Liver cancer among sub-Saharan African immigrants with hepatitis B in NYC, 2001-2020

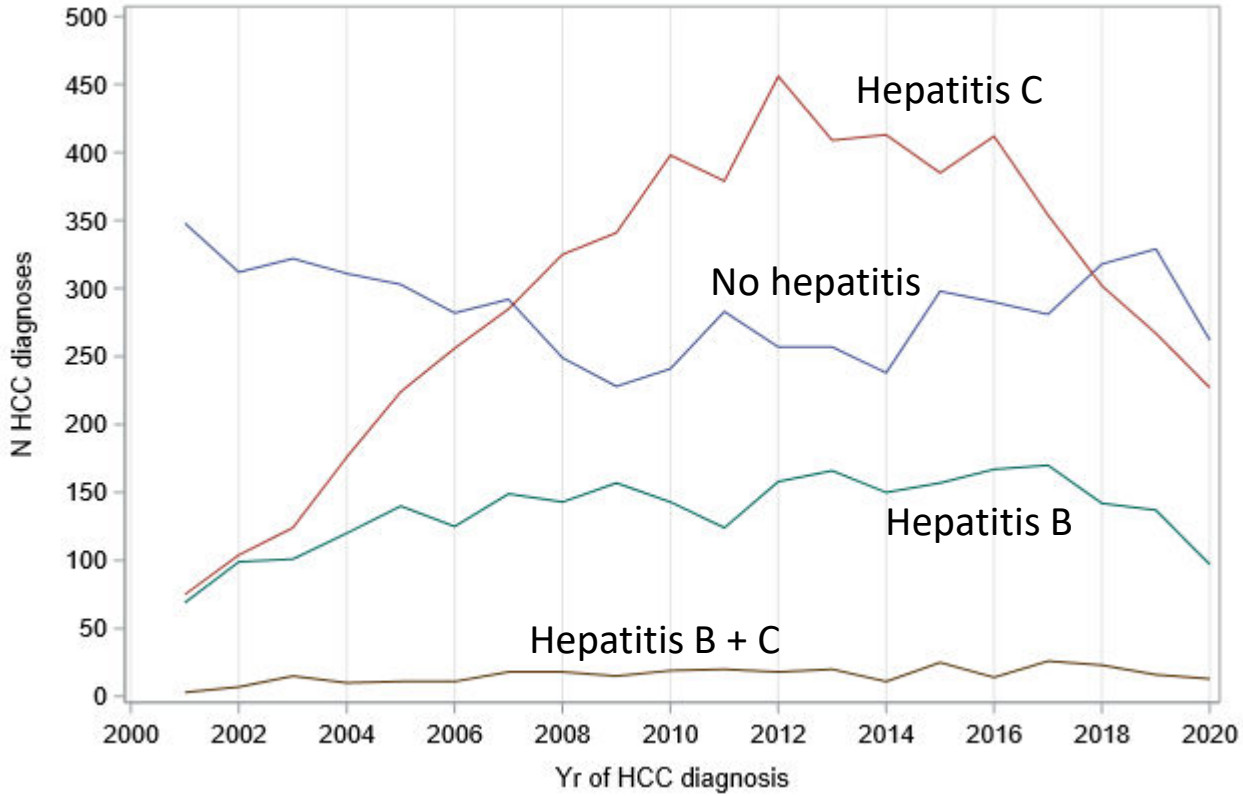
Holly A. Anger, MPH
Senior Surveillance and Research Scientist, Viral Hepatitis Program

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 infection with hepatitis B virus 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 diagnoses are declining, but no declines for HCC in presence of hepatitis B

