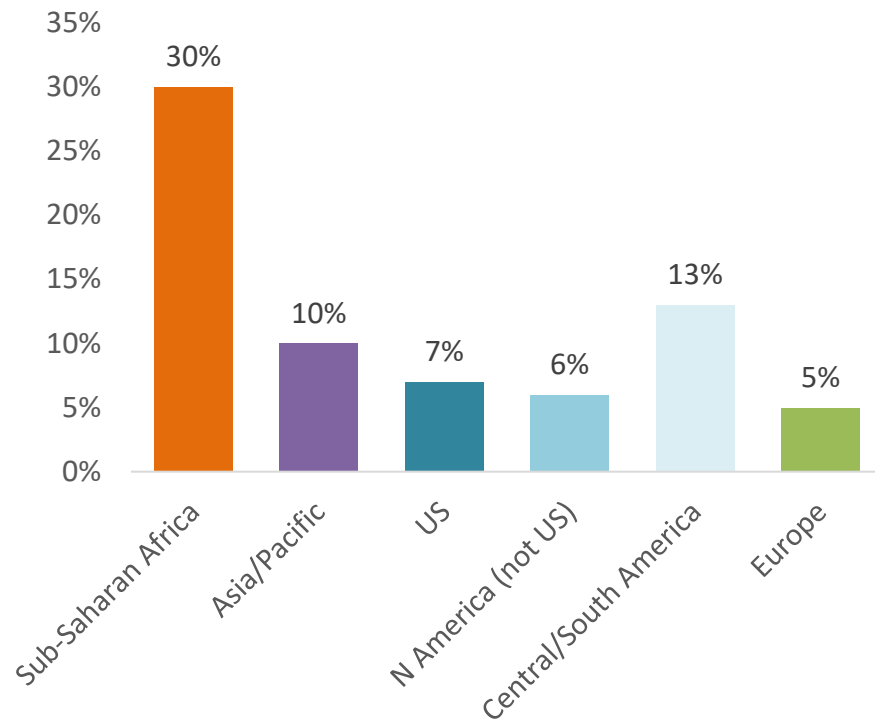


# Sub-Saharan African Immigrants with Hepatitis B are Diagnosed with HCC at Younger Ages

## Age distribution at HCC by region of birth

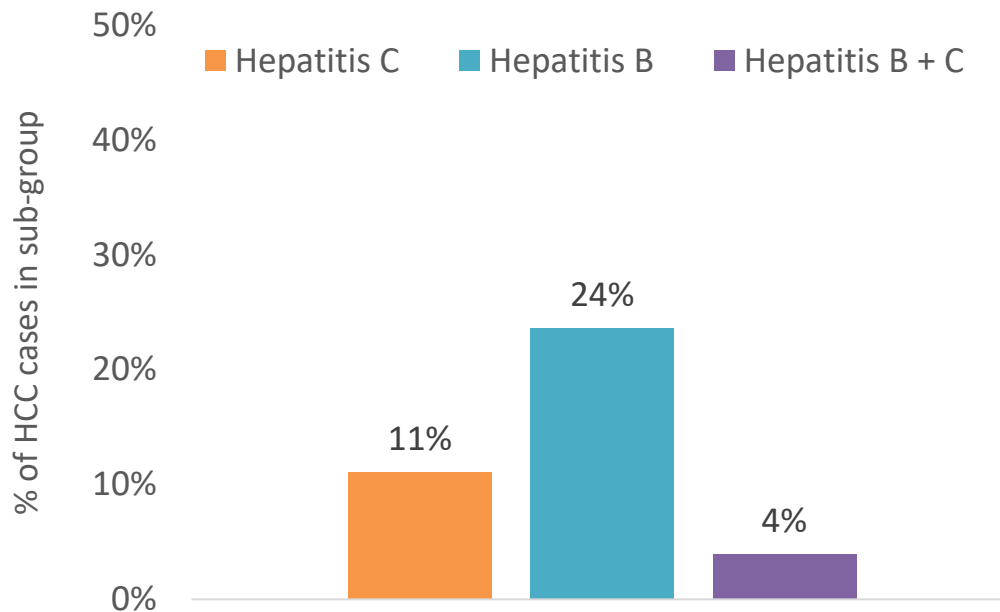


