

2018 North Carolina Hepatitis B/C Surveillance Report

**HIV/STD/Hepatitis Surveillance Unit
Division of Public Health
North Carolina Department of Health and Human Services
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NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**



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Summary

Hepatitis B

- The number of people diagnosed with acute hepatitis B in North Carolina in 2018 was 221, a rate of 2.1 per 100,000 population, an increase from 187 cases in 2017 (1.8 per 100,000 population).
- The highest rates of acute hepatitis B occurred among the 35 to 49-year-old age group. This age group comprised 50% of the total acute hepatitis B cases.
- In 2018, White/Caucasian men and women had the highest acute hepatitis B rates (2.9 and 1.5 per 100,000, respectively) and comprised 65.6% of the total acute hepatitis B cases.
- In 2018, the exposure most frequently reported by people with acute hepatitis B was heterosexual contact (54%), followed by IDU (27%).
- The number of people diagnosed with chronic hepatitis B in North Carolina in 2018 was 1,084 at a rate of 10.4 per 100,000. The majority of cases were among men (rate of 13.5 per 100,000), the 35-39 age group (rate of 22.0 per 100,000), and Asian/Pacific Islander (rate of 71.5 per 100,000). Risk was not reported for over 50% of cases.
- As of December 31, 2018, 24,336 people had been diagnosed with chronic hepatitis B in North Carolina.

Hepatitis C

- The number of people diagnosed with acute hepatitis C in North Carolina in 2018 was 191, a rate of 1.8 per 100,000 population, which is similar to the 188 cases diagnosed and reported in 2017 (1.8 per 100,000 population).
- The highest rates of acute hepatitis C occurred among the 20 to 39-year-old age group. This age group comprised 72.3% of the total acute hepatitis C cases.
- In 2018, White/Caucasian men and women had the highest acute hepatitis C rates (2.2 and 1.9 per 100,000, respectively) and comprised 73% of the total acute hepatitis C cases.
- In 2018, the most frequently reported risk factor by people with acute hepatitis C was IDU (50%), followed by heterosexual contact (41%).
- As of December 31, 2018, there have been 41,096 cases of chronic hepatitis C reported to North Carolina since 2016. In 2018, 16,399 chronic hepatitis C cases were reported to the state. The majority of cases were among men (59%), in both the 25-34 age group (24%) and 50-64 age group (37%); for the majority of cases, race/ethnicity is unknown (55%). Risk was not reported for over 50% of cases.

HEPATITIS B AND C IN NORTH CAROLINA

Hepatitis B and C Reporting in North Carolina

In North Carolina, laboratory results and symptoms diagnostic of acute, chronic, and perinatal hepatitis B and acute hepatitis C are reportable by law to the North Carolina Department of Health and Human Services (North Carolina DHHS). Statewide surveillance information is collected by the local health departments and sent to the North Carolina Division of Public Health. Hepatitis B and C in North Carolina are required to be reported to the local health department following the schedule below:

Within 24 hours	Within seven days
Acute Hepatitis B	Chronic Hepatitis B
Perinatal Hepatitis B	Acute Hepatitis C

*Note Chronic hepatitis C, which is primarily reported in North Carolina by electronic lab reporting (ELR), does not have a timeframe for reporting to North Carolina Division of Public Health.

Hepatitis B

Hepatitis B is a vaccine-preventable, mild-to-severe liver infection, caused by the hepatitis B virus (HBV), which can advance from acute to chronic. The Centers for Disease Control and Prevention (CDC) estimates that there are 850,000 people living with HBV, with about 21,000 new infections a year in the United States.¹ Nationally, there has been an increase in the rate of new acute HBV infections, which is likely due to the increase in injection drug use.² HBV is a leading cause of liver cancer.

Acute versus Chronic Hepatitis B

Acute infection ranges from asymptomatic or mild disease to — rarely — fulminant hepatitis. Some acute HBV infections will resolve on their own, but some will develop into chronic infection. Most people with chronic HBV infection are asymptomatic and have no evidence of liver disease. However, some people may develop chronic hepatitis (elevation of aspartate aminotransferase [AST]/alanine aminotransferase [ALT]), cirrhosis, or hepatocellular carcinoma (a type of liver cancer).² The younger a person is when infected with hepatitis B virus, the greater the chance of developing a chronic infection. Approximately 90% of infected infants will develop chronic infection; the risk goes down as a child gets older. One-quarter to one-half of children infected between the ages of one and five years will develop chronic hepatitis B. Between 15%-25% of people with chronic HBV will develop chronic liver disease, including cirrhosis, liver failure, or liver cancer.¹ Around 25% of people with chronic HBV infected in

¹Centers for Disease Control and Prevention (CDC) (2019). *What is Viral Hepatitis?* Updated April 8, 2019. Accessed May 7, 2019. Retrieved from <https://www.cdc.gov/hepatitis/abc/index.htm>.

²Centers for Disease Control and Prevention (CDC) (2019). *Hepatitis B Questions and Answers for Health Professionals*. Updated May 16, 2019. Accessed June 17, 2019. Retrieved from <https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#overview>.

childhood and 15% of people infected with chronic HBV after childhood die prematurely from cirrhosis or liver cancer.²

Transmission of Hepatitis B

HBV can survive outside the body for at least seven days and still cause infection.² HBV can be transmitted through sex with an infected person, sharing contaminated equipment, sharing personal items (such as toothbrushes and razors), and breaches in infection control resulting in outbreaks in health care facilities. Vertical transmission can also occur between an infected mother and her infant (perinatal HBV).¹ The majority of infections due to perinatal transmission diagnosed in North Carolina are found in people born in other countries, primarily Asian and African countries, who are now North Carolina residents.

People at risk for HBV include:

- Infants born to HBV-infected mothers;
- Sexual partners of HBV-infected people;
- Men who report sex with men;
- People who inject drugs;
- Household contacts of HBV-infected people;
- Health care and public safety workers at risk for occupational exposure; and
- Hemodialysis patients.²

Symptoms of Hepatitis B

Newly acquired HBV infections only cause symptoms in certain cases, and it does vary by age. Most children under the age of five are generally asymptomatic, while 30%-50% of people older than five years of age have symptoms. People who are immunocompromised are also generally asymptomatic.² Symptoms for acute HBV include fever, fatigue, nausea, vomiting, abdominal pain, jaundice and dark urine. If symptoms do occur, they begin on average 90 days after HBV exposure. Symptoms can typically last for several weeks but can persist up to six months.¹ Since, acute infections can be asymptomatic and diagnostic criteria for chronic infections are relatively non-specific, a portion of the reported chronic cases may in fact be acute.³

Screening for Hepatitis B

Screening for HBV should be done for individuals born in countries with high HBV prevalence, men who have sex with men, people who are HIV positive, household/sexual and needle sharing partners of HBV positive people, people who require immunosuppressive therapies, people undergoing hemodialysis,

¹Centers for Disease Control and Prevention (CDC) (2019). *What is Viral Hepatitis?* Updated April 8, 2019. Accessed May 7, 2019. Retrieved from <https://www.cdc.gov/hepatitis/abc/index.htm>.

²Centers for Disease Control and Prevention (CDC) (2019). *Hepatitis B Questions and Answers for Health Professionals*. Updated May 16, 2019. Accessed June 17, 2019. Retrieved from <https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#overview>.

³Centers for Disease Control and Prevention. (2012). Chapter 9: Hepatitis B - epidemiology and prevention of vaccine-preventable diseases. In W. Atkinson, S. Wolfe, & J. Hamborsky (Eds.). *The Pink Book: Course Textbook*, 12th edition, 2nd print (pp. 115-138). Washington DC: Public Health Foundation. Retrieved from <http://www.cdc.gov/vaccines/pubs/pinkbook/hepb.html>.

blood and tissue donors, pregnant women, infants born to HBV-infected mothers, and people with elevated alanine aminotransferase levels.²

Treatment for Hepatitis B

There is no treatment for acute HBV as the majority will self-clear about 90 to 95% of the time. Chronic HBV is treated with several antiviral medications aimed at suppressing and decreasing the pathogenicity of the virus.¹ There is no cure for HBV at this time.

Vaccination for Hepatitis B

The first HBV vaccine became commercially available in the United States in 1982. There are three single-antigen and three combination vaccines available for HBV in the United States. The vaccination schedule most often used for children and adults is 3 intramuscular injections, the second and third doses administered at 1 and 6 months, respectively, after the first dose.¹ It is recommended that all children 0-18 years of age receive the vaccine, and all other adults receive it as soon as possible.

The Advisory Committee on Immunization Practices (ACIP) recommends vaccinations to the following people:

- All infants;
- Unvaccinated children under the age of 19;
- People at risk for infection by sexual exposure;
- People who inject drugs;
- Household contacts of HBV-infected people;
- Health care and public safety workers at risk for occupational exposure;
- Hemodialysis patients;
- People with diabetes;
- International travelers to countries with high or intermediate levels of endemic HBV;
- People who are infected with hepatitis C;
- People with HIV;
- People with chronic liver disease;
- People who are incarcerated; and
- People seeking protection from HBV.²

¹Centers for Disease Control and Prevention (CDC) (2019). *What is Viral Hepatitis?* Updated April 8, 2019. Accessed May 7, 2019. Retrieved from <https://www.cdc.gov/hepatitis/abc/index.htm>.

²Centers for Disease Control and Prevention (CDC) (2019). *Hepatitis B Questions and Answers for Health Professionals*. Updated May 16, 2019. Accessed June 17, 2019. Retrieved from <https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#overview>.

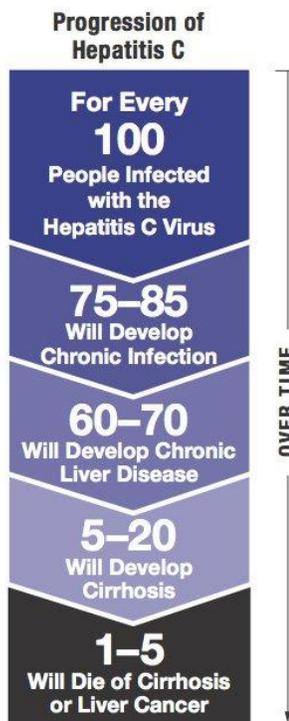
Hepatitis C

Hepatitis C is a liver infection, caused by the hepatitis C virus (HCV), which can advance from acute to chronic. The CDC estimates that over 2.4 million people are living with HCV, and that there are around 41,000 new infections annually in the United States. HCV is a common reason for liver transplants in the United States.¹ In North Carolina, we estimate that 150,000 people are infected with chronic HCV.