HCC diagnoses in NYC by viral hepatitis infection, 2001-2020



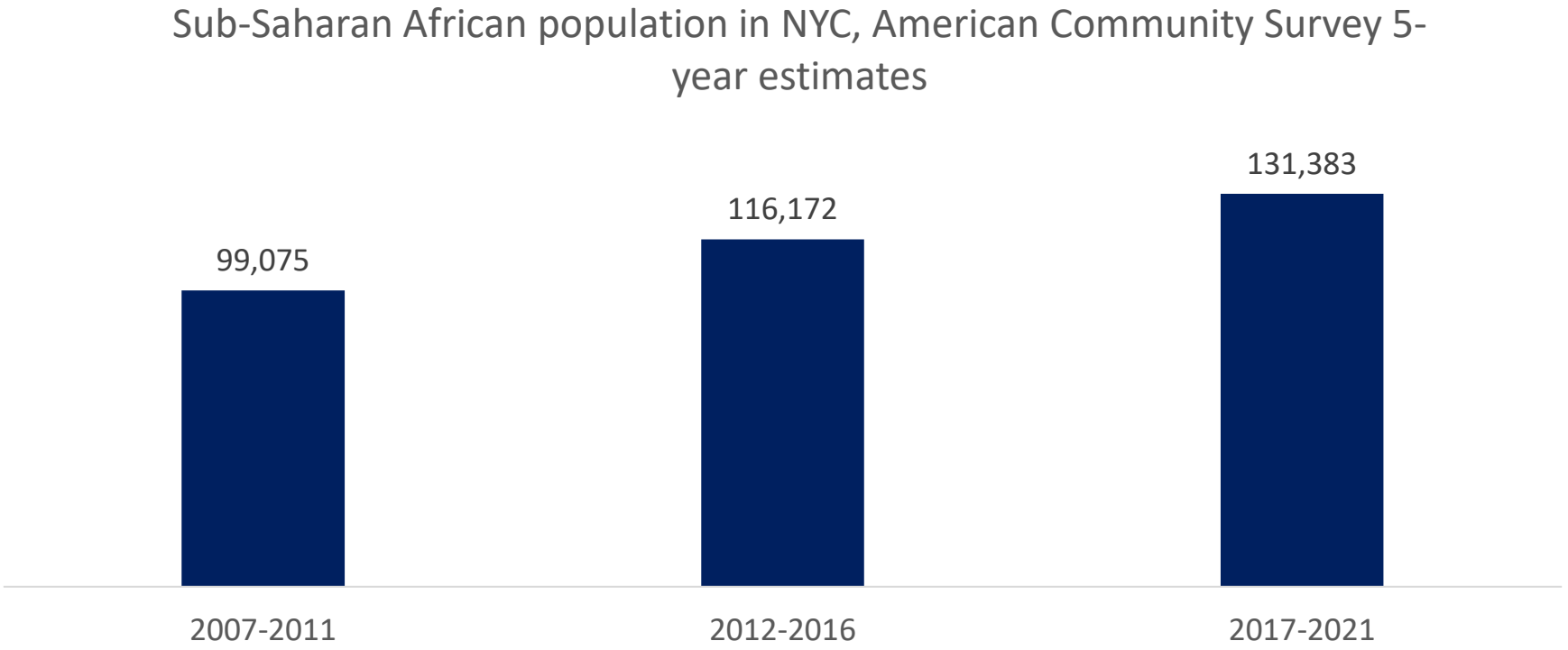
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HCC screening recommendations for individuals with hepatitis B

- For people with chronic hepatitis B and without cirrhosis, regular HCC screening is generally recommended beginning at age 40
- AASLD 2019 guidelines recommend screening 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 HBV
  - Many people **aren't diagnosed with hepatitis B until they already have HCC**

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The Sub-Saharan African population in NYC is increasing



Some key questions

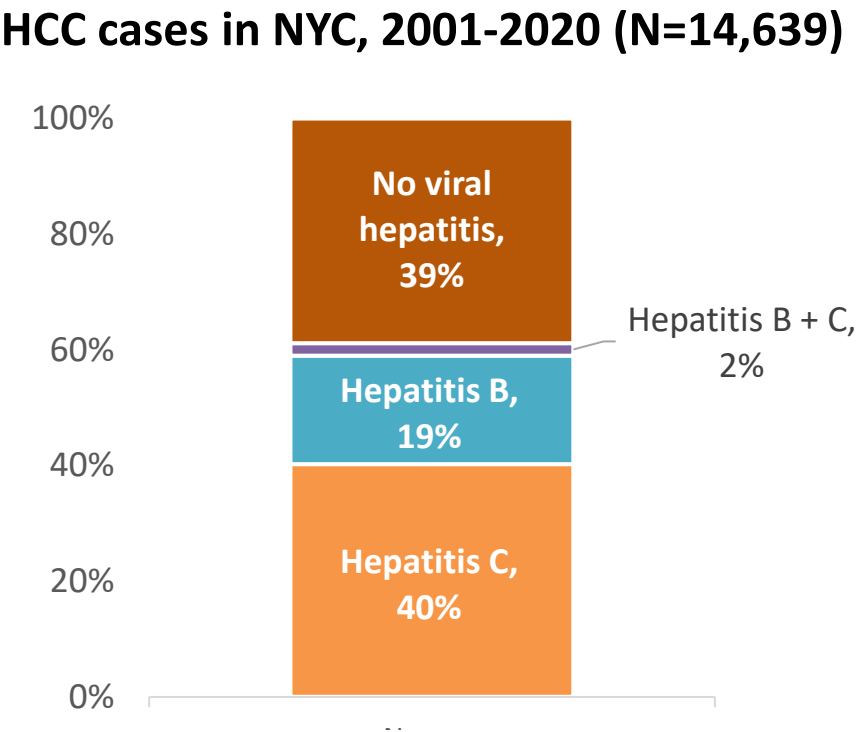
- Compared to other populations with hepatitis B and HCC, are Sub-Saharan African immigrants with hepatitis B and HCC more likely to:
  - Be diagnosed with HCC at earlier ages?
  - Be diagnosed with hepatitis B and HCC at the same time?

