NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

North Carolina
Public Health

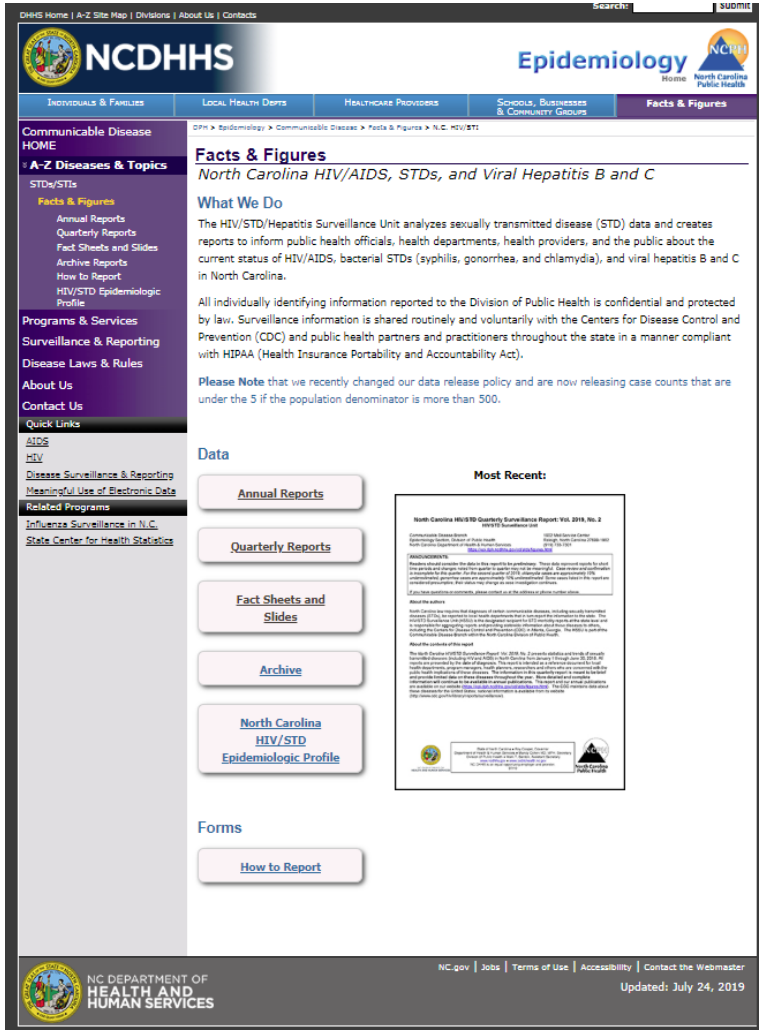
Viral Hepatitis B and C Epidemiology in North Carolina 2018

August 2019

Division of Public Health/Epidemiology Section/Communicable Disease Branch

HIV/STD/Hepatitis Surveillance Unit

Where to find Hepatitis B/C Information?



http://epi.publichealth.nc.gov/cd/stds/figures.html

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

HEPATITIS B (HBV)

NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

North Carolina
Public Health

HBV in United States, 2017

- Number of reported acute HBV cases: 3,218
  - Estimated number of new HBV cases : 20,900 (95% CI: 11,900-51,200)

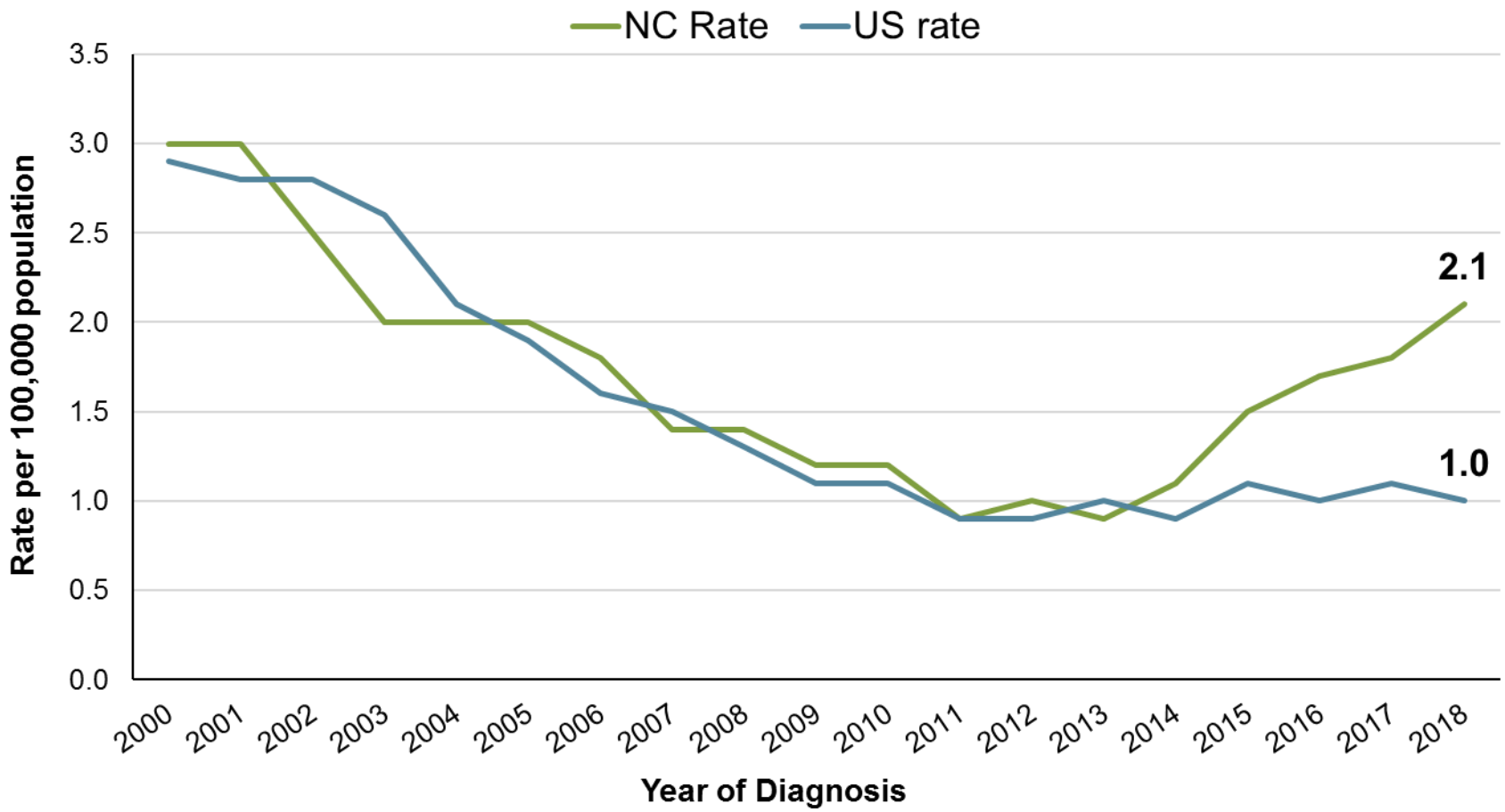
- Using national prevalence data, CDC estimates that 850,000 people are living with HBV in the U.S.
  - Some studies suggest as many as 2.2 million could be living with HBV
  - In North Carolina, at the end of 2018 there were 24,336 people diagnosed with chronic HBV and presumed alive

- Data reveal 47%-70% of people living with HBV in the U.S. were born in other countries where routine HBV immunization was introduced more recently than U.S.
  - Of people with HBV born outside the U.S., an estimated 58% migrated from Asia

- CDC mortality data show disproportionate numbers of Asians/Pacific Islanders in the U.S. are dying with HBV.

Source: Surveillance for Viral Hepatitis-United States, 2016 from Centers for Disease Control and Prevention (https://www.cdc.gov/hepatitis/statistics/index.htm).