Acute versus Chronic Hepatitis C

HCV can be classified as acute (mild illness lasting a few weeks and up to 6 months) or chronic (life-long). Most people who get infected with HCV develop chronic HCV.⁴ Around 75%-85% of people who get infected with HCV develop a chronic infection. From 5%-20% of people who develop chronic HCV develop cirrhosis, and 1%-5% will die from either cirrhosis or liver cancer (Figure 1).^{4,5}

Figure 1. Progression of Hepatitis C⁵



Transmission of Hepatitis C

HCV transmission occurs primarily through infected blood. The most common way HCV is transmitted in the United States is through injection drug use. HCV can also be transmitted through the receipt of blood (including blood products and organs), needlestick injuries in health care settings, and through vertical transmission (HCV-infected mother-to-child). While infrequent, HCV can also be spread through

¹Centers for Disease Control and Prevention (CDC) (2019). *What is Viral Hepatitis?* Updated April 8, 2019. Accessed May 7, 2019. Retrieved from <https://www.cdc.gov/hepatitis/abc/index.htm>.

⁴Centers for Disease Control and Prevention (CDC) (2019). *Hepatitis C Questions and Answers for Health Professionals*. Updated May 16, 2019. Accessed June 17, 2019. Retrieved from <https://www.cdc.gov/hepatitis/hcv/hcvfaq.htm#section2>.

⁵Image from Hepatitis Foundation International. Accessed on June 18, 2019. <https://hepatitisfoundation.org/HEPATITIS/Hepatitis-C.html>.

sexual contact with an HCV-infected person, sharing personal items contaminated with infectious blood (such as toothbrushes and razors), unregulated tattooing, and other health care procedures that involve invasive procedures.⁴

People at risk for HCV include:

- People who inject drugs;
- Recipients of clotting factor concentrates made before 1987;
- Recipients of blood transfusions or solid organ transplants prior to July 1992;
- Children born to HBV-infected mothers;
- People with HIV;
- Health care worker with known exposure to HCV;
- Recipients of blood or organs from a donor who tested positive for HCV; and
- Hemodialysis patients.⁴

Symptoms of Hepatitis C

The majority of people who newly acquire HCV are usually asymptomatic or have mild symptoms. When symptoms do occur, they include fever, fatigue, nausea, vomiting, abdominal pain, joint pain, jaundice, dark urine, and clay-colored stool. If symptoms do occur, they begin on average two to 12 weeks after HCV exposure.⁴ The acute form of the infection is a short-term illness that occurs within the first six months after someone is exposed to the virus. Most people infected with chronic HCV are asymptomatic or have non-specific symptoms (like fatigue and depression).⁴ Progression of chronic liver disease is slow without any symptoms for a few decades. Most HCV infection is not recognized in asymptomatic people until they are screened for either blood donations or if elevated liver enzyme levels are detected during routine examinations.⁴

Screening for Hepatitis C

Screening for HCV should be done for current or former drug users, everyone born from 1945-1965 (Baby Boomers), anyone who received clotting factor concentrates made before 1987, recipients of blood transfusions or organ transplants before 1992, long-term hemodialysis patients, people with known exposures to HCV, people with HIV, and children born to mothers with HCV. It is also recommended to test people in jails or prisons, people who use drugs, and people who get an unregulated tattoo.¹

Treatment for Hepatitis C

Treatment is not recommended for acute HCV. Current therapies to treat chronic HCV can achieve sustained virologic response (SVR) 12 weeks after completion of treatment; an SVR is indicative of a cure of HCV infection. Over 90% of HCV-infected people can be cured of HCV with eight to 12 weeks of oral therapy.⁴

¹Centers for Disease Control and Prevention (CDC) (2019). *What is Viral Hepatitis?* Updated April 8, 2019. Accessed May 7, 2019. Retrieved from <https://www.cdc.gov/hepatitis/abc/index.htm>.

⁴Centers for Disease Control and Prevention (CDC) (2019). *Hepatitis C Questions and Answers for Health Professionals*. Updated May 16, 2019. Accessed June 17, 2019. Retrieved from <https://www.cdc.gov/hepatitis/hcv/hcvfaq.htm#section1>.

The North Carolina Viral Hepatitis Program (NCVHP) manages a statewide bridge counselor program to promote linkage to care activities with patients with HCV. In 2018, there were four HCV bridge counselors in North Carolina; two located in the western part of the state, one centrally located, and one in the southeastern part of the state. In 2019, NCVHP will be adding one more HCV bridge counselor to cover the northeast part of the state. The HCV bridge counselors offer support and guidance to those who may otherwise have difficulty accessing both medical treatment and social services.

NCVHP, in collaboration with Duke University and the University of North Carolina-Chapel Hill, has developed a partnership to address limited resources for HCV treatment. Carolina Hepatitis C Academic Mentorship Program (CHAMP) is a telemedicine program designed to increase access to HCV treatment in North Carolina. CHAMP offers health care providers the opportunity to participate in a “boot camp,” which is a one-day intensive course on successfully treating patients with HCV. In addition to the boot camp, these providers have weekly conference calls with CHAMP mentors, which serve as a time for discussion of cases and continued education on effective treatment options. The team also provides funding for pretreatment lab work for uninsured and underinsured patients, as medication assistance programs do not cover lab costs, and can be a significant barrier for patients to access treatment. For more information about CHAMP, please visit: https://epi.dph.ncdhhs.gov/cd/hepatitis/CHAMP-Brochure_FINAL-WEB.pdf.

Prevention of Hepatitis C

There is no vaccine for HCV, but people infected with HCV should be vaccinated against HBV and hepatitis A.

NCVHP manages several prevention projects, including a perinatal HCV pilot and a testing and outreach partnership with the North Carolina Harm Reduction Coalition (NCHRC). The NCHRC program provides harm reduction materials to syringe access programs and community-based organizations to prevent the transmission of hepatitis, HIV, and other STDs. For more information about NCHRC, please visit: <http://www.nchrc.org/>.

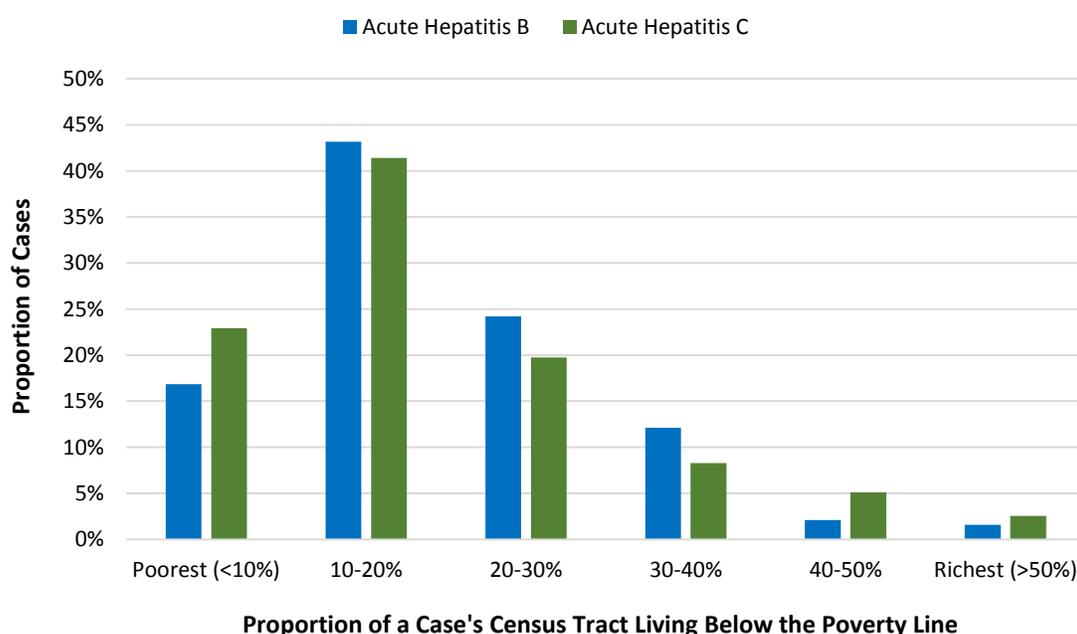
The Injury and Violence Prevention Branch oversees the North Carolina Safer Syringe Initiative. They provide information about existing syringe access programs in the state, resources for health care providers and law enforcement agencies, testing and treatment programs, information about the syringe exchange law, and information for health departments, community-based organizations, and other agencies interested in starting their own access program. For more information, please visit: <https://www.ncdhhs.gov/divisions/public-health/north-carolina-safer-syringe-initiative>.

NCVHP has also created a regional drug user health resource guide. This contains regional specific information on low cost/free clinics, housing, food pantry and community means, hepatitis treatment providers, and syringe access programs. It also includes information on gastroenterologists, medication assisted treatment, behavioral health, and narcotics anonymous chapters. This resource guide is available online: <https://epi.dph.ncdhhs.gov/cd/hepatitis/DrugUserHealthResourceGuide-WEB.pdf>.

Poverty and Hepatitis

While the North Carolina surveillance data shows higher hepatitis rates in some racial and ethnic groups, factors such as poverty and large gaps in wealth distribution may be driving these differences.¹⁶ People who cannot afford basic needs may also have trouble accessing quality health services, and may have had experiences with the health system that discourage the accessing of testing and care.¹⁶ For each person diagnosed with acute HBV or HCV in North Carolina in 2018, we calculated the proportion of the population living below the poverty line in their census tract of residence at the time of their diagnosis using 5-year (2013-2017) estimates from the American Community Survey. This calculation estimated the neighborhood poverty level experienced for people newly diagnosed with STDs or HIV in North Carolina. Figure 1 shows the rate of newly diagnosed STDs by census tract poverty rate. Figure 5 demonstrates that although people living at all levels of poverty get STDs, those living in census tracts with a higher proportion of residents residing below the federal poverty line are more likely to be diagnosed with hepatitis.

Figure 1. People Diagnosed with Acute Hepatitis B and C in North Carolina by Poverty Indicator*, 2018



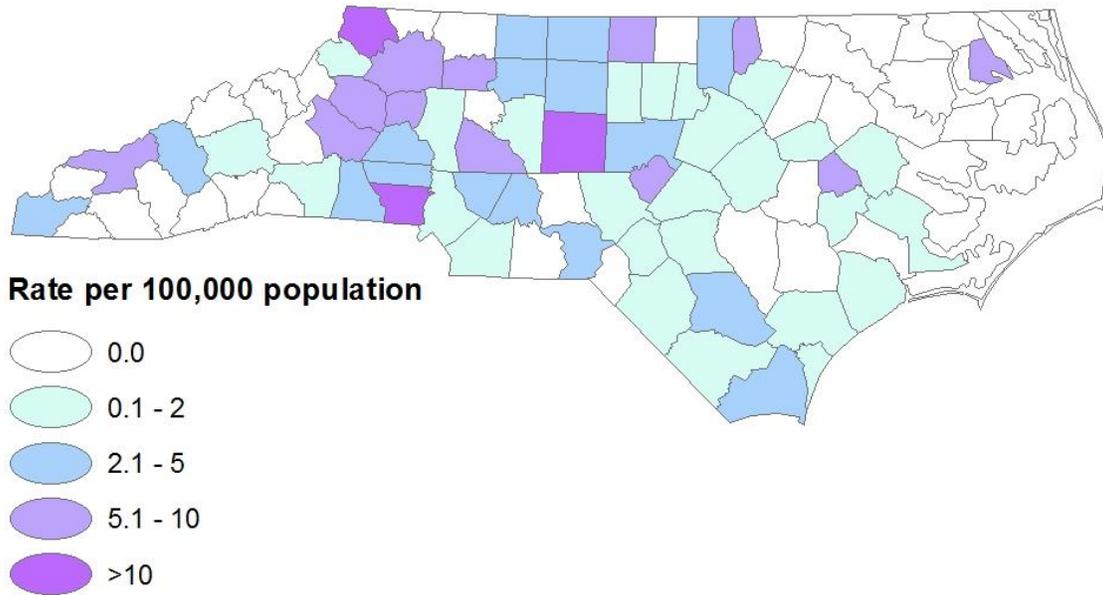
*Estimates of people living below the poverty line within a census tract and all population estimates obtained from the American Community Survey, 2013-2017 5-year estimate.