Overview of analysis

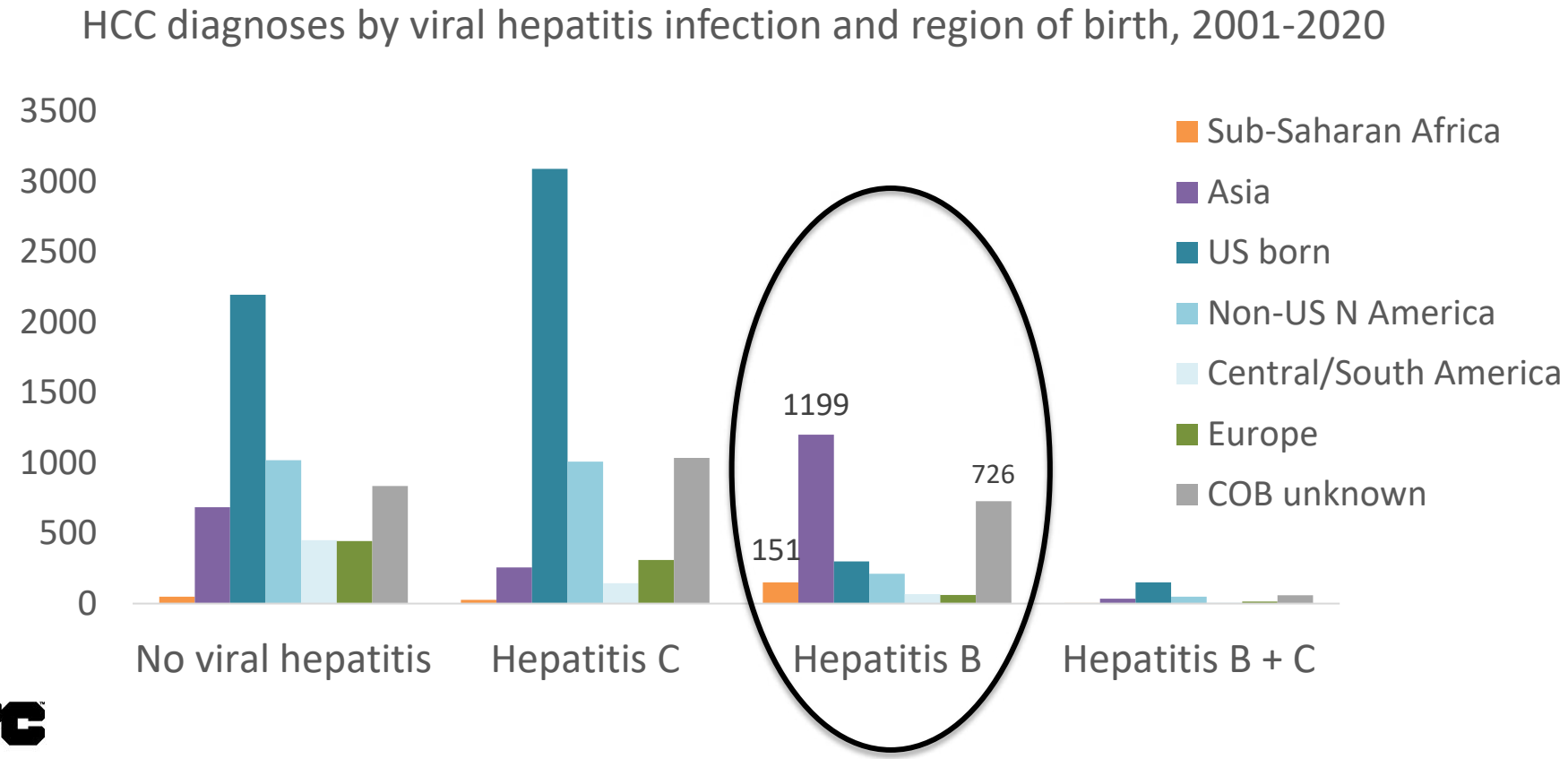
Design	• **Descriptive**, cross-sectional analysis
Population	• Chronic **HBV cases** reported to NYC Department of Health & Mental Hygiene and identified as having **HCC** via match with the NY Cancer registry
Time period	• HCC diagnoses from **2001-2020**