Acute HBV Rates in North Carolina and United States, 2000-2018

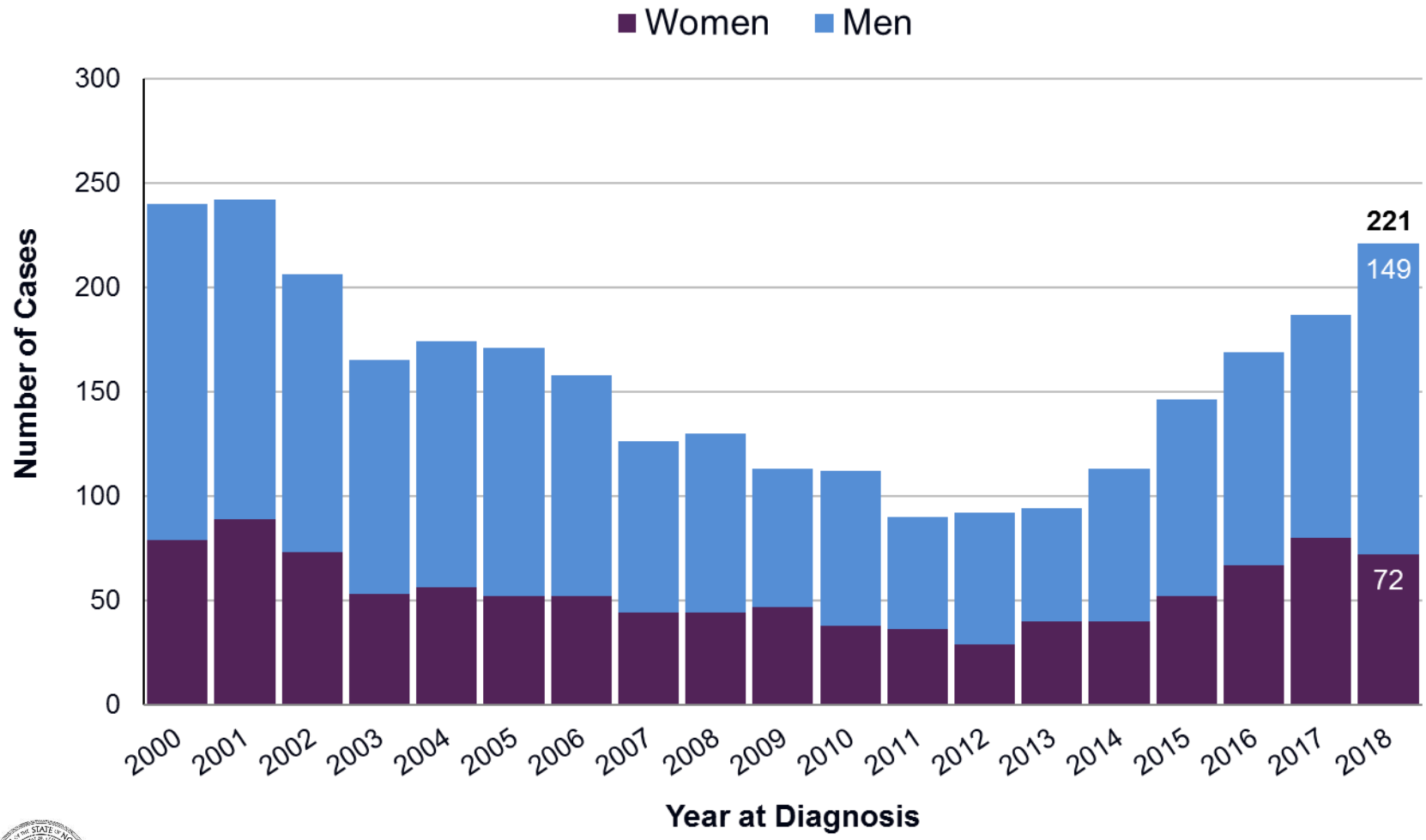


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019) and Surveillance for Viral Hepatitis, United States, 2000-2016 CDC reports (https://www.cdc.gov/hepatitis/statistics/index.htm) and CDC DVH Quarter 5 Hepatitis Reports (June 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV Cases By Gender North Carolina, 2000-2018

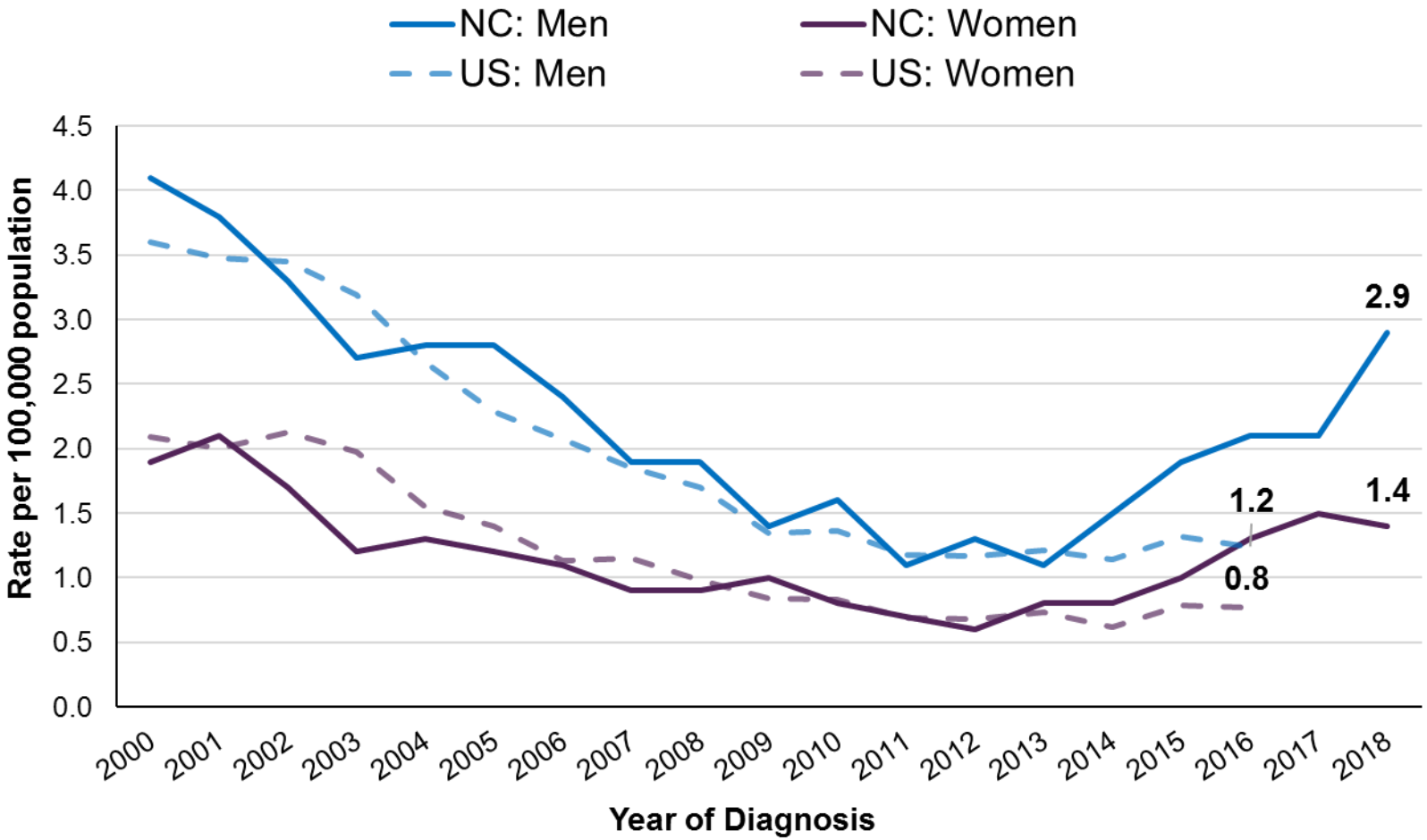


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV Rates by Gender in North Carolina and United States, 2000-2018