Data Sources: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 28, 2018), and 2013-2017 American Community Survey (ACS) 5-year estimates (accessed from <https://www.census.gov/programs-surveys/acs/>).

¹⁶ Centers for Disease Control and Prevention. (2017). STD health equity. Updated February 15, 2017. Accessed July 19, 2017. Retrieved from <https://www.cdc.gov/std/health-disparities/default.htm#ftn5>.

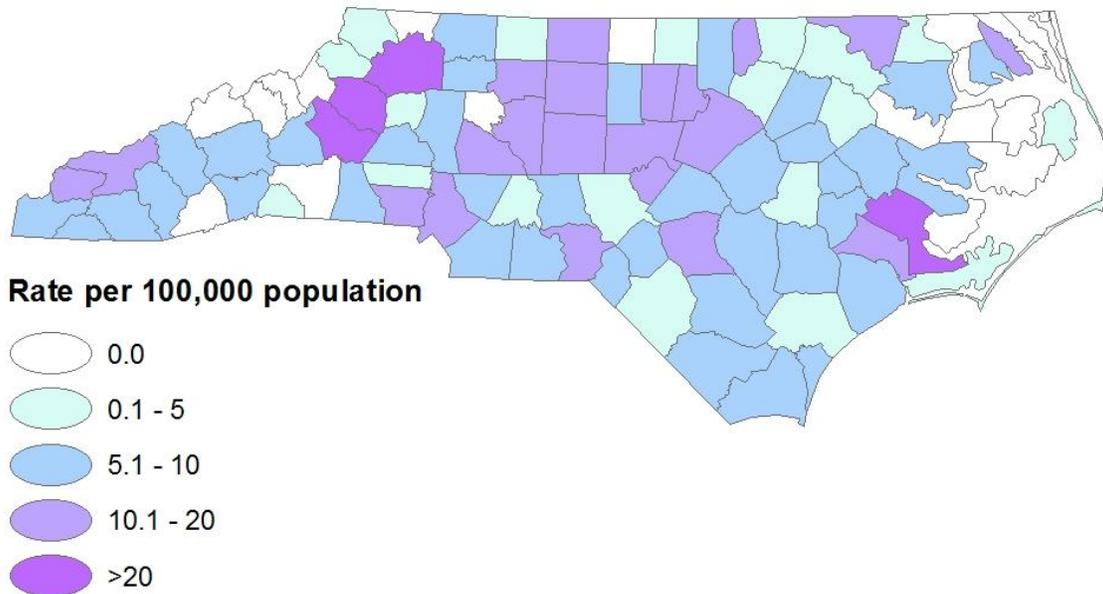
Hepatitis B and C Rate Maps by County of Residence at Diagnosis, 2018

Figure 2. Acute Hepatitis B Rates in North Carolina by County of Residence at Diagnosis, 2018



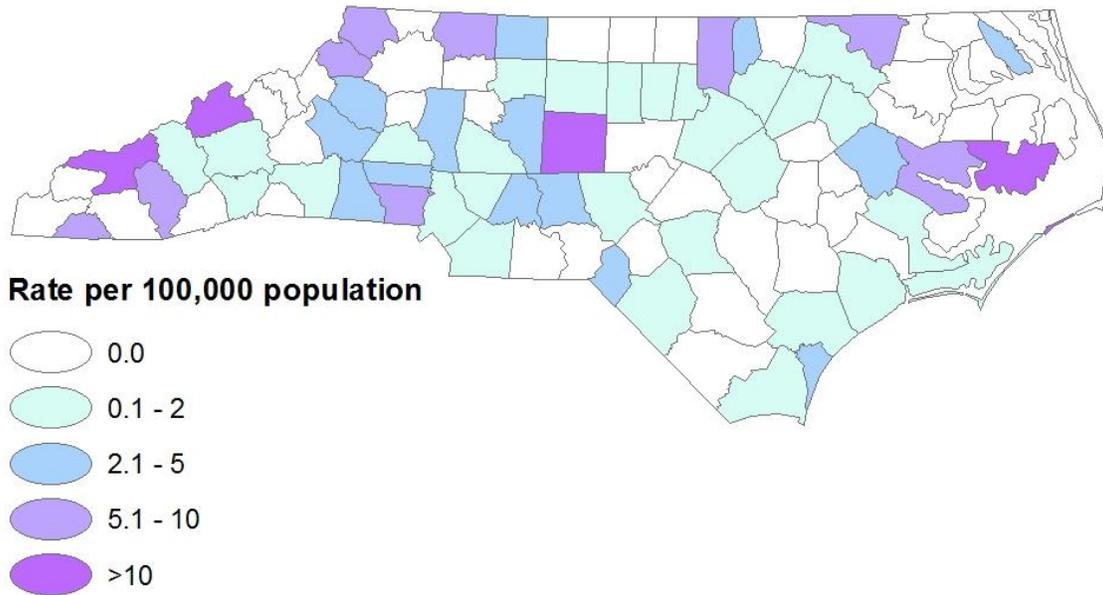
Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

Figure 3. Newly Diagnosed Chronic Hepatitis B Rates in North Carolina by County of Residence at Diagnosis, 2018



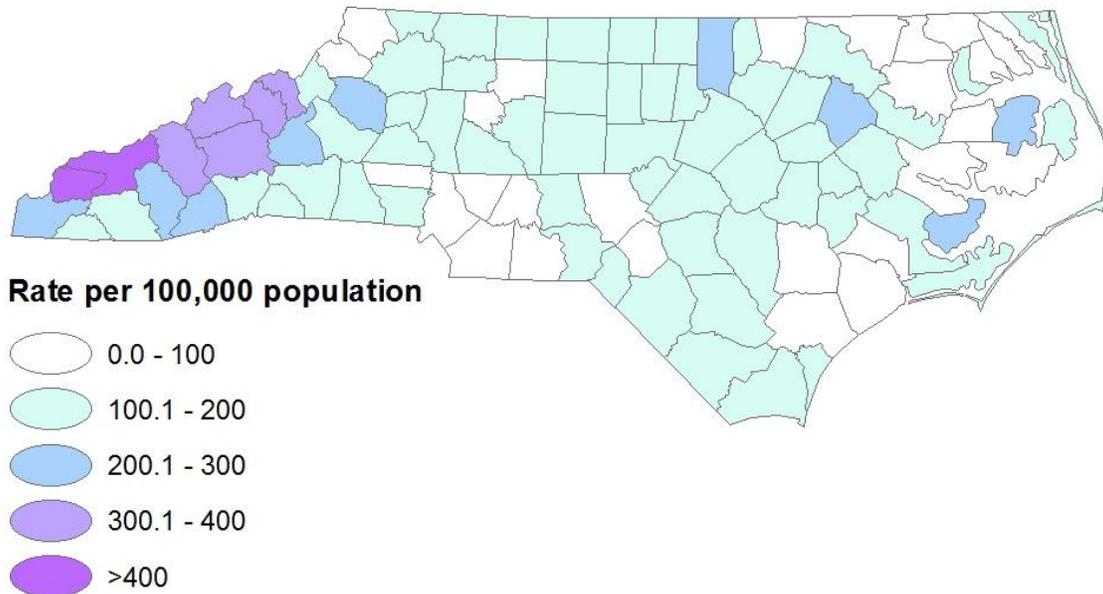
Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 1, 2019).

Figure 4. Acute Hepatitis C Rates in North Carolina by County of Residence at Diagnosis, 2018



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

Figure 5. Newly Reported Chronic Hepatitis C Rates in North Carolina by County of Residence at Diagnosis Through 12/31/2018



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

County Totals and Rates for Hepatitis B and C 2018

Table 1. Acute Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018..... 2

Table 2. Number of People Diagnosed with Chronic Hepatitis B, Presumed Alive, and Residing in North Carolina by Most Recently Known County of Residence as of 12/31/2018 5

Table 3. Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018..... 6

Table 4. Acute Hepatitis C Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018..... 9

Table 5. Newly Reported Chronic Hepatitis C and Presumed Alive in North Carolina by County of Residence at Diagnosis as of 12/31/2018..... 12

Table 6. Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by County of Report and Year of Report, 2016-2018 13

Table 1. Acute Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Alamance	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Alexander	0	0.0	1	2.7	0	0.0	1	2.7	2	5.4
Alleghany	1	9.2	0	0.0	0	0.0	0	0.0	0	0.0
Anson	1	3.9	0	0.0	1	4.0	4	16.1	0	0.0
Ashe	0	0.0	1	3.8	0	0.0	0	0.0	3	11.1
Avery	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Beaufort	0	0.0	1	2.1	0	0.0	1	2.1	0	0.0
Bertie	0	0.0	1	5.0	0	0.0	0	0.0	0	0.0
Bladen	0	0.0	0	0.0	0	0.0	0	0.0	1	3.0
Brunswick	0	0.0	2	1.6	4	3.2	7	5.4	5	3.7
Buncombe	3	1.2	6	2.4	3	1.2	4	1.6	2	0.8
Burke	0	0.0	3	3.4	5	5.6	6	6.7	8	8.9
Cabarrus	1	0.5	2	1.0	1	0.5	3	1.5	5	2.4
Caldwell	5	6.1	10	12.3	17	20.8	7	8.5	7	8.5
Camden	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Carteret	0	0.0	1	1.5	2	2.9	0	0.0	0	0.0
Caswell	0	0.0	0	0.0	0	0.0	0	0.0	2	8.8
Catawba	1	0.6	0	0.0	5	3.2	7	4.4	8	5.0
Chatham	0	0.0	1	1.5	1	1.4	0	0.0	2	2.7
Cherokee	2	7.4	5	18.5	6	21.6	3	10.7	1	3.5
Chowan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clay	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cleveland	2	2.1	2	2.1	2	2.1	2	2.1	4	4.1
Columbus	1	1.8	0	0.0	2	3.6	1	1.8	1	1.8
Craven	2	1.9	1	1.0	1	1.0	0	0.0	2	1.9
Cumberland	3	0.9	5	1.5	4	1.2	6	1.8	4	1.2
Currituck	0	0.0	0	0.0	1	3.9	0	0.0	0	0.0
Dare	0	0.0	0	0.0	0	0.0	1	2.8	0	0.0
Davidson	5	3.1	2	1.2	5	3.0	7	4.2	2	1.2
Davie	0	0.0	1	2.4	0	0.0	0	0.0	0	0.0
Duplin	1	1.7	2	3.4	0	0.0	1	1.7	0	0.0
Durham	1	0.3	7	2.3	3	1.0	6	1.9	3	0.9
Edgecombe	1	1.8	1	1.9	0	0.0	0	0.0	0	0.0
Forsyth	5	1.4	3	0.8	1	0.3	9	2.4	9	2.4
Franklin	1	1.6	3	4.7	2	3.1	1	1.5	1	1.5
Gaston	10	4.7	11	5.2	20	9.2	12	5.5	27	12.1
Gates	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Graham	4	46.4	1	11.6	3	35.1	0	0.0	0	0.0
Granville	3	5.2	0	0.0	1	1.7	0	0.0	2	3.3
Greene	1	4.8	0	0.0	0	0.0	1	4.8	2	9.5
Guilford	7	1.4	2	0.4	7	1.3	13	2.5	13	2.4