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HCC diagnoses by viral hepatitis infection, NYC 2001-2020



Most individuals with HCC and hepatitis B are Asian-born



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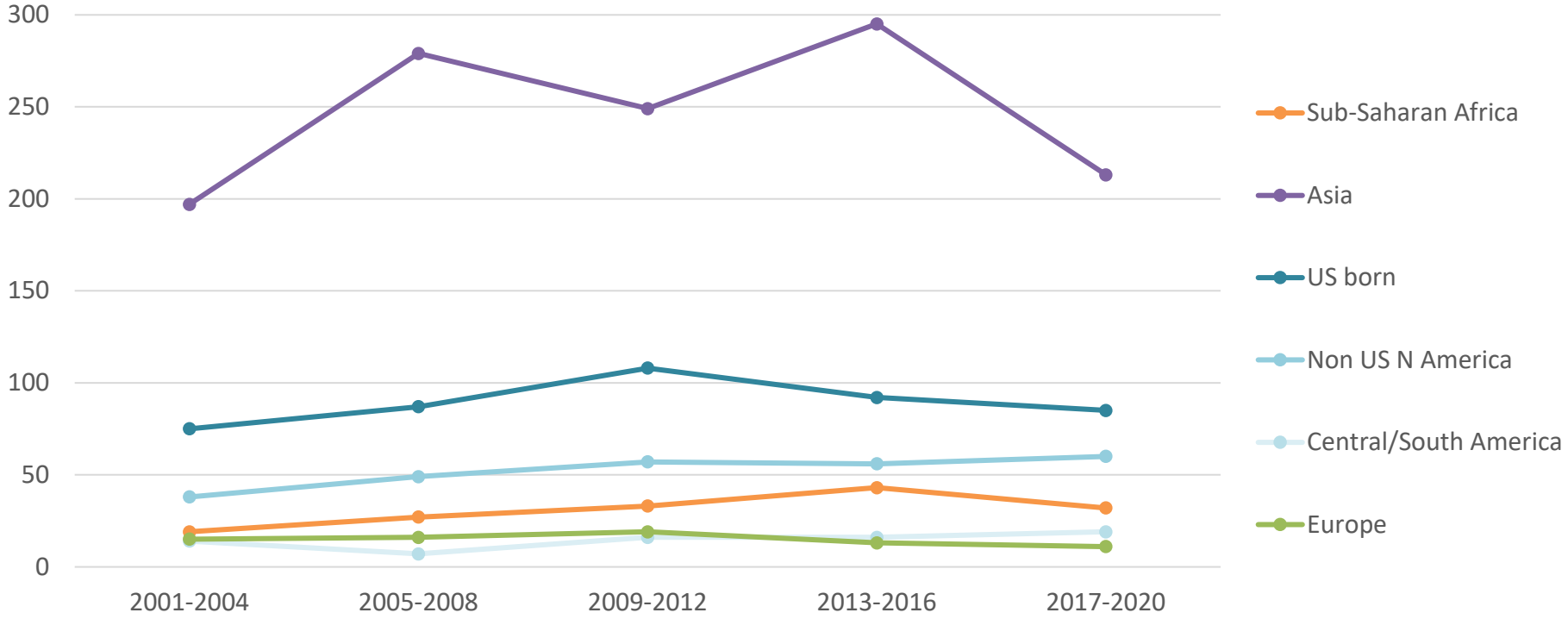
Countries represented among Sub-Saharan African immigrants with hepatitis B and HCC, 2001-2020 (n=154)