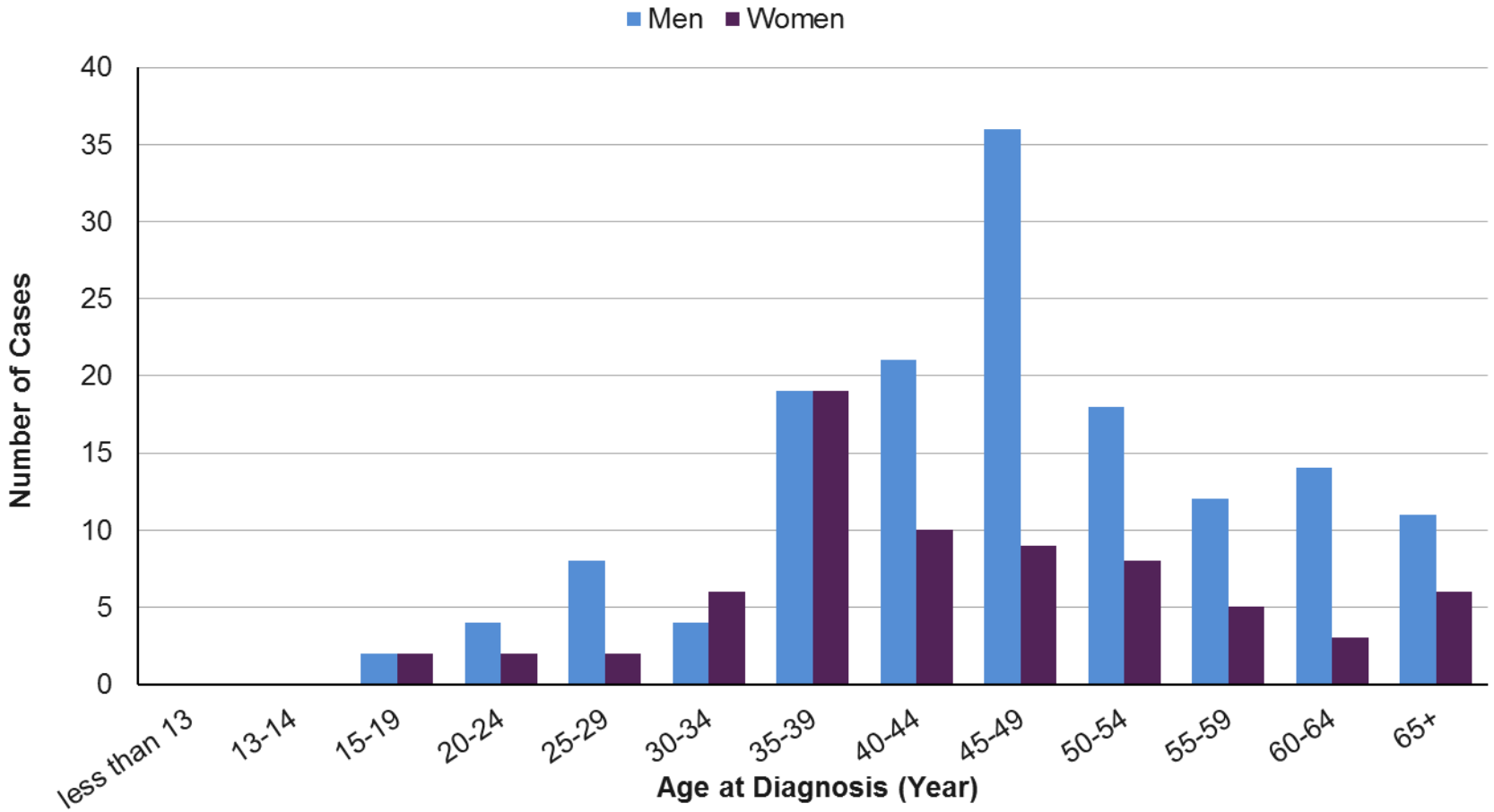


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019) and Surveillance for Viral Hepatitis, United States, 2009-2016 CDC reports (https://www.cdc.gov/hepatitis/statistics/index.htm).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Age Distribution of Acute HBV Cases by Gender, North Carolina, 2018

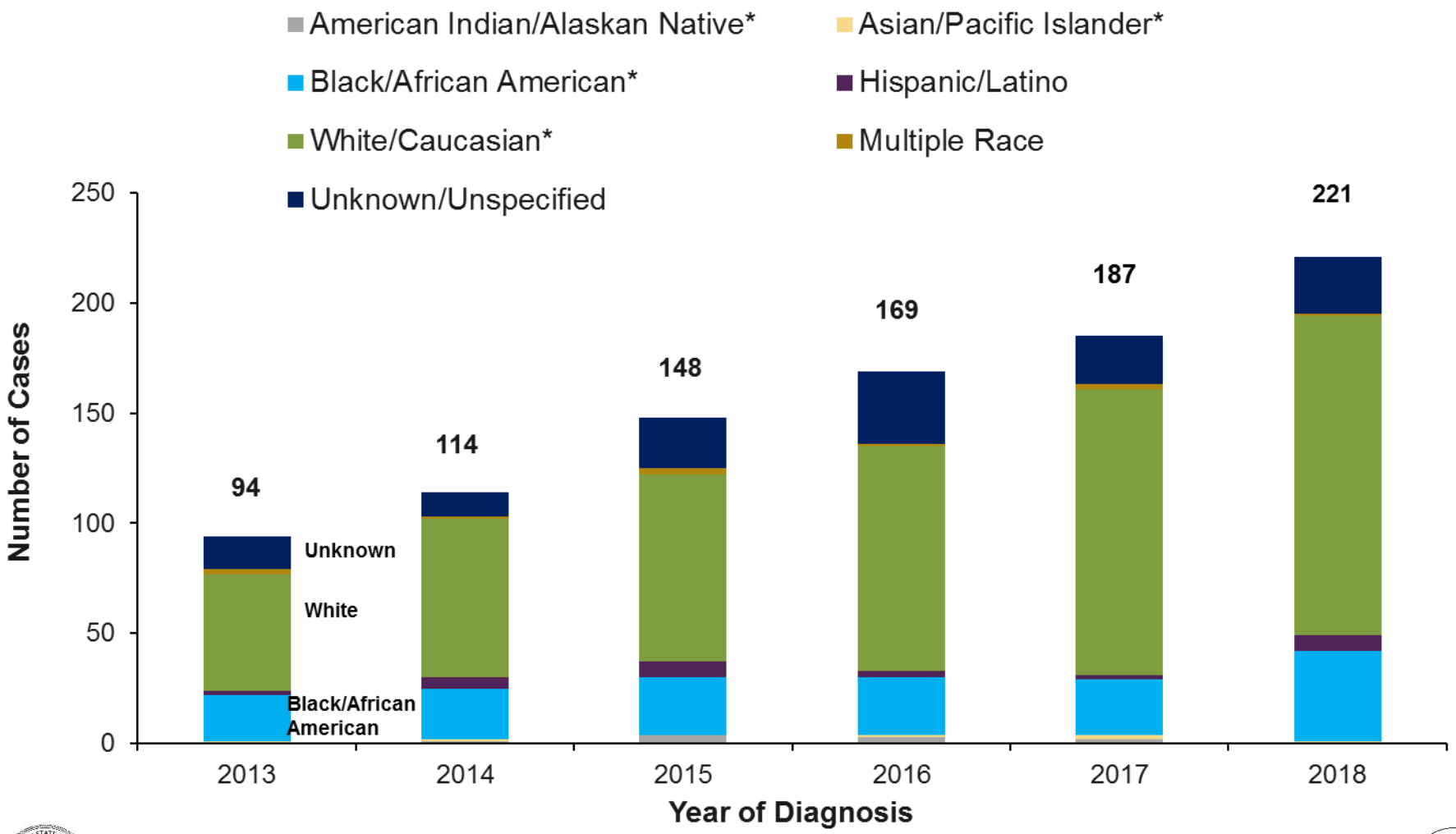


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV Cases by Race/Ethnicity North Carolina 2013-2018