## Age <40 yrs at HCC diagnosis by region of birth



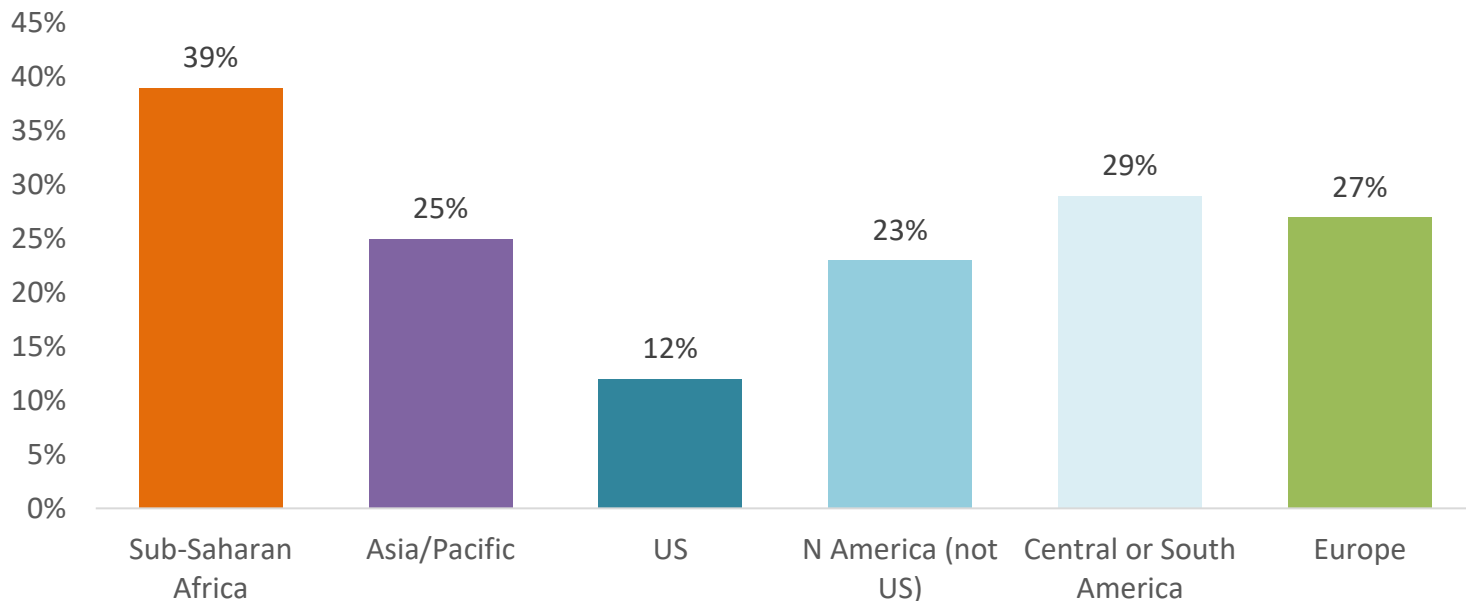
# People with Hepatitis B and HCC Are More Likely to Have Viral Hepatitis Diagnosed at the Same Time as HCC