- 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

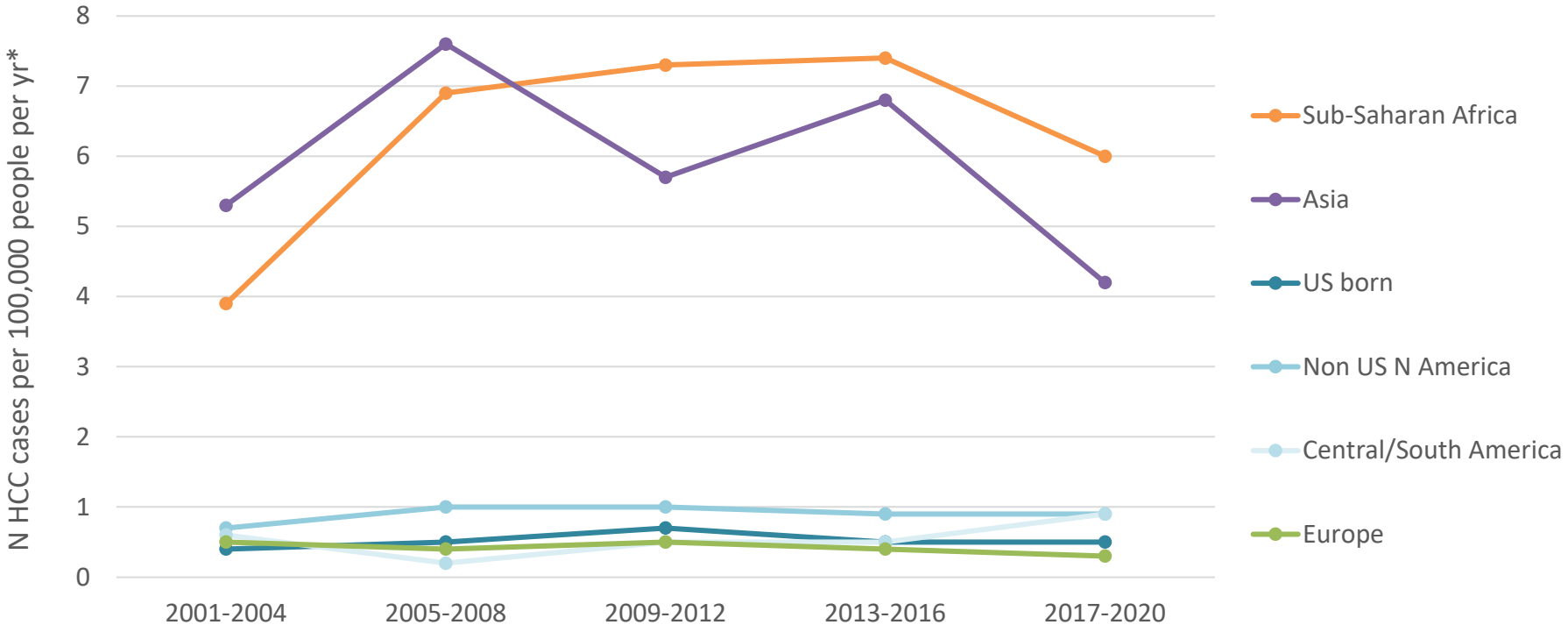
- African country not specified (n=75, including 59 of non-specified West African country)

N of HCC cases with hepatitis B was highest among Asian immigrants



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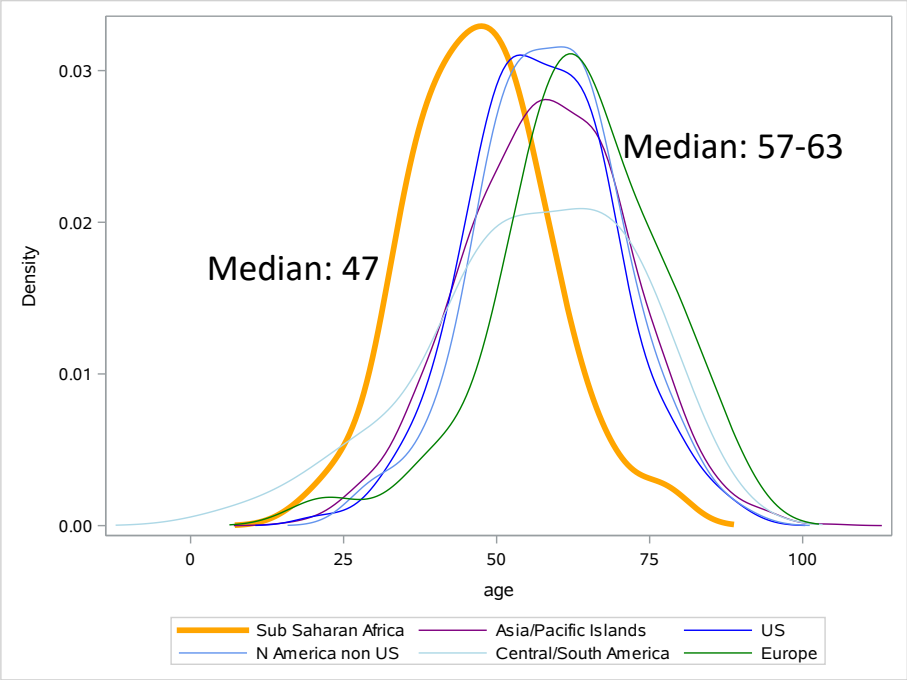
…but the rate of HCC cases with hepatitis B was highest among Sub-Saharan African immigrants in recent years