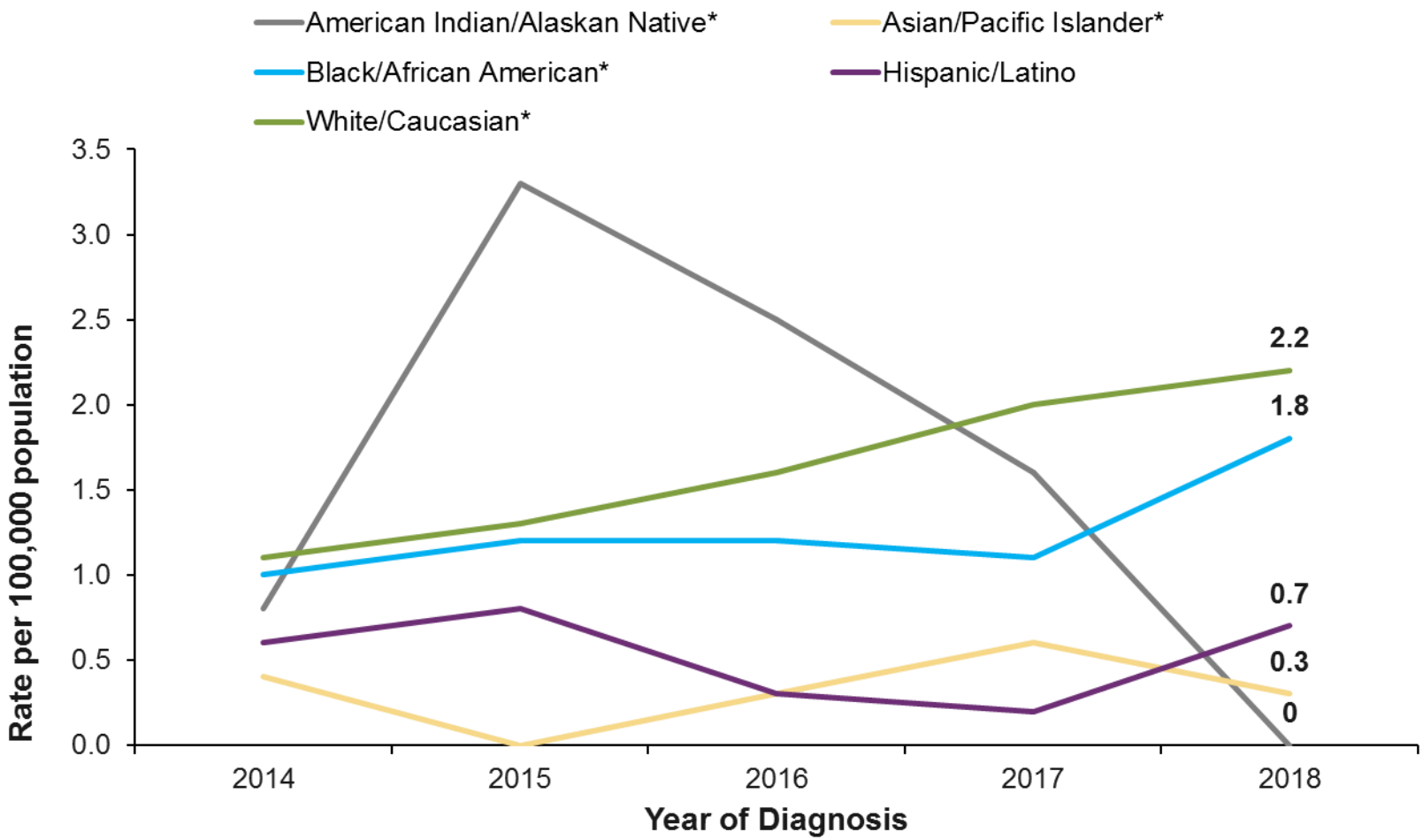
*Non-Hispanic/Latino

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV Rates by Race/Ethnicity North Carolina 2014-2018



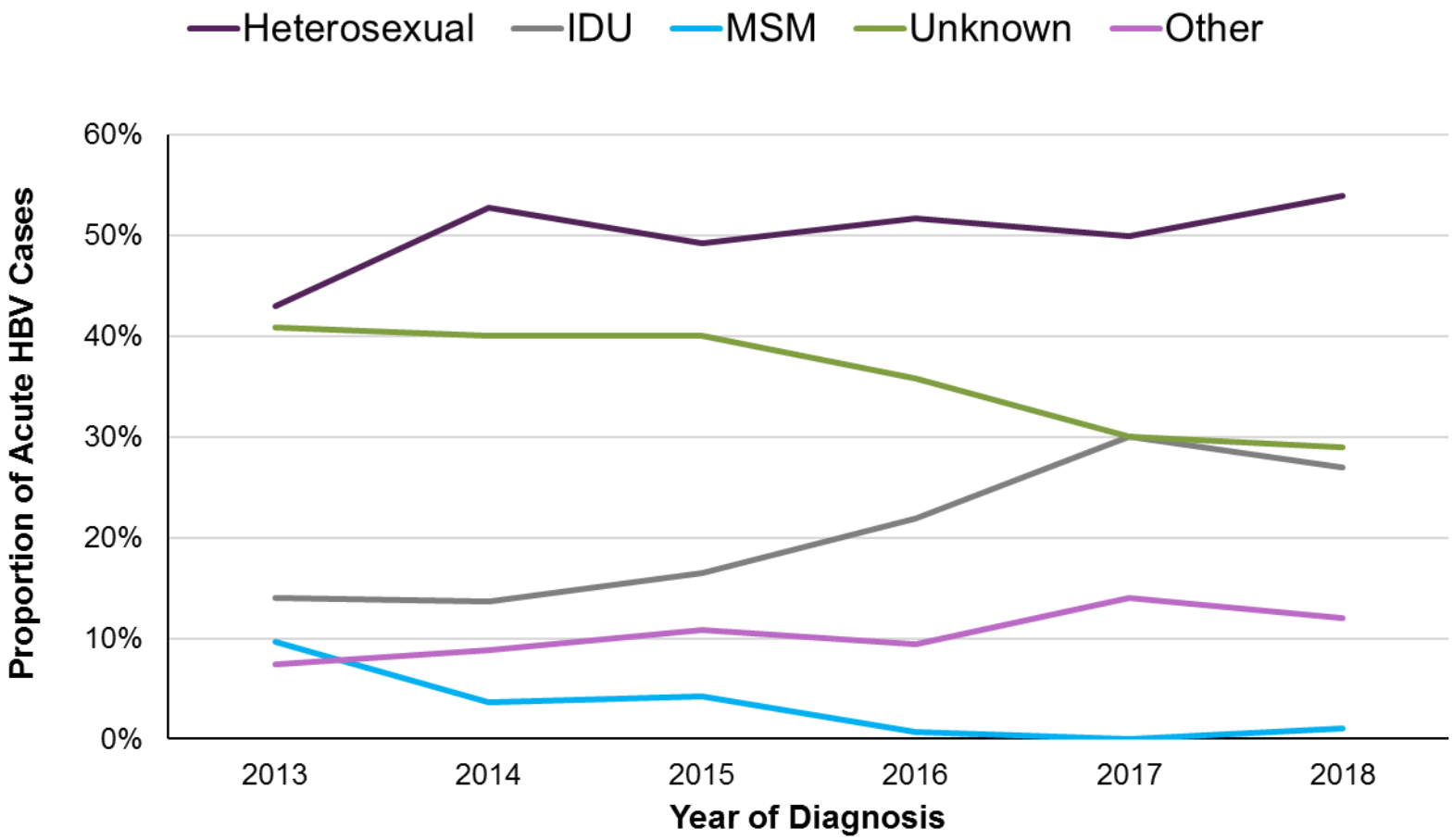
*Non-Hispanic/Latino

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV Cases by Reported Risk*
North Carolina 2013-2018