Continued

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 1 (Continued). Acute Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Halifax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Harnett	0	0.0	5	3.9	3	2.3	6	4.5	1	0.7
Haywood	0	0.0	2	3.4	4	6.6	0	0.0	3	4.8
Henderson	1	0.9	0	0.0	0	0.0	1	0.9	0	0.0
Hertford	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hoke	0	0.0	1	1.9	0	0.0	0	0.0	1	1.8
Hyde	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Iredell	3	1.8	1	0.6	1	0.6	4	2.3	2	1.1
Jackson	0	0.0	3	7.3	3	7.0	3	6.9	0	0.0
Johnston	0	0.0	0	0.0	3	1.6	0	0.0	1	0.5
Jones	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lee	4	6.7	0	0.0	2	3.3	7	11.6	5	8.1
Lenoir	1	1.7	1	1.7	0	0.0	1	1.8	1	1.8
Lincoln	0	0.0	0	0.0	1	1.2	2	2.4	4	4.8
Macon	0	0.0	0	0.0	1	2.9	1	2.9	0	0.0
Madison	0	0.0	0	0.0	2	9.4	1	4.6	0	0.0
Martin	0	0.0	0	0.0	1	4.3	0	0.0	0	0.0
McDowell	2	4.4	0	0.0	0	0.0	0	0.0	0	0.0
Mecklenburg	9	0.9	10	1.0	9	0.9	10	0.9	14	1.3
Mitchell	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Montgomery	2	7.3	1	3.6	0	0.0	0	0.0	0	0.0
Moore	1	1.1	4	4.3	4	4.2	2	2.1	1	1.0
Nash	0	0.0	2	2.1	0	0.0	0	0.0	0	0.0
New Hanover	2	0.9	0	0.0	1	0.4	3	1.3	1	0.4
Northampton	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0
Onslow	0	0.0	1	0.5	0	0.0	0	0.0	1	0.5
Orange	0	0.0	0	0.0	0	0.0	2	1.4	1	0.7
Pamlico	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pasquotank	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pender	0	0.0	0	0.0	1	1.7	0	0.0	1	1.6
Perquimans	0	0.0	0	0.0	0	0.0	0	0.0	1	7.5
Person	1	2.6	1	2.6	0	0.0	0	0.0	0	0.0
Pitt	0	0.0	1	0.6	0	0.0	0	0.0	1	0.6
Polk	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Randolph	0	0.0	1	0.7	3	2.1	7	4.9	22	15.3
Richmond	0	0.0	0	0.0	1	2.2	0	0.0	1	2.2
Robeson	0	0.0	2	1.5	3	2.2	1	0.8	1	0.8
Rockingham	2	2.2	3	3.3	1	1.1	2	2.2	2	2.2
Rowan	0	0.0	1	0.7	5	3.6	5	3.6	12	8.5
Rutherford	1	1.5	1	1.5	0	0.0	1	1.5	1	1.5

Continued

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 1 (Continued). Acute Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Sampson	1	1.6	1	1.6	1	1.6	0	0.0	0	0.0
Scotland	0	0.0	1	2.8	0	0.0	0	0.0	0	0.0
Stanly	0	0.0	1	1.6	0	0.0	1	1.6	2	3.2
Stokes	0	0.0	0	0.0	2	4.4	3	6.6	2	4.4
Surry	0	0.0	0	0.0	1	1.4	0	0.0	0	0.0
Swain	1	7.0	5	34.9	0	0.0	1	7.0	1	7.0
Transylvania	0	0.0	0	0.0	1	3.0	0	0.0	0	0.0
Tyrrell	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Union	1	0.5	0	0.0	1	0.4	0	0.0	1	0.4
Vance	1	2.2	4	9.0	3	6.7	4	9.0	4	9.0
Wake	4	0.4	5	0.5	4	0.4	4	0.4	4	0.4
Warren	0	0.0	1	4.9	3	15.1	0	0.0	0	0.0
Washington	4	32.0	2	16.3	0	0.0	0	0.0	0	0.0
Watauga	1	1.9	1	1.9	0	0.0	2	3.6	1	1.8
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wilkes	6	8.8	6	8.8	2	2.9	3	4.4	4	5.8
Wilson	0	0.0	0	0.0	1	1.2	1	1.2	1	1.2
Yadkin	2	5.3	0	0.0	1	2.7	1	2.7	2	5.3
Yancey	0	0.0	1	5.7	0	0.0	0	0.0	0	0.0
Unassigned ^b	2	--	1	--	3	--	5	--	4	--
North Carolina	113	1.1	146	1.5	169	1.7	187	1.8	221	2.1

^aRates are expressed per 100,000 population.

^bUnassigned includes cases with unknown county of residence at diagnosis or cases that were diagnosed at long-term residence facilities, including prisons; rates are not available due to the lack of overall population data in the unassigned area.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 2. Number of People Diagnosed with Chronic Hepatitis B, Presumed Alive, and Residing in North Carolina by Most Recently Known County^a of Residence as of 12/31/2018

County	Cases	County	Cases	County	Cases
Alamance	167	Gaston	466	Pitt	293
Alexander	43	Gates	9	Polk	9
Alleghany	3	Graham	9	Randolph	211
Anson	45	Granville	110	Richmond	84
Ashe	16	Greene	28	Robeson	193
Avery	13	Guilford	1,949	Rockingham	100
Beaufort	65	Halifax	76	Rowan	210
Bertie	37	Harnett	144	Rutherford	76
Bladen	32	Haywood	61	Sampson	53
Brunswick	153	Henderson	122	Scotland	76
Buncombe	455	Hertford	49	Stanly	82
Burke	308	Hoke	93	Stokes	33
Cabarrus	268	Hyde	2	Surry	68
Caldwell	112	Iredell	228	Swain	25
Camden	10	Jackson	31	Transylvania	20
Carteret	86	Johnston	141	Tyrrell	7
Caswell	18	Jones	12	Union	259
Catawba	519	Lee	117	Vance	115
Chatham	55	Lenoir	123	Wake	2,702
Cherokee	34	Lincoln	61	Warren	25
Chowan	11	Macon	35	Washington	18
Clay	13	Madison	15	Watauga	53
Cleveland	166	Martin	24	Wayne	184
Columbus	74	McDowell	41	Wilkes	135
Craven	356	Mecklenburg	4,345	Wilson	152
Cumberland	1,128	Mitchell	11	Yadkin	37
Currituck	19	Montgomery	34	Yancey	13
Dare	23	Moore	109	Unassigned ^b	2,387
Davidson	243	Nash	181	North Carolina	24,336
Davie	50	New Hanover	436		
Duplin	68	Northampton	29		
Durham	1,024	Onslow	289		
Edgecombe	111	Orange	410		
Forsyth	944	Pamlico	8		
Franklin	66	Pasquotank	67		
		Pender	84		
		Perquimans	6		
		Person	26		

^aBased on most recent known address from North Carolina Electronic Disease Surveillance System (NC EDSS) as of June 1, 2019.

^bUnassigned includes cases diagnosed at long-term residence facilities, including prisons.

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

Table 3. Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Alamance	7	4.5	13	8.3	12	7.5	9	5.5	11	6.6
Alexander	2	5.4	6	16.2	1	2.7	0	0.0	1	2.7
Alleghany	1	9.2	0	0.0	1	9.2	0	0.0	0	0.0
Anson	1	3.9	0	0.0	2	7.9	1	4.0	2	8.0
Ashe	1	3.7	1	3.8	2	7.5	1	3.7	1	3.7
Avery	0	0.0	1	5.7	1	5.7	1	5.7	0	0.0
Beaufort	3	6.3	2	4.2	3	6.3	6	12.8	3	6.4
Bertie	0	0.0	2	9.9	2	10.3	0	0.0	1	5.3
Bladen	4	11.6	1	2.9	3	8.9	4	12.0	2	6.0
Brunswick	11	9.3	7	5.7	9	7.1	9	6.9	12	8.8
Buncombe	15	6.0	29	11.5	15	5.9	27	10.5	25	9.6
Burke	16	17.9	21	23.5	14	15.7	16	17.8	19	21.0
Cabarrus	9	4.7	17	8.7	10	5.0	19	9.2	15	7.1
Caldwell	1	1.2	2	2.5	24	29.4	12	14.6	20	24.4
Camden	0	0.0	1	9.7	0	0.0	1	9.5	0	0.0
Carteret	4	5.8	3	4.4	2	2.9	6	8.7	1	1.4
Caswell	2	8.8	0	0.0	2	8.8	0	0.0	0	0.0
Catawba	21	13.5	19	12.2	15	9.6	19	12.0	13	8.2
Chatham	0	0.0	3	4.4	7	10.1	7	9.8	8	10.9
Cherokee	2	7.4	6	22.1	3	10.8	5	17.9	2	7.0
Chowan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clay	3	28.4	1	9.4	0	0.0	0	0.0	1	9.0
Cleveland	3	3.1	7	7.2	6	6.2	5	5.1	6	6.1
Columbus	3	5.3	8	14.1	5	8.9	6	10.7	5	9.0
Craven	31	29.8	12	11.7	17	16.5	12	11.7	22	21.4
Cumberland	45	13.5	43	13.0	52	15.6	50	15.1	44	13.2
Currituck	0	0.0	1	4.0	5	19.5	2	7.6	0	0.0
Dare	0	0.0	2	5.6	1	2.8	2	5.5	1	2.7
Davidson	6	3.7	14	8.6	9	5.5	26	15.7	17	10.2
Davie	3	7.3	4	9.6	3	7.2	7	16.5	0	0.0
Duplin	3	5.0	5	8.5	6	10.1	6	10.2	3	5.1
Durham	53	18.0	66	21.9	79	25.7	59	18.9	54	17.0
Edgecombe	2	3.6	3	5.6	4	7.5	3	5.7	1	1.9
Forsyth	39	10.7	50	13.6	48	12.9	37	9.8	40	10.6
Franklin	4	6.4	2	3.1	6	9.3	3	4.5	3	4.4
Gaston	10	4.7	51	23.9	25	11.5	47	21.4	33	14.8
Gates	0	0.0	1	8.7	0	0.0	2	17.4	0	0.0
Graham	0	0.0	2	23.3	2	23.4	0	0.0	1	11.8
Granville	14	24.1	17	29.2	7	11.9	4	6.7	4	6.7
Greene	1	4.8	1	4.8	1	4.7	4	19.1	2	9.5
Guilford	63	12.3	45	8.7	120	22.9	75	14.2	74	13.9