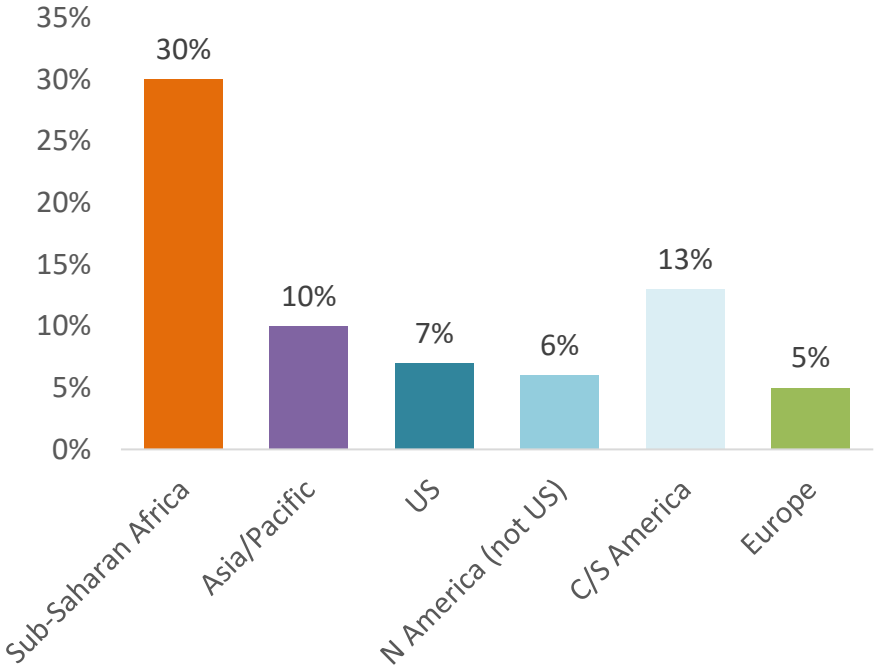
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Sub-Saharan African immigrants with hepatitis B are diagnosed with HCC at younger ages