## % of people with HCC where viral hepatitis diagnosed at same time as HCC

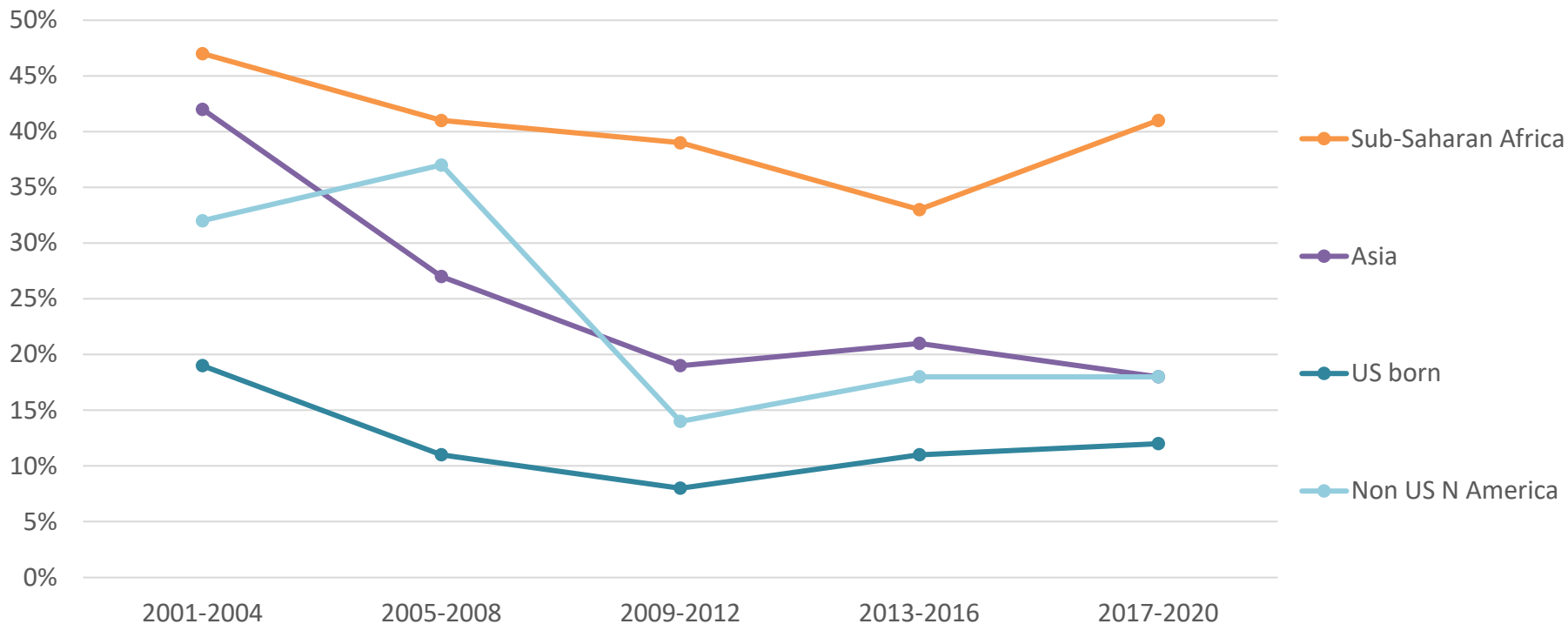


# Concurrent Diagnosis of Hepatitis B and HCC was More Common Among All Non-US Born Groups

% people with HCC and hepatitis B where hepatitis diagnosed at the same time as HCC



# Concurrent Diagnosis of HCC and Hepatitis B is Going Down for Some Groups, but Less So for Sub-Saharan African Immigrants





# Some Things to Keep In Mind...

- Analysis based on surveillance data from the NYC DOHMH viral hepatitis registry and NY cancer registry
  - Do not have information on behavioral and clinical factors, or diagnoses that may have occurred before arrival in NYC
- Country of birth information only available in cancer registry, not viral hepatitis surveillance registry
  - Cannot estimate HCC risk among people with Hepatitis B by region of birth
- Substantial amount of missing data for region of birth for people with HCC

# Conclusions

- Though they account for only 6% of people who have HCC and hepatitis B, Sub-Saharan African immigrants had the **highest rate of HCC** in the presence of hepatitis B
- In NYC, Sub-Saharan African immigrants with hepatitis B and HCC had a **4 times higher likelihood of being diagnosed with HCC at age <40** compared to US born
  - Supports earlier HCC screening for African-born Black people with hepatitis B
- Sub-Saharan African immigrants have the highest likelihood of being **diagnosed with hepatitis B and HCC at the same time**
  - Represents missed opportunities to screen and diagnosis people for Hepatitis B, link them to care, and potentially prevent HCC
  - Rates of concurrent diagnosis of HCC and HBV have declined at a faster rate for other groups, indicating there is still work to improve HBV screening



# Contact Information

**Holly Anger, MPH**

Senior Surveillance and Research Scientist, Viral Hepatitis Program

Bureau of Hepatitis, HIV, and Sexually Transmitted Infections

New York City Department of Health and Mental Hygiene

Email: [hanger@health.nyc.gov](mailto:hanger@health.nyc.gov)