Continued

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 3 (Continued). Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Halifax	2	3.8	9	17.2	6	11.6	4	7.8	1	2.0
Harnett	6	4.7	5	3.9	9	6.9	20	15.1	12	8.9
Haywood	5	8.5	2	3.4	7	11.6	1	1.6	6	9.7
Henderson	5	4.5	6	5.4	8	7.0	8	6.9	6	5.1
Hertford	4	16.3	9	36.9	1	4.1	1	4.2	1	4.2
Hoke	0	0.0	12	22.8	7	13.2	6	11.1	3	5.5
Hyde	0	0.0	0	0.0	0	0.0	1	19.0	0	0.0
Iredell	10	6.0	8	4.7	12	7.0	10	5.7	12	6.7
Jackson	6	14.7	6	14.5	2	4.7	4	9.3	4	9.2
Johnston	9	5.0	4	2.2	11	5.8	8	4.1	13	6.4
Jones	2	20.3	0	0.0	1	10.4	1	10.4	1	10.4
Lee	6	10.1	7	11.8	11	18.4	5	8.3	8	13.0
Lenoir	3	5.1	4	6.9	3	5.2	5	8.8	4	7.1
Lincoln	3	3.8	1	1.2	7	8.6	2	2.4	4	4.8
Macon	2	5.9	5	14.7	1	2.9	2	5.8	3	8.5
Madison	0	0.0	1	4.7	0	0.0	1	4.6	0	0.0
Martin	1	4.3	2	8.6	1	4.3	2	8.8	0	0.0
McDowell	3	6.7	3	6.7	2	4.5	0	0.0	4	8.8
Mecklenburg	186	18.4	171	16.5	169	16.0	152	14.1	137	12.5
Mitchell	3	19.8	1	6.6	0	0.0	2	13.4	0	0.0
Montgomery	1	3.7	3	10.9	4	14.6	3	11.0	2	7.3
Moore	8	8.6	13	13.8	9	9.4	4	4.1	4	4.1
Nash	10	10.6	9	9.6	7	7.4	8	8.5	7	7.4
New Hanover	16	7.4	23	10.5	22	9.8	16	7.0	13	5.6
Northampton	1	4.8	2	9.7	0	0.0	1	5.0	2	10.2
Onslow	31	16.2	14	7.3	14	7.3	16	8.2	13	6.6
Orange	22	15.7	14	9.9	33	23.1	22	15.3	20	13.7
Pamlico	2	15.5	0	0.0	1	7.8	2	15.8	0	0.0
Pasquotank	2	5.1	1	2.5	5	12.7	5	12.7	6	15.1
Pender	1	1.8	1	1.7	3	5.1	6	9.9	1	1.6
Perquimans	0	0.0	1	7.4	0	0.0	0	0.0	1	7.5
Person	1	2.6	1	2.6	2	5.1	0	0.0	1	2.5
Pitt	19	10.9	17	9.7	10	5.6	11	6.2	12	6.7
Polk	0	0.0	0	0.0	0	0.0	1	4.9	1	4.9
Randolph	5	3.5	10	7.0	13	9.1	11	7.7	21	14.6
Richmond	1	2.2	2	4.4	1	2.2	5	11.2	8	17.8
Robeson	4	3.0	12	8.9	7	5.2	15	11.3	2	1.5
Rockingham	6	6.5	6	6.5	5	5.5	8	8.8	11	12.1
Rowan	10	7.2	15	10.8	15	10.8	12	8.5	15	10.6
Rutherford	2	3.0	1	1.5	6	9.0	2	3.0	0	0.0

Continued

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 3(Continued). Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018

County	2014		2015		2016		2017		2018	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Sampson	2	3.1	6	9.4	3	4.7	3	4.7	4	6.3
Scotland	1	2.8	2	5.7	1	2.8	5	14.2	2	5.7
Stanly	4	6.6	2	3.3	0	0.0	2	3.3	2	3.2
Stokes	0	0.0	3	6.5	2	4.4	5	10.9	1	2.2
Surry	2	2.8	3	4.2	1	1.4	2	2.8	4	5.6
Swain	1	7.0	2	14.0	3	21.1	5	35.0	2	14.0
Transylvania	1	3.0	1	3.0	1	3.0	3	8.9	0	0.0
Tyrrell	0	0.0	1	24.2	1	24.8	1	23.9	0	0.0
Union	19	8.7	22	9.9	8	3.5	16	6.9	14	5.9
Vance	2	4.5	10	22.5	6	13.5	13	29.3	7	15.7
Wake	74	7.4	102	10.0	344	32.8	169	15.8	161	14.7
Warren	1	4.9	3	14.8	0	0.0	2	10.1	1	5.0
Washington	4	32.0	1	8.1	0	0.0	1	8.3	0	0.0
Watauga	5	9.5	3	5.7	3	5.5	3	5.4	2	3.6
Wayne	6	4.8	15	12.1	11	8.8	11	8.9	5	4.1
Wilkes	10	14.6	17	24.9	14	20.4	21	30.7	16	23.3
Wilson	3	3.7	2	2.5	3	3.7	4	4.9	8	9.8
Yadkin	0	0.0	0	0.0	0	0.0	1	2.7	3	8.0
Yancey	0	0.0	0	0.0	3	17.0	1	5.6	0	0.0
Unassigned ^b	54	--	46	--	41	--	34	--	46	--
North Carolina	970	9.8	1,111	11.1	1,384	13.6	1,178	11.5	1,084	10.4

^aRate is expressed per 100,000 population.

^bUnassigned includes cases diagnosed at long-term residence facilities, including prisons.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 4. Acute Hepatitis C Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018[^]

County	2014		2015		2016 [^]		2017 [^]		2018 [^]	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Alamance	0	0.0	0	0.0	1	0.6	3	1.8	3	1.8
Alexander	0	0.0	1	2.7	1	2.7	1	2.7	0	0.0
Alleghany	0	0.0	0	0.0	0	0.0	1	9.1	0	0.0
Anson	0	0.0	1	3.9	1	4.0	0	0.0	0	0.0
Ashe	0	0.0	0	0.0	1	3.8	0	0.0	2	7.4
Avery	2	11.4	0	0.0	1	5.7	0	0.0	0	0.0
Beaufort	0	0.0	1	2.1	0	0.0	0	0.0	3	6.4
Bertie	0	0.0	1	5.0	0	0.0	0	0.0	0	0.0
Bladen	1	2.9	2	5.9	1	3.0	0	0.0	0	0.0
Brunswick	3	2.5	6	4.9	13	10.3	11	8.4	2	1.5
Buncombe	1	0.4	0	0.0	2	0.8	2	0.8	5	1.9
Burke	2	2.2	2	2.2	4	4.5	3	3.3	3	3.3
Cabarrus	3	1.6	1	0.5	0	0.0	1	0.5	1	0.5
Caldwell	7	8.6	8	9.8	11	13.5	9	11.0	4	4.9
Camden	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Carteret	0	0.0	1	1.5	0	0.0	0	0.0	1	1.4
Caswell	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Catawba	1	0.6	3	1.9	8	5.1	4	2.5	1	0.6
Chatham	1	1.5	0	0.0	1	1.4	1	1.4	0	0.0
Cherokee	5	18.5	3	11.1	2	7.2	4	14.3	0	0.0
Chowan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clay	0	0.0	0	0.0	2	18.6	0	0.0	1	9.0
Cleveland	1	1.0	2	2.1	0	0.0	2	2.1	3	3.1
Columbus	1	1.8	0	0.0	1	1.8	2	3.6	0	0.0
Craven	0	0.0	1	1.0	3	2.9	1	1.0	2	1.9
Cumberland	0	0.0	0	0.0	2	0.6	4	1.2	2	0.6
Currituck	0	0.0	1	4.0	1	3.9	2	7.6	0	0.0
Dare	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Davidson	4	2.4	0	0.0	0	0.0	2	1.2	6	3.6
Davie	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Duplin	1	1.7	0	0.0	0	0.0	0	0.0	0	0.0
Durham	1	0.3	0	0.0	0	0.0	1	0.3	5	1.6
Edgecombe	0	0.0	0	0.0	0	0.0	3	5.7	1	1.9
Forsyth	3	0.8	5	1.4	4	1.1	6	1.6	7	1.8
Franklin	0	0.0	0	0.0	0	0.0	2	3.0	1	1.5
Gaston	1	0.5	1	0.5	0	0.0	8	3.6	13	5.8
Gates	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Graham	0	0.0	2	23.3	5	58.5	1	11.7	0	0.0
Granville	2	3.4	0	0.0	0	0.0	0	0.0	4	6.7
Greene	0	0.0	0	0.0	0	0.0	2	9.5	0	0.0
Guilford	7	1.4	4	0.8	4	0.8	6	1.1	7	1.3

Continued

[^]Case definition of hepatitis C changed in 2016. Please see Appendix A: Technical notes for information.^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 4 (Continued). Acute Hepatitis C Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018[^]