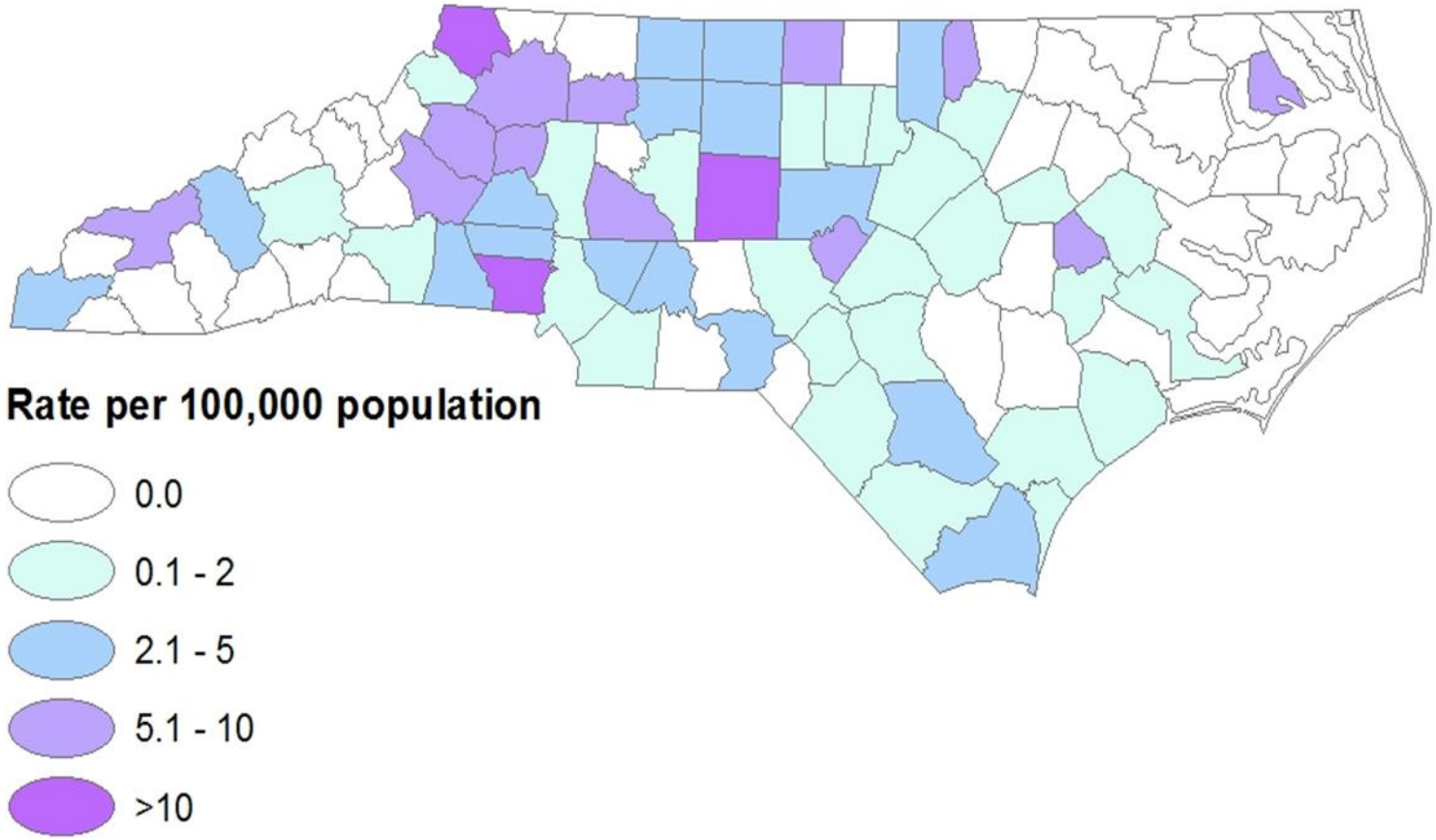


*People may report more than one risk, so totals may not add up to the case total. Rates are not presented due to the lack of population data for the exposure groups.
Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Acute HBV County Rates in North Carolina 2018

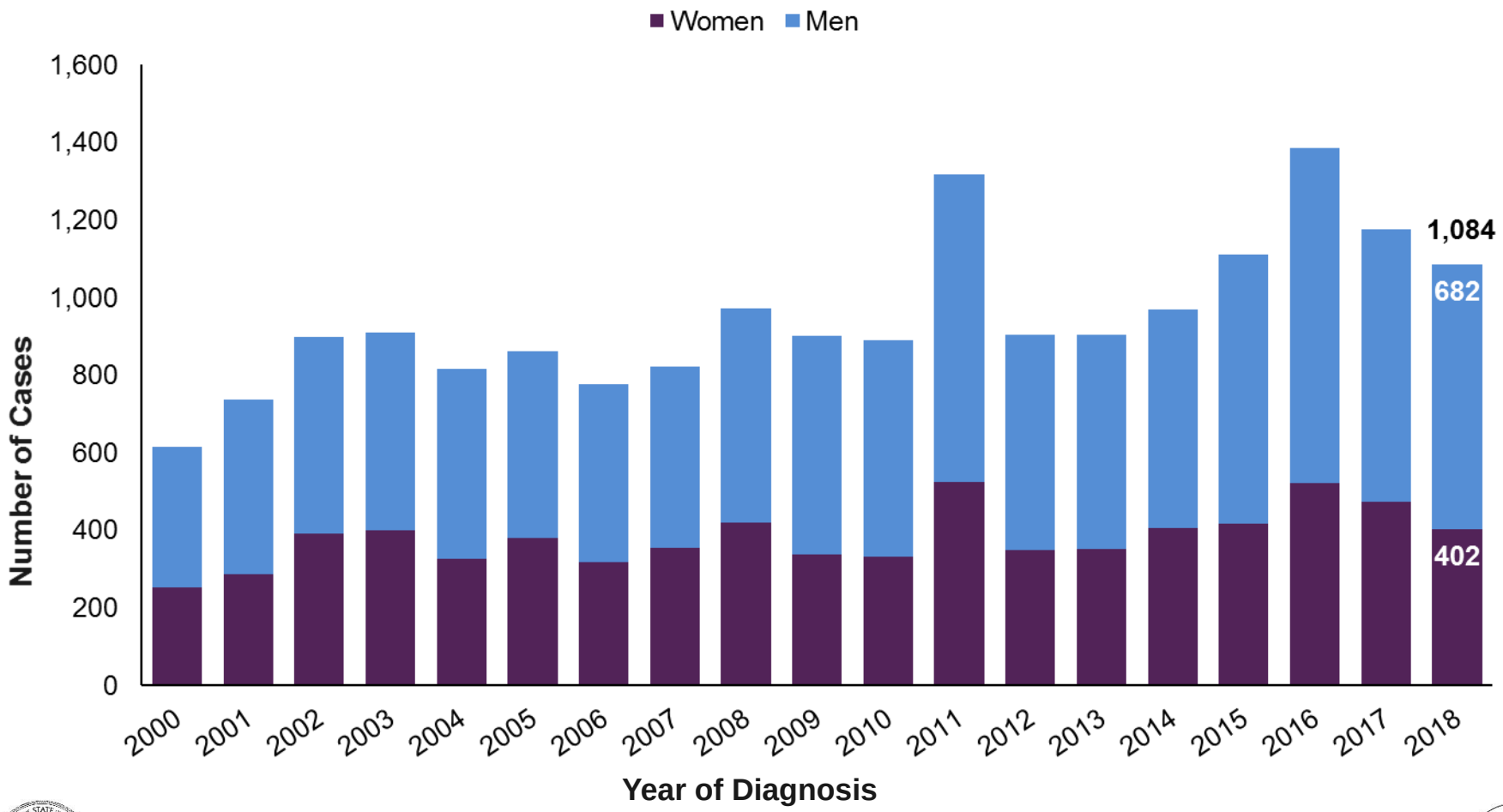


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV Cases By Gender North Carolina, 2000-2018