Age distribution at HCC by region of birth

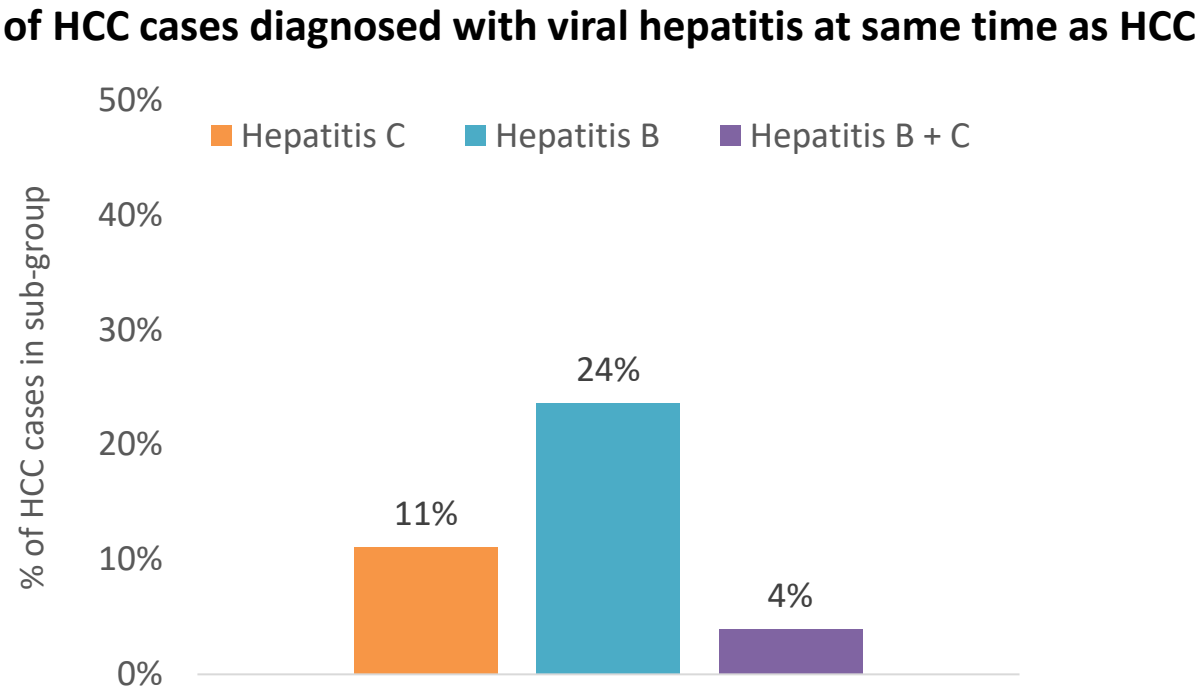


Age <40 yrs at HCC diagnosis by region of birth



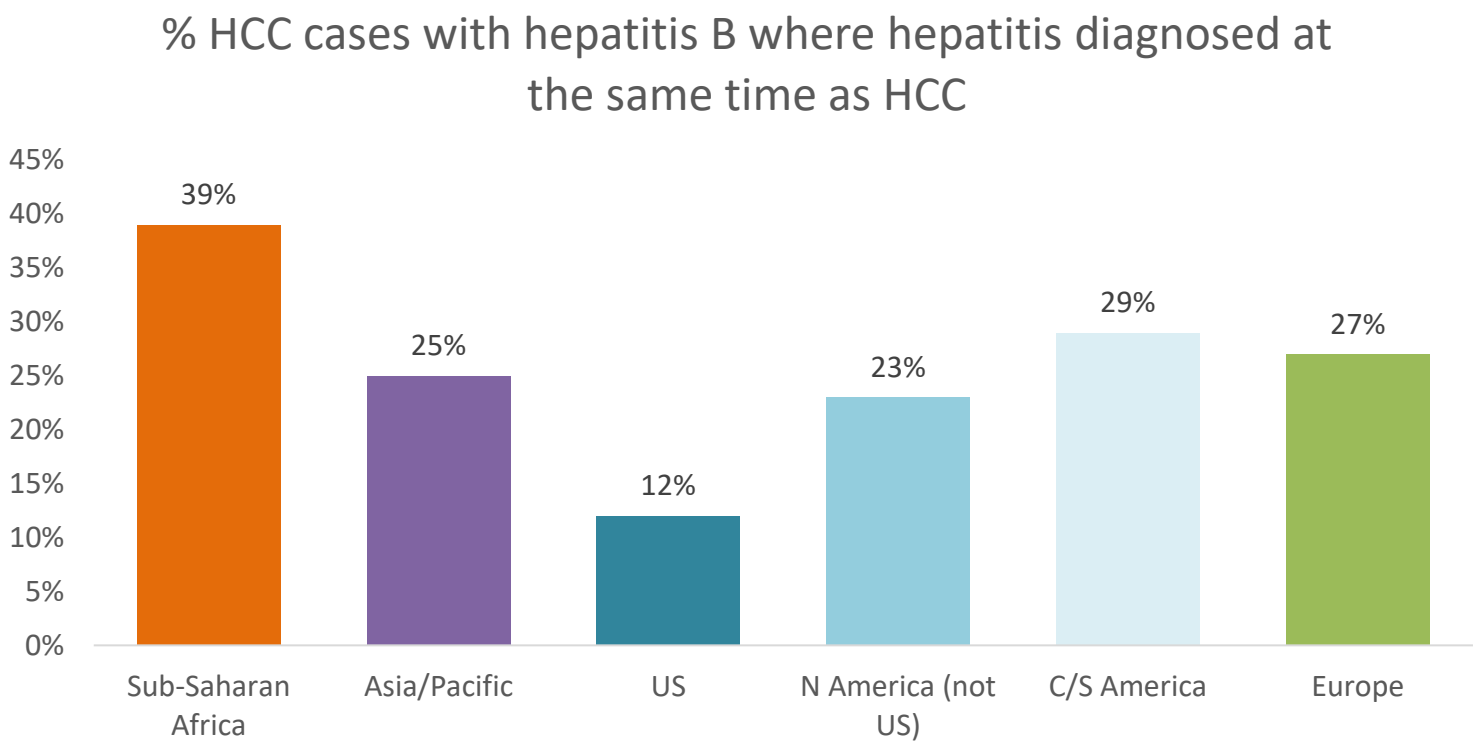
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People with hepatitis B and HCC are more likely to have viral hepatitis diagnosed at the same time as HCC