County	2014		2015		2016 [^]		2017 [^]		2018 [^]	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Halifax	0	0.0	0	0.0	1	1.9	0	0.0	1	2.0
Harnett	2	1.6	1	0.8	6	4.6	4	3.0	0	0.0
Haywood	3	5.1	3	5.0	2	3.3	1	1.6	1	1.6
Henderson	1	0.9	0	0.0	0	0.0	1	0.9	1	0.9
Hertford	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hoke	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hyde	0	0.0	0	0.0	0	0.0	0	0.0	1	19.1
Iredell	4	2.4	2	1.2	6	3.5	7	4.0	5	2.8
Jackson	1	2.4	1	2.4	3	7.0	5	11.6	4	9.2
Johnston	3	1.7	0	0.0	5	2.6	3	1.5	1	0.5
Jones	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lee	0	0.0	1	1.7	0	0.0	1	1.7	0	0.0
Lenoir	1	1.7	2	3.4	1	1.7	3	5.3	0	0.0
Lincoln	2	2.5	1	1.2	1	1.2	4	4.9	3	3.6
Macon	0	0.0	0	0.0	3	8.8	1	2.9	0	0.0
Madison	0	0.0	0	0.0	1	4.7	1	4.6	3	13.8
Martin	0	0.0	0	0.0	1	4.3	0	0.0	0	0.0
McDowell	1	2.2	0	0.0	1	2.2	2	4.4	0	0.0
Mecklenburg	2	0.2	4	0.4	2	0.2	1	0.1	5	0.5
Mitchell	0	0.0	0	0.0	1	6.7	0	0.0	0	0.0
Montgomery	1	3.7	0	0.0	0	0.0	2	7.3	1	3.7
Moore	0	0.0	2	2.1	5	5.2	1	1.0	1	1.0
Nash	0	0.0	2	2.1	1	1.1	2	2.1	1	1.1
New Hanover	7	3.2	5	2.3	10	4.4	6	2.6	7	3.0
Northampton	0	0.0	0	0.0	0	0.0	0	0.0	1	5.1
Onslow	1	0.5	0	0.0	4	2.1	6	3.1	1	0.5
Orange	0	0.0	0	0.0	0	0.0	3	2.1	1	0.7
Pamlico	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pasquotank	1	2.5	0	0.0	3	7.6	0	0.0	1	2.5
Pender	0	0.0	2	3.5	0	0.0	0	0.0	1	1.6
Perquimans	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Person	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0
Pitt	2	1.1	2	1.1	1	0.6	2	1.1	5	2.8
Polk	0	0.0	0	0.0	0	0.0	2	9.7	0	0.0
Randolph	12	8.4	8	5.6	14	9.8	13	9.1	16	11.2
Richmond	0	0.0	3	6.6	1	2.2	0	0.0	0	0.0
Robeson	1	0.7	1	0.7	1	0.7	1	0.8	1	0.8
Rockingham	1	1.1	2	2.2	4	4.4	3	3.3	0	0.0
Rowan	0	0.0	5	3.6	1	0.7	0	0.0	1	0.7
Rutherford	2	3.0	3	4.5	8	12.1	3	4.5	1	1.5

Continued

[^]Case definition of hepatitis C changed in 2016. Please see Appendix A: Technical notes for information.^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 4 (Continued). Acute Hepatitis C Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2014-2018[^]

County	2014		2015		2016 [^]		2017 [^]		2018 [^]	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Sampson	0	0.0	0	0.0	1	1.6	2	3.2	0	0.0
Scotland	0	0.0	1	2.8	0	0.0	0	0.0	1	2.9
Stanly	0	0.0	0	0.0	0	0.0	4	6.5	3	4.8
Stokes	0	0.0	0	0.0	0	0.0	1	2.2	2	4.4
Surry	12	16.6	2	2.8	9	12.5	4	5.5	6	8.3
Swain	3	21.1	2	14.0	4	28.2	2	14.0	5	35.1
Transylvania	0	0.0	0	0.0	2	6.0	0	0.0	0	0.0
Tyrrell	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Union	0	0.0	0	0.0	3	1.3	3	1.3	4	1.7
Vance	0	0.0	0	0.0	0	0.0	1	2.3	1	2.2
Wake	4	0.4	5	0.5	1	0.1	6	0.6	9	0.8
Warren	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0
Washington	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Watauga	0	0.0	1	1.9	8	14.8	1	1.8	3	5.4
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wilkes	2	2.9	7	10.3	7	10.2	0	0.0	0	0.0
Wilson	1	1.2	1	1.2	1	1.2	1	1.2	0	0.0
Yadkin	2	5.3	0	0.0	1	2.7	1	2.7	0	0.0
Yancey	1	5.7	0	0.0	0	0.0	0	0.0	0	0.0
Unassigned ^b	7	--	5	--	10	--	2	--	16	--
North Carolina	128	1.3	121	1.2	203	2.0	188	1.8	191	1.8

[^]Case definition of hepatitis C changed in 2016. Please see Appendix A: Technical notes for information.

^aRate is expressed per 100,000 population.

^bUnassigned includes cases diagnosed at long-term residence facilities, including prisons.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 5. Number of People Diagnosed with Chronic Hepatitis C in North Carolina as of 12/31/2018 by County of Residence at Diagnosis

County	Cases	County	Cases	County	Cases
Alamance	571	Gaston	741	Perquimans	28
Alexander	152	Gates	15	Person	134
Alleghany	46	Graham	84	Pitt	444
Anson	51	Granville	288	Polk	58
Ashe	64	Greene	91	Randolph	644
Avery	63	Guilford	1,224	Richmond	130
Beaufort	120	Halifax	136	Robeson	369
Bertie	41	Harnett	394	Rockingham	244
Bladen	75	Haywood	470	Rowan	640
Brunswick	579	Henderson	431	Rutherford	285
Buncombe	1,926	Hertford	56	Sampson	196
Burke	475	Hoke	106	Scotland	115
Cabarrus	393	Hyde	17	Stanly	159
Caldwell	417	Iredell	495	Stokes	162
Camden	10	Jackson	264	Surry	269
Carteret	297	Johnston	452	Swain	126
Caswell	75	Jones	34	Transylvania	174
Catawba	551	Lee	229	Tyrrell	21
Chatham	169	Lenoir	156	Union	289
Cherokee	239	Lincoln	205	Vance	151
Chowan	32	Macon	194	Wake	2,597
Clay	61	Madison	184	Warren	43
Cleveland	262	Martin	55	Washington	16
Columbus	217	McDowell	321	Watauga	105
Craven	558	Mecklenburg	2,225	Wayne	298
Cumberland	1,007	Mitchell	118	Wilkes	385
Currituck	65	Montgomery	85	Wilson	385
Dare	150	Moore	195	Yadkin	142
Davidson	739	Nash	432	Yancey	125
Davie	114	New Hanover	685	Unassigned ^b	8,415
Duplin	99	Northampton	44	North Carolina	41,096
Durham	1,410	Onslow	430		
Edgecombe	290	Orange	386		
Forsyth	863	Pamlico	84		
Franklin	181	Pasquotank	84		
		Pender	175		

^aChronic hepatitis C became reportable in North Carolina in October 2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Newly diagnosed chronic hepatitis C is also not available at this time. This does not take into account those that have either self-cleared or have received treatment for hepatitis C.

^bUnassigned includes cases diagnosed at long-term residence facilities, including prisons.

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

Table 6. Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by County of Report and Year of Report, 2016-2018*

County	2016		2017		2018	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Alamance	76	47.4	241	147.4	254	152.6
Alexander	22	59.2	62	166.9	68	182.0
Alleghany	5	45.8	23	208.7	18	161.3
Anson	12	47.7	24	96.5	15	60.3
Ashe	7	26.3	33	123.1	24	88.5
Avery	11	63.1	34	194.2	18	102.8
Beaufort	18	38.0	57	121.1	45	95.6
Bertie	6	30.9	17	88.2	18	94.6
Bladen	5	14.8	30	89.6	40	120.5
Brunswick	75	59.4	306	234.1	198	144.8
Buncombe	127	49.8	959	372.9	840	324.2
Burke	95	106.2	257	285.2	123	136.1
Cabarrus	78	38.7	203	98.2	112	53.0
Caldwell	36	44.0	204	249.0	177	215.8
Camden	0	0.0	4	37.9	6	56.0
Carteret	46	66.8	140	203.1	111	159.7
Caswell	9	39.5	32	141.4	34	149.8
Catawba	73	46.7	248	157.2	230	145.0
Chatham	8	11.5	54	75.8	107	146.3
Cherokee	32	115.1	131	468.2	76	267.8
Chowan	2	14.1	9	64.1	21	149.7
Clay	12	111.7	30	272.7	19	170.6
Cleveland	41	42.3	112	115.2	109	111.6
Columbus	27	48.0	99	176.8	91	163.5
Craven	78	75.9	275	267.6	205	199.2
Cumberland	137	41.1	480	144.9	390	117.4
Currituck	2	7.8	35	133.0	28	103.4
Dare	21	58.7	75	207.7	54	147.9
Davidson	89	54.1	352	212.9	298	178.9
Davie	14	33.4	67	158.1	33	77.2
Duplin	12	20.2	43	73.1	44	74.8
Durham	91	29.6	753	241.4	566	178.7
Edgecombe	43	80.7	133	252.1	114	219.2
Forsyth	118	31.8	399	106.2	346	91.3
Franklin	15	23.2	71	107.5	95	140.6
Gaston	106	48.9	375	170.6	260	116.7
Gates	2	17.3	8	69.5	5	43.2
Graham	10	117.0	34	398.4	40	471.5
Granville	16	27.3	145	244.2	127	211.3
Greene	14	66.4	53	252.6	24	114.2
Guilford	108	20.6	511	96.5	605	113.4

Continued

*Chronic hepatitis C became reportable in North Carolina in October 2016 and is only reported from laboratories reporting electronically. These numbers are likely an underestimation. The number of chronic hepatitis C cases is given as "reported" rather than "newly diagnosed"; since surveillance for chronic hepatitis C is relatively new in North Carolina and our case records are incomplete, we are unable to determine a positive lab test reflects a new diagnosis or a new reported test result for a person who was previously diagnosed.

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 6 (Continued). Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by County of Report and Year of Report, 2016-2018

County	2016		2017		2018	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Halifax	15	29.0	63	122.9	58	114.7
Harnett	44	33.7	171	129.3	179	133.4
Haywood	63	104.3	216	353.9	191	308.2
Henderson	45	39.6	199	172.4	187	160.2
Hertford	5	20.6	30	125.4	21	88.8
Hoke	13	24.5	58	107.1	35	63.9
Hyde	4	73.5	9	170.9	4	76.5
Iredell	78	45.2	227	129.3	190	106.5
Jackson	39	91.6	109	252.4	116	267.7
Johnston	45	23.6	157	79.9	250	123.4
Jones	7	72.9	19	197.9	8	83.0
Lee	28	46.9	93	153.5	108	175.7
Lenoir	18	31.4	76	134.2	62	110.8
Lincoln	44	54.2	107	129.9	54	64.5
Macon	17	49.6	108	311.9	69	195.6
Madison	7	32.8	101	468.1	76	349.2
Martin	4	17.3	24	105.4	27	119.1
McDowell	20	44.6	176	389.7	125	274.7
Mecklenburg	428	40.5	1,141	105.9	656	60.0
Mitchell	13	86.7	55	367.2	50	333.3
Montgomery	18	65.9	35	128.0	32	117.3
Moore	27	28.3	85	87.4	83	84.1
Nash	64	68.1	227	241.5	141	150.0
New Hanover	97	43.2	324	141.7	264	113.7
Northampton	2	9.9	26	130.6	16	81.3
Onslow	78	40.6	171	87.8	181	91.6
Orange	23	16.1	135	93.8	228	156.1
Pamlico	18	141.0	30	237.1	36	284.1
Pasquotank	10	25.4	43	108.9	31	78.2
Pender	30	51.0	92	151.4	53	85.3
Perquimans	1	7.5	14	104.0	13	96.9
Person	10	25.4	61	154.8	63	159.5
Pitt	59	33.3	201	112.5	184	102.3
Polk	4	19.6	26	126.7	28	135.8
Randolph	92	64.3	297	207.5	255	177.9
Richmond	13	28.9	52	116.0	65	144.8
Robeson	54	40.5	177	133.5	138	104.7
Rockingham	25	27.4	106	116.7	113	124.6
Rowan	82	58.8	326	232.0	232	164.2
Rutherford	48	72.4	139	208.8	98	146.6

Continued

*Chronic hepatitis C became reportable in North Carolina in October 2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. The number of chronic hepatitis C cases is given as "reported" rather than "newly diagnosed"; since surveillance for chronic hepatitis C is relatively new in North Carolina and our case records are incomplete, we are unable to determine a positive lab test reflects a new diagnosis or a new reported test result for a person who was previously diagnosed.