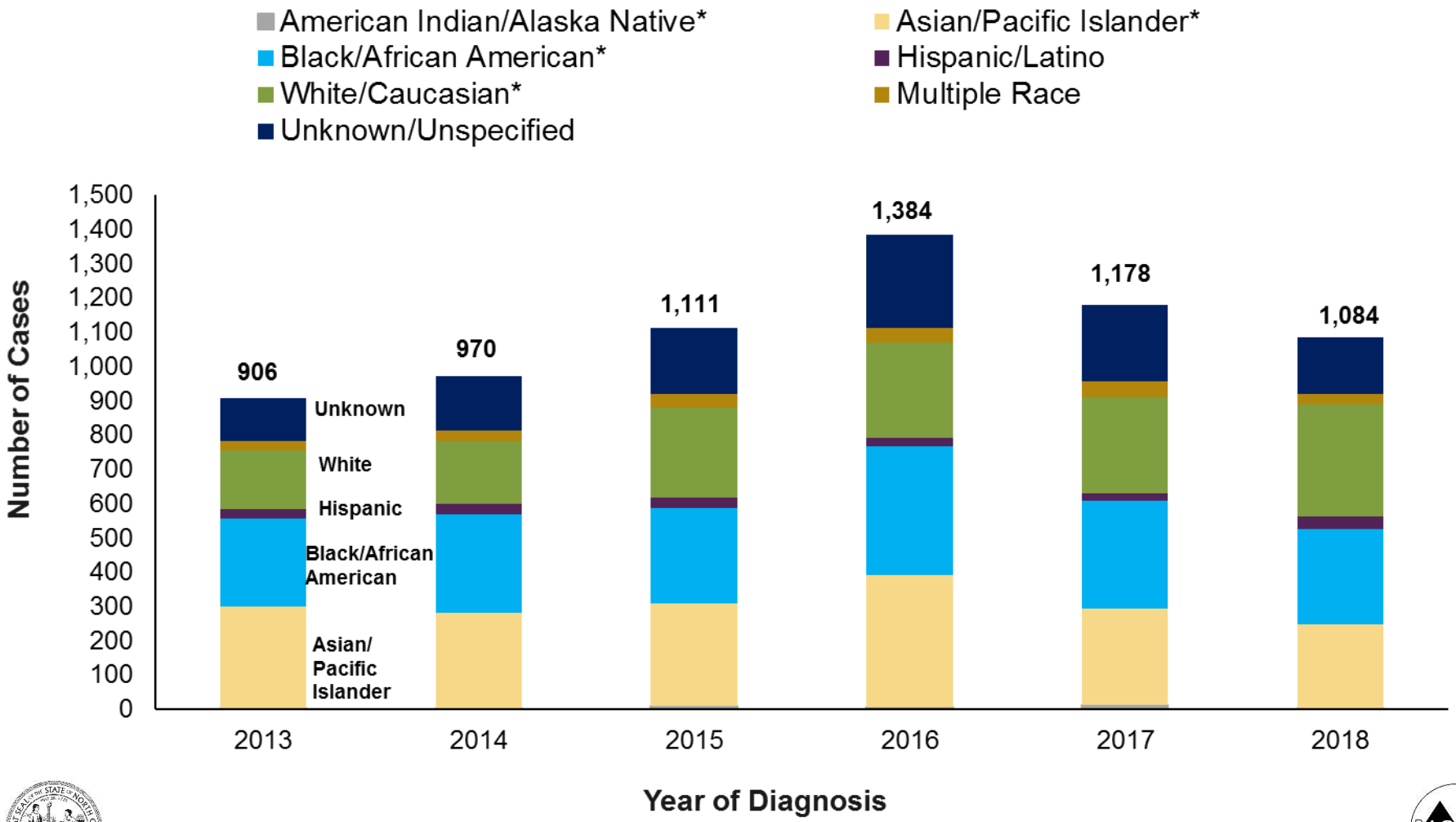


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV Cases by Race/Ethnicity North Carolina 2013-2018