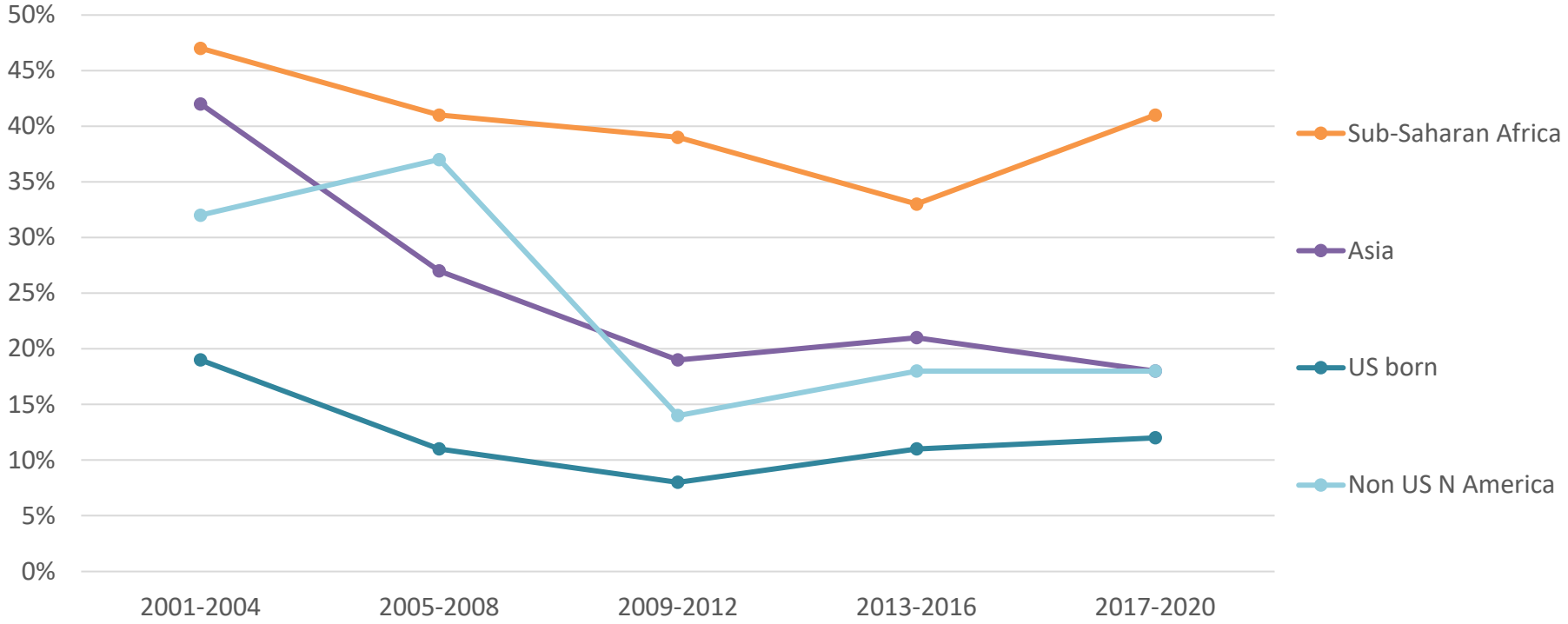


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Concurrent diagnosis of hepatitis B and HCC was more common among all non-US born groups



Concurrent diagnosis of HCC and hepatitis B is going down for some groups, but less so for Sub-Saharan African immigrants



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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 HCC cases

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Conclusions

- Though they account for 6% of HCC cases with HBV, Sub-Saharan African immigrants had the **highest rate of HCC** in the presence of HBV infection

- 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/North American Blacks with hepatitis B

- Sub-Saharan African immigrants had the highest likelihood of being **diagnosed with hepatitis B and HCC at the same time**
  - Represent 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

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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