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 6 (Continued). Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by County of Report and Year of Report, 2016-2018

County	2016		2017		2018	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Sampson	33	52.1	98	154.5	65	102.2
Scotland	11	31.1	56	159.2	48	137.9
Stanly	25	41.1	75	122.0	59	95.0
Stokes	17	37.0	71	155.4	74	162.8
Surry	34	47.2	130	180.3	105	145.9
Swain	8	56.4	59	413.6	59	414.2
Transylvania	10	29.9	88	260.2	76	222.1
Tyrrell	4	99.4	7	167.3	10	242.1
Union	50	22.1	135	58.3	104	44.1
Vance	7	15.7	73	164.7	71	159.3
Wake	285	27.2	1,203	112.2	1,109	101.5
Warren	5	25.1	23	115.8	15	75.7
Washington	4	33.0	7	58.2	5	42.2
Watauga	17	31.4	45	81.7	43	76.9
Wayne	33	26.5	135	109.5	130	105.5
Wilkes	80	116.7	188	274.6	117	170.7
Wilson	61	75.0	202	247.6	122	149.8
Yadkin	16	42.5	61	162.0	65	173.1
Yancey	12	68.1	55	310.5	58	324.0
Unassigned ^b	1,059	--	4,000	--	3,356	--
North Carolina	5,162	50.8	19,535	190.2	16,399	157.9

*Chronic hepatitis C became reportable in North Carolina in October 2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Newly diagnosed chronic hepatitis C is also not available at this time since surveillance for chronic hepatitis C is relatively new to the state and we are unable to determine if someone is newly diagnosed or infected.

^aRates are expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

North Carolina State Totals and Rates for Hepatitis B and C by Selected Demographics, 2018

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Table 7. Number of Infants Diagnosed with Hepatitis B (Perinatal Hepatitis B) in North Carolina by Year of Diagnosis, 2009-2018

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	2	1	0	1	2	1	0	3	0

Data Source: Immunization Branch (data as of April 26, 2018).

Table 8. Acute Hepatitis B Annual Rates in North Carolina by Selected Demographics, 2014-2018

Demographics	2014		2015		2016		2017		2018	
	Cases	Rate ^a								
Gender										
Male	73	1.5	94	1.9	102	2.1	107	.1	149	2.9
Female	40	0.8	52	1.0	67	1.3	80	1.5	72	1.4
Age at Diagnosis										
Less than 13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	1	0.2	1	0.2	1	0.1	0	0.0	4	0.6
20-24	3	0.4	7	1.0	15	2.1	6	0.9	6	0.9
25-29	2	0.3	7	1.0	7	1.0	8	1.1	10	1.4
30-34	9	1.4	15	2.3	12	1.9	16	2.4	10	1.5
35-39	21	3.4	29	4.6	34	5.3	35	5.4	38	5.8
40-44	22	3.2	23	3.5	25	3.9	38	6.0	31	4.9
45-49	15	2.2	23	3.4	24	3.5	24	3.4	45	6.5
50-54	19	2.7	16	2.3	22	3.2	29	4.2	26	3.8
55-59	8	1.2	14	2.1	15	2.2	10	1.5	17	2.4
60-64	3	0.5	8	1.3	9	1.5	10	1.6	17	2.6
65 and older	10	0.7	3	0.2	5	0.3	11	0.7	17	1.0
Race/Ethnicity										
American Indian/Alaska Native ^b	1	0.8	4	3.3	3	2.5	2	1.6	0	0.0
Asian/Pacific Islander ^b	1	0.4	0	0.0	1	0.3	2	0.6	1	0.3
Black/African American ^b	23	1.0	26	1.2	26	1.2	25	1.1	41	1.8
Hispanic/Latino	5	0.6	7	0.8	3	0.3	2	0.2	7	0.7
White/Caucasian ^b	71	1.1	84	1.3	102	1.6	132	2.0	145	2.2
Multiple Race ^c	1	--	2	--	1	--	2	--	1	--
Unknown/Unspecified ^c	11	--	23	--	33	--	22	--	26	--
Exposure Category^d										
Heterosexual Contact ^e	58	--	73	--	84	--	95	--	119	--
IDU ^f	16	--	24	--	35	--	62	--	59	--
MSM ^f	4	--	6	--	2	--	4	--	3	--
Other Risk ^g	10	--	16	--	16	--	28	--	27	--
Unknown ^h	45	--	56	--	63	--	58	--	64	--
Total	113	1.1	146	1.5	169	1.7	187	1.8	221	2.1

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

^dPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^eHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^fIDU = injection drug use; MSM = men who report sex with men.

^gOther risk includes health care exposure or contact with a positive hepatitis B individual.

^hUnknown is defined as individuals who did not report any risks (includes missing) for acquiring hepatitis B.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 9. Acute Hepatitis B Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis, 2014-2018

Gender	Age at Diagnosis (Year)	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a												
Male	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	1	1.4	0.3	1	1.1	0.3	1	1.0	0.3	0	0.0	0.0	2	1.3	0.6
	20-24	2	2.7	0.5	7	7.4	1.9	9	8.8	2.4	4	3.7	1.1	4	2.7	1.1
	25-29	2	2.7	0.6	4	4.3	1.2	5	4.9	1.4	5	4.7	1.4	8	5.4	2.2
	30-34	6	8.2	1.9	12	12.8	3.8	4	3.9	1.3	7	6.5	2.2	4	2.7	1.2
	35-39	13	17.8	4.3	16	17.0	5.2	16	15.7	5.1	23	21.5	7.2	19	12.8	5.9
	40-44	17	23.3	5.1	12	12.8	3.7	15	14.7	4.8	21	19.6	6.8	21	14.1	6.8
	45-49	7	9.6	2.1	14	14.9	4.2	17	16.7	5.0	11	10.3	3.2	36	24.2	10.6
	50-54	16	21.9	4.7	10	10.6	2.9	15	14.7	4.5	19	17.8	5.7	18	12.1	5.4
	55-59	3	4.1	1.0	11	11.7	3.4	9	8.8	2.8	4	3.7	1.2	12	8.1	3.6
	60-64	3	4.1	1.1	4	4.3	1.4	6	5.9	2.1	7	6.5	2.4	14	9.4	4.6
	65 and older	3	4.1	0.5	3	3.2	0.5	5	4.9	0.7	6	5.6	0.8	11	7.4	1.5
Total		73	100.0	1.5	94	100.0	1.9	102	100.0	2.1	107	100.0	2.1	149	100.0	2.9
Female	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	2	2.8	0.6
	20-24	1	2.5	0.3	0	0.0	0.0	6	9.0	1.8	2	2.5	0.6	2	2.8	0.6
	25-29	0	0.0	0.0	3	5.8	0.9	2	3.0	0.6	3	3.8	0.8	2	2.8	0.6
	30-34	3	7.5	0.9	3	5.8	0.9	8	11.9	2.4	9	11.3	2.7	6	8.3	1.8
	35-39	8	20.0	2.5	13	25.0	4.0	18	26.9	5.5	12	15.0	3.6	19	26.4	5.6
	40-44	5	12.5	1.4	11	21.2	3.2	10	14.9	3.0	17	21.3	5.2	10	13.9	3.1
	45-49	8	20.0	2.3	9	17.3	2.6	7	10.4	2.0	13	16.3	3.7	9	12.5	2.5
	50-54	3	7.5	0.8	6	11.5	1.7	7	10.4	2.0	10	12.5	2.8	8	11.1	2.3
	55-59	5	12.5	1.5	3	5.8	0.9	6	9.0	1.7	6	7.5	1.7	5	6.9	1.4
	60-64	0	0.0	0.0	4	7.7	1.3	3	4.5	0.9	3	3.8	0.9	3	4.2	0.9
	65 and older	7	17.5	0.8	0	0.0	0.0	0	0.0	0.0	5	6.3	0.5	6	8.3	0.6
Total		40	100.0	0.8	52	100.0	1.0	67	100.0	1.3	80	100.0	1.5	72	100.0	1.4

Continued

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 9 (Continued). Acute Hepatitis B Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis 2014-2018

Gender	Age at Diagnosis (Year)	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a												
Total	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	1	0.9	0.2	1	0.7	0.2	1	0.6	0.1	0	0.0	0.0	4	1.8	0.6
	20-24	3	2.7	0.4	7	4.8	1.0	15	8.9	2.1	6	3.2	0.9	6	2.7	0.9
	25-29	2	1.8	0.3	7	4.8	1.0	7	4.1	1.0	8	4.3	1.1	10	4.5	1.4
	30-34	9	8.0	1.4	15	10.3	2.3	12	7.1	1.9	16	8.6	2.4	10	4.5	1.5
	35-39	21	18.6	3.4	29	19.9	4.6	34	20.1	5.3	35	18.7	5.4	38	17.2	5.8
	40-44	22	19.5	3.2	23	15.8	3.5	25	14.8	3.9	38	20.3	6.0	31	14.0	4.9
	45-49	15	13.3	2.2	23	15.8	3.4	24	14.2	3.5	24	12.8	3.4	45	20.4	6.5
	50-54	19	16.8	2.7	16	11.0	2.3	22	13.0	3.2	29	15.5	4.2	26	11.8	3.8
	55-59	8	7.1	1.2	14	9.6	2.1	15	8.9	2.2	10	5.3	1.5	17	7.7	2.4
	60-64	3	2.7	0.5	8	5.5	1.3	9	5.3	1.5	10	5.3	1.6	17	7.7	2.6
	65 and older	10	8.8	0.7	3	2.1	0.2	5	3.0	0.3	11	5.9	0.7	17	7.7	1.0
Total		113	100.0	1.1	146	100.0	1.5	169	100.0	1.7	187	100.0	1.8	221	100.0	2.1

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 10. Acute Hepatitis B Annual Rates in North Carolina by Gender, Race/Ethnicity, and Year of Diagnosis, 2014-2018