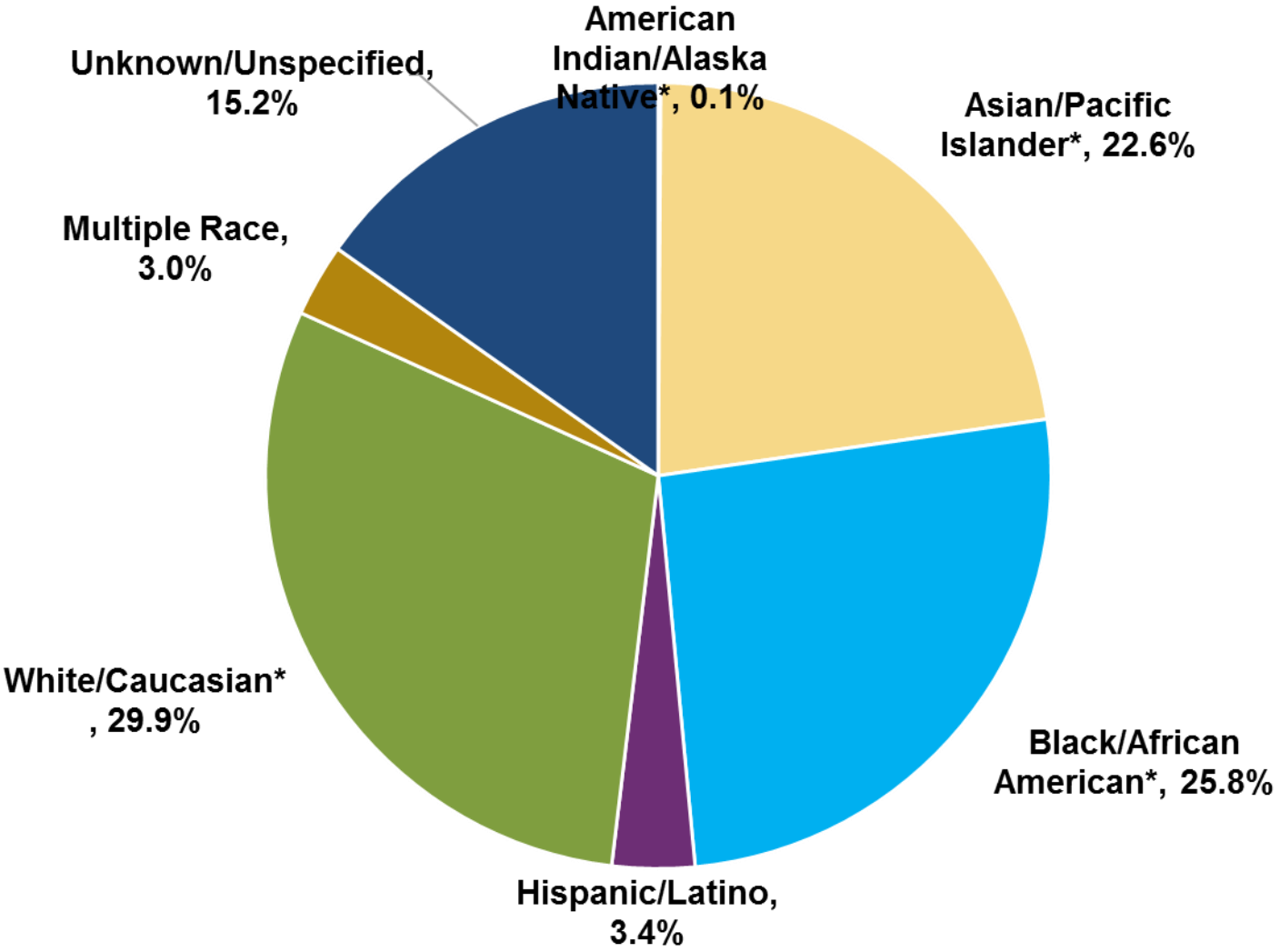
*Non-Hispanic/Latino

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV in North Carolina, 2018



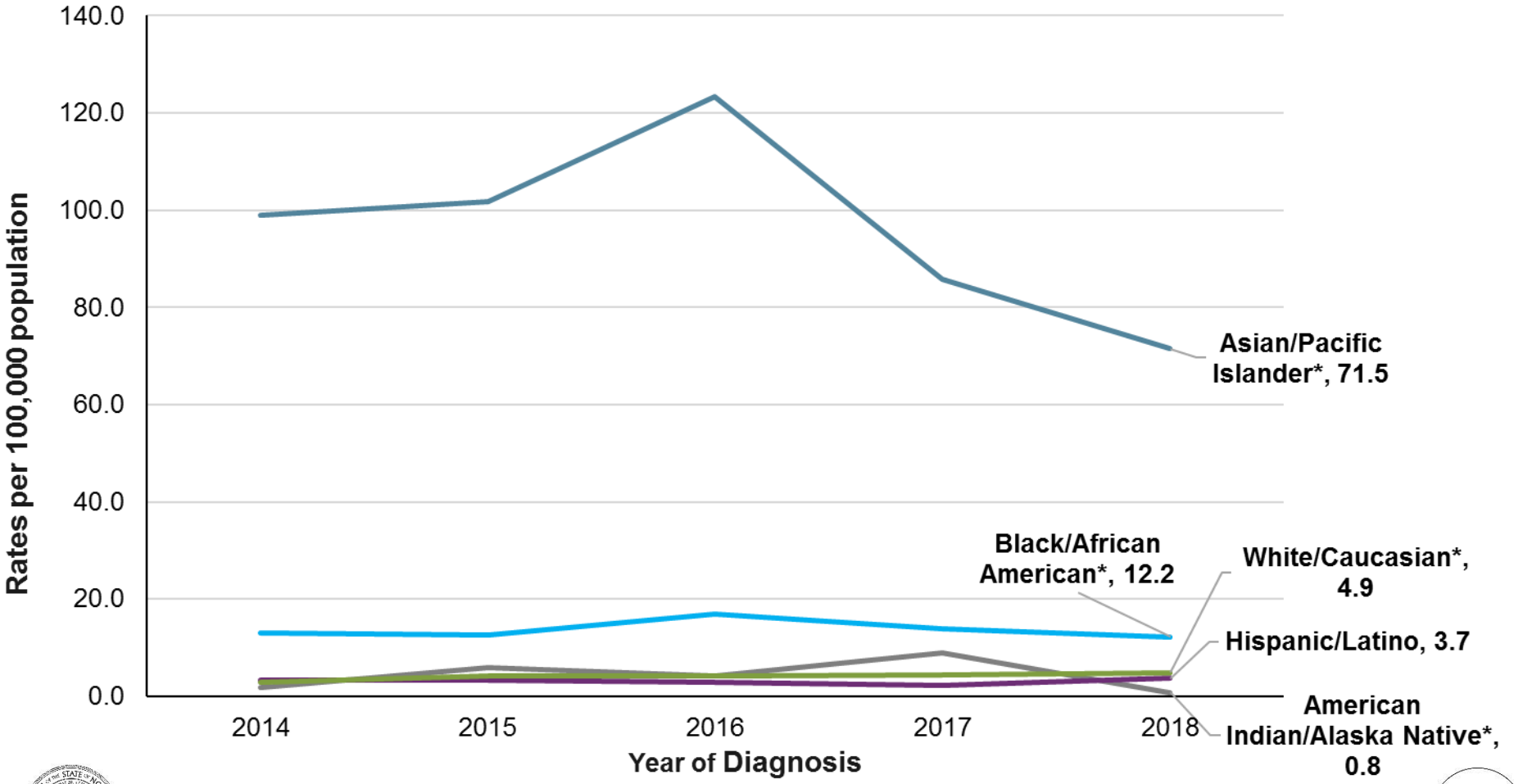
*Non-Hispanic/Latino

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV Rates by Race/Ethnicity North Carolina 2014-2018



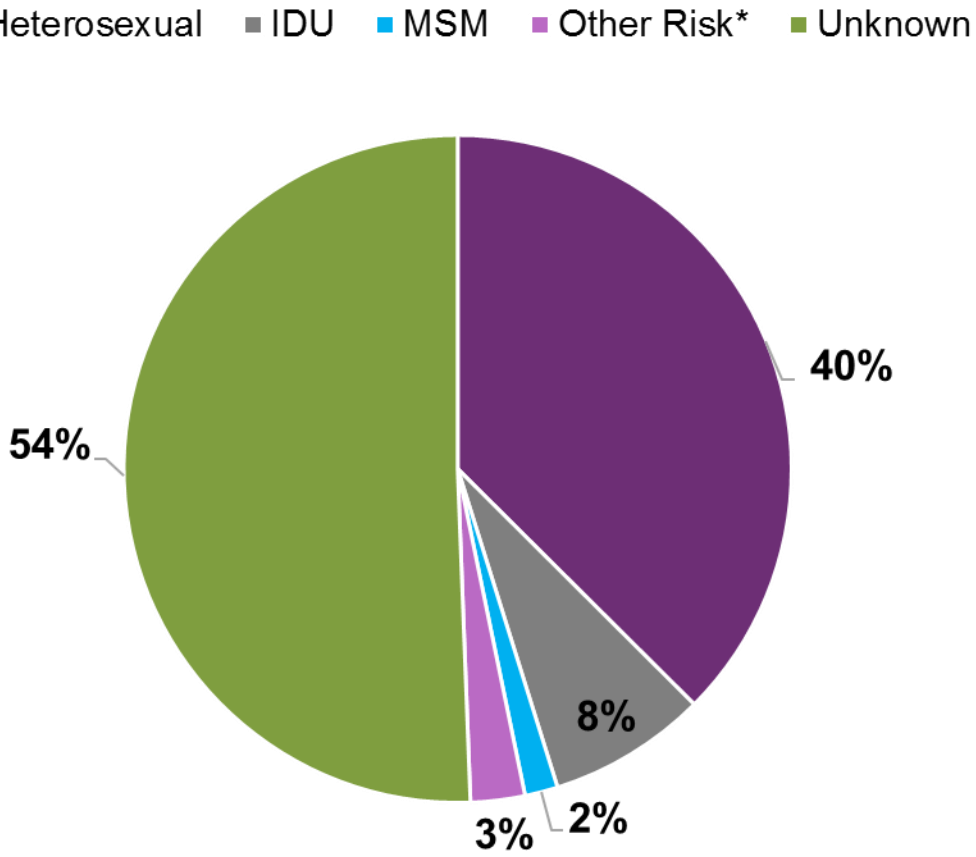
*Non-Hispanic/Latino

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV Cases by Reported Risk* North Carolina 2018

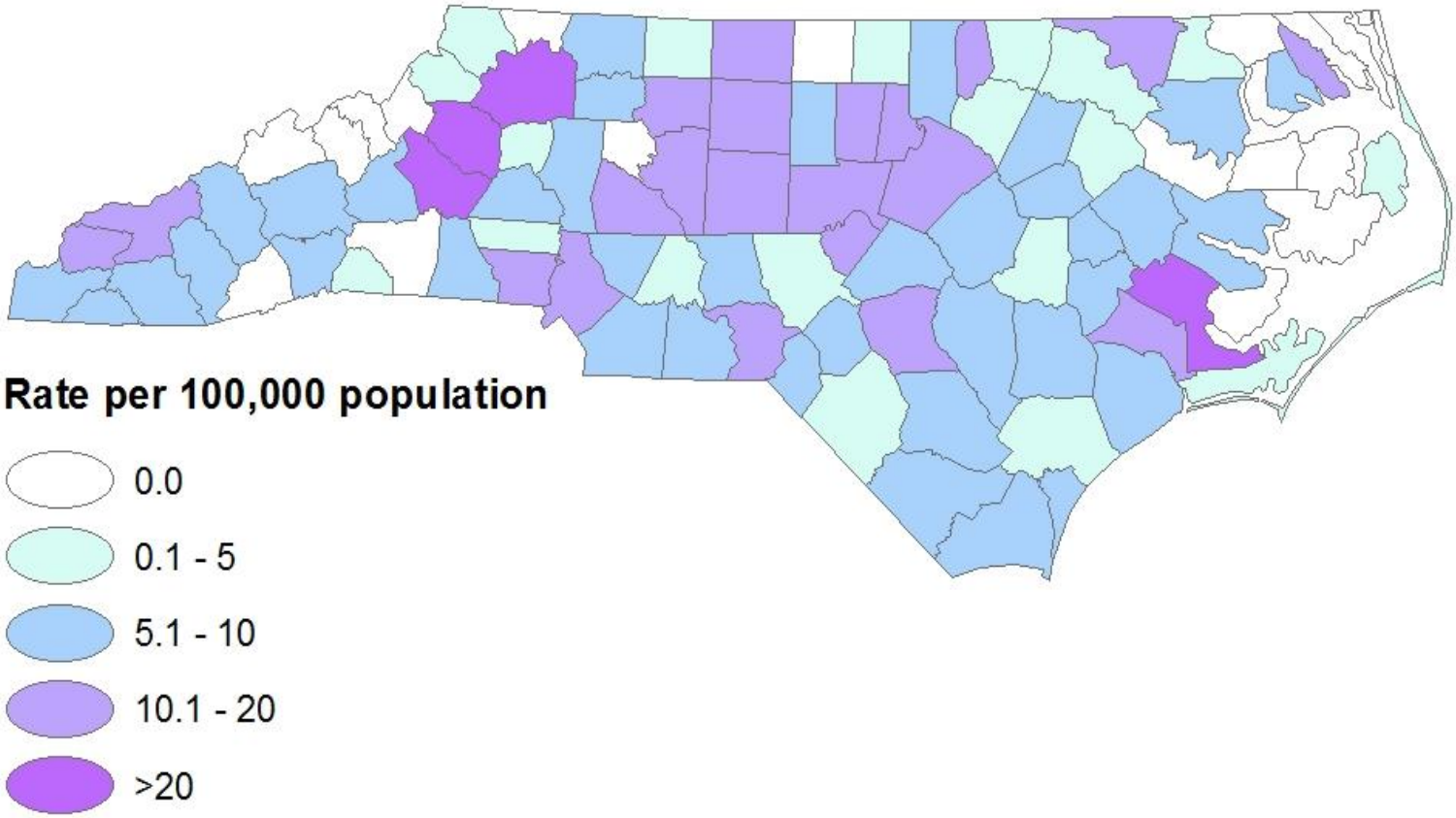


*People may report more than one risk, so totals may not add up to the case total. Rates are not presented due to the lack of population data for the exposure groups. Other risk includes healthcare exposure, or contact with a positive HBV individual.
Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

Chronic HBV County Rates in North Carolina 2018



Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

VIRAL HEPATITIS AND CO-MORBIDITIES

Conquering the Syndemic: The Impact of HCV, HIV, and Opioid Overdoses in North Carolina

HCV

- Reported acute HCV, 2018[1] = 191 (5-fold increase from 2010)
- Estimated people living with chronic HCV in U.S., 2016[2] = 2.4 million
  (Trends in mortality and curative treatment indicate the prevalence is lower today.)
- Average lifetime treatment cost of chronic HCV[3] = $100,000/person

Syndemic

- Estimate 7-13% of HIV-infected people in NC are co-infected with HCV (CDC estimates 25%)[4,5]
- At least 6% of people diagnosed with HIV in NC in 2018 were exposed through injection drug use[1]
- An estimated 50%–90% of HIV-infected injection drug users are co-infected with HCV[6]
- Around 50% of people with acute HCV in 2018 reported injection drug use[1]

Opioid Overdoses

- Prescription opioid deaths in NC, 2016[7] = 1,194
- Heroin deaths, 2016[7] = 697
- CDC estimates the cost of drug overdose deaths in NC, 2016[8] = $1.3 billion

HIV Infections

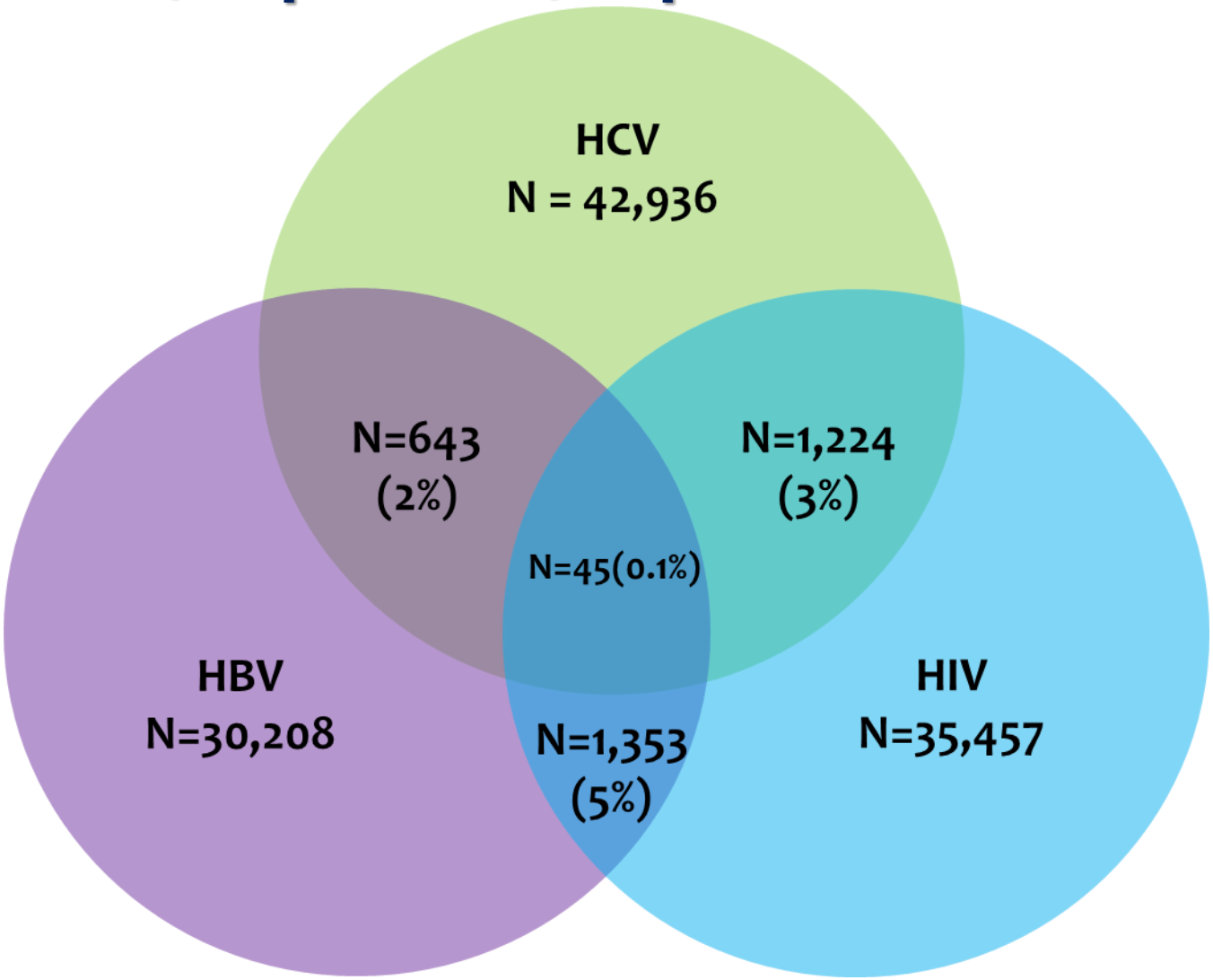
- Newly reported HIV, 2018[1] = 1,218
- People living with HIV, 2018[1] = 35,457
- Average lifetime treatment cost of HIV[9] = >$370,000/person

[1]NC HIV/STD/Hepatitis Annual Surveillance Report, 2018; [2]CDC Surveillance for Viral Hepatitis (https://www.cdc.gov/hepatitis/hcv/hcvfaq.htm#Ref01). [3]In the absence of liver transplant (C. Everett Koop Institute, Dartmouth http://www.epidemic.org/thefacts/theepidemic/USHealthCareCosts/);[4]Based on estimates from NC Ryan White CAREWare and the Medical Monitoring Project in NC;[5]CDC HIV and Viral Hepatitis Fact Sheet https://www.cdc.gov/hiv/pdf/library_factsheets_hiv_and_viral_hepatitis.pdf ;[6]HIV/AIDS and Viral Hepatitis, CDC https://www.cdc.gov/hepatitis/populations/hiv.htm; [7]Prescription & Drug Overdoses Fact Sheet, 2016 http://www.injuryfreenc.ncdhhs.gov/About/PrescriptionFactSheet2015-Oct2016.pdf; [8] Prescription & Drug Overdoses Fact Sheet, 2017 https://ncdhhs.s3.amazonaws.com/s3fs-public/Prescription%20fact%20sheet%20SEC_FINAL_03_07_17.pdf. [9]HIV Cost-effectiveness, CDC: https://www.cdc.gov/hiv/programresources/guidance/costeffectiveness/index.html).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health

2018 HIV/Hepatitis B/Hepatitis C Coinfection



Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 26, 2019) and North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

North Carolina Public Health