Gender	Race/Ethnicity	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a												
Male	American Indian/Alaska Native ^b	1	1.4	1.7	2	2.1	3.4	1	1.0	1.7	1	0.9	1.7	0	0.0	0.0
	Asian/Pacific Islander ^b	1	1.4	0.7	0	0.0	0.0	1	1.0	0.7	1	0.9	0.6	0	0.0	0.0
	Black/African American ^b	15	20.5	1.5	14	14.9	1.3	15	14.7	1.4	11	10.3	1.0	30	20.1	2.8
	Hispanic/Latino	3	4.1	0.7	7	7.4	1.5	3	2.9	0.6	2	1.9	0.4	5	3.4	1.0
	White/Caucasian ^b	47	64.4	1.5	55	58.5	1.7	64	62.7	2.0	76	71.0	2.4	93	62.4	2.9
	Multiple Races ^c	0	0.0	--	1	1.1	--	1	1.0	--	2	1.9	--	1	0.7	--
	Unknown/Unspecified ^c	6	8.2	--	15	16.0	--	17	16.7	--	14	13.1	--	20	13.4	--
Total		73	100.0	1.5	94	100.0	1.9	102	100.0	2.1	107	100.0	2.1	149	100.0	2.9
Female	American Indian/Alaska Native ^b	0	0.0	0.0	2	3.8	3.2	2	3.0	3.2	1	1.3	1.6	0	0.0	0.0
	Asian/Pacific Islander ^b	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	1	1.3	0.6	1	1.4	0.6
	Black/African American ^b	8	20.0	0.7	12	23.1	1.0	11	16.4	0.9	14	17.5	1.2	11	15.3	0.9
	Hispanic/Latino	2	5.0	0.5	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	2	2.8	0.4
	White/Caucasian ^b	24	60.0	0.7	29	55.8	0.9	38	56.7	1.1	56	70.0	1.7	52	72.2	1.5
	Multiple Races ^c	1	2.5	--	1	1.9	--	0	0.0	--	0	0.0	--	0	0.0	--
	Unknown/Unspecified ^c	5	12.5	--	8	15.4	--	16	23.9	--	8	10.0	--	6	8.3	--
Total		40	100.0	0.8	52	100.0	1.0	67	100.0	1.3	80	100.0	1.5	72	100.0	1.4
Total	American Indian/Alaska Native ^b	1	0.9	0.8	4	2.7	3.3	3	1.8	2.5	2	1.1	1.6	0	0.0	0.0
	Asian/Pacific Islander ^b	1	0.9	0.4	0	0.0	0.0	1	0.6	0.3	2	1.1	0.6	1	0.5	0.3
	Black/African American ^b	23	20.4	1.0	26	17.8	1.2	26	15.4	1.2	25	13.4	1.1	41	18.6	1.8
	Hispanic/Latino	5	4.4	0.6	7	4.8	0.8	3	1.8	0.3	2	1.1	0.2	7	3.2	0.7
	White/Caucasian ^b	71	62.8	1.1	84	57.5	1.3	102	60.4	1.6	132	70.6	2.0	145	65.6	2.2
	Multiple Races ^c	1	0.9	--	2	1.4	--	1	0.6	--	2	1.1	--	1	0.5	--
	Unknown/Unspecified ^c	11	9.7	--	23	15.8	--	33	19.5	--	22	11.8	--	26	11.8	--
Total		113	100.0	1.1	146	100.0	1.5	169	100.0	1.7	187	100.0	1.8	221	100.0	2.1

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 11. Acute Hepatitis B Cases in North Carolina by Gender, Risk of Exposure^a, and Year of Diagnosis, 2014-2018

Gender	Exposure Category	2014		2015		2016		2017		2018	
		Cases	Rate ^a								
Male	Heterosexual ^b	40	--	49	--	45	--	51	--	81	--
	IDU ^c	10	--	17	--	22	--	41	--	37	--
	MSM ^c	4	--	6	--	2	--	4	--	3	--
	Other Risks ^d	4	--	9	--	6	--	13	--	16	--
	Unknown ^e	25	--	32	--	40	--	34	--	45	--
	Total^a	73	--	94	--	102	--	107	--	149	--
Female	Heterosexual ^b	18	--	24	--	39	--	44	--	38	--
	IDU ^c	6	--	7	--	13	--	21	--	22	--
	Other Risks ^d	6	--	7	--	10	--	15	--	11	--
	Unknown ^e	20	--	24	--	23	--	24	--	19	--
	Total^a	40	--	52	--	67	--	80	--	72	--
Total	Heterosexual ^b	58	--	73	--	84	--	95	--	119	--
	IDU ^c	16	--	24	--	35	--	62	--	59	--
	MSM ^c	4	--	6	--	2	--	4	--	3	--
	Other Risks ^d	10	--	16	--	16	--	28	--	27	--
	Unknown ^e	45	--	56	--	63	--	58	--	64	--
	Total^a	113	--	146	--	169	--	187	--	221	--

^aPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^bHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^cIDU = injection drug use; MSM = men who report sex with men.

^dOther risk includes health care exposure or contact with a positive hepatitis B individual.

^eUnknown is defined as individuals who did not report any risks for acquiring hepatitis B.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 12. Number of People Diagnosed with Chronic Hepatitis B, Presumed Alive, and Residing in North Carolina as of 12/31/2018

Demographics	Males			Females			Total ⁱ		
	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Current Age (Year)									
Less than 13	23	0.2	2.8	23	0.2	2.9	46	0.2	2.8
13-14	9	0.1	6.7	13	0.1	10.0	22	0.1	8.3
15-19	82	0.6	23.6	64	0.7	19.0	146	0.6	21.3
20-24	174	1.2	48.2	138	1.4	41.0	312	1.3	44.7
25-29	419	2.9	114.3	349	3.6	96.4	770	3.2	105.7
30-34	690	4.7	211.1	739	7.6	218.8	1,432	5.9	215.5
35-39	1,072	7.4	334.0	1,125	11.6	333.2	2,203	9.1	334.5
40-44	1,440	9.9	464.3	1,334	13.7	407.8	2,783	11.4	436.7
45-49	1,625	11.2	477.3	1,370	14.1	383.9	3,003	12.3	430.7
50-54	1,768	12.2	533.3	1,132	11.7	324.3	2,909	12.0	427.5
55-59	2,021	13.9	607.2	953	9.8	262.5	2,985	12.3	428.9
60-64	1,775	12.2	584.9	726	7.5	211.3	2,509	10.3	387.8
65 and older	3,445	23.7	466.5	1,745	18.0	183.5	5,208	21.4	308.3
Missing ^b	5	0.0	--	3	0.0	--	8	0.0	--
Race/Ethnicity									
American Indian/Alaska Native ^c	78	0.5	131.8	30	0.3	46.7	108	0.4	87.5
Asian/Pacific Islander ^c	3,349	23.0	2,021.0	3,540	36.4	1,999.5	6,909	28.4	2,015.7
Black/African American ^c	4,915	33.8	457.4	2,699	27.8	220.9	7,633	31.4	332.4
Hispanic/Latino	291	2.0	56.4	370	3.8	76.8	662	2.7	66.4
White/Caucasian ^c	4,094	28.1	126.5	1,966	20.2	58.0	6,079	25.0	91.8
Multiple Race ^b	307	2.1	--	295	3.0	--	602	2.5	--
Unknown/Unspecified ^b	1,514	10.4	--	814	8.4	--	2,343	9.6	--
Exposure Category^d									
Heterosexual Contact ^e	2,173	14.9	--	1,885	19.4	--	4,058	16.7	--
IDU ^f	261	1.8	--	107	1.1	--	368	1.5	--
MSM ^f	246	1.7	--	--	--	--	246	1.0	--
Other Risk ^g	149	1.0	--	103	1.1	--	252	1.0	--
Unknown ^h	12,013	82.6	--	7,770	80.0	--	19,857	81.6	--
Totalⁱ	14,548	100.0	288.0	9,714	100.0	182.2	24,336	100.0	234.4

^aRate is expressed per 100,000 population.

^bRates are not available due to the lack of overall population data for the missing age, multiple race and unknown/unspecified race/ethnicity groups.

^cNon-Hispanic/Latino.

^dPeople may report more than one risk, so totals and percentages may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^eHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^fIDU = injection drug use; MSM = men who report sex with men.

^gOther risk includes health care exposure or contact with a positive hepatitis B individual.

^hUnknown is defined as individuals who did not report any risks for acquiring hepatitis B.

ⁱTotals includes cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 13. Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by Selected Demographics, 2014-2018

Demographics	2014		2015		2016		2017		2018	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Gender										
Male	565	11.7	695	14.2	862	17.4	702	14.0	682	13.5
Female	405	7.9	416	8.1	522	10.0	475	9.0	402	7.5
Age at Diagnosis										
Less than 13	12	0.7	7	0.4	9	0.6	4	0.2	3	0.2
13-14	3	1.1	2	0.8	8	3.1	2	0.8	4	1.5
15-19	29	4.4	12	1.8	34	5.0	17	2.5	14	2.0
20-24	69	9.7	58	8.2	76	10.8	46	6.6	47	6.7
25-29	98	14.9	129	19.1	111	15.9	92	12.9	99	13.6
30-34	120	18.8	136	21.3	159	24.6	133	20.3	111	16.7
35-39	122	19.5	149	23.5	204	31.7	186	28.6	145	22.0
40-44	117	17.2	114	17.2	201	31.2	141	22.1	127	19.9
45-49	95	14.2	117	17.3	135	19.6	124	17.8	125	17.9
50-54	98	14.0	103	14.7	122	17.6	104	15.1	106	15.6
55-59	72	10.9	104	15.5	111	16.3	111	16.1	75	10.8
60-64	48	8.2	86	14.3	83	13.5	80	12.7	81	12.5
65 and older	87	6.0	94	6.2	131	8.3	138	8.5	147	8.7
Race/Ethnicity										
American Indian/Alaska Native ^b	2	1.7	7	5.8	5	4.1	11	9	1	0.8
Asian/Pacific Islander ^b	279	98.9	300	101.8	384	123.3	281	85.7	245	71.5
Black/African American ^b	288	13.1	279	12.6	376	16.8	315	13.9	280	12.2
Hispanic/Latino	28	3.2	29	3.2	27	2.9	21	2.2	37	3.7
White/Caucasian ^b	183	2.8	264	4.1	277	4.2	283	4.3	324	4.9
Multiple Race ^c	32	--	41	--	44	--	45	--	32	--
Unknown/Unspecified ^c	158	--	191	--	271	--	222	--	165	--
Exposure Category^d										
Heterosexual Contact ^e	385	--	390	--	480	--	409	--	432	--
IDU ^f	24	--	45	--	69	--	78	--	89	--
MSM ^f	20	--	23	--	27	--	25	--	18	--
Other Risk ^g	30	--	31	--	27	--	27	--	30	--
Unknown ^h	556	--	673	--	846	--	700	--	584	--
Total	970	9.1	1,111	11.1	1,384	13.6	1,178	11.5	1,084	10.4

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

^dPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^eHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^fIDU = injection drug use; MSM = men who report sex with men.

^gOther risk includes health care exposure or contact with a positive hepatitis B individual.

^hUnknown is defined as individuals who did not report any risks for acquiring hepatitis B.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 14. Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis, 2014-2018

Gender	Age at Diagnosis (Year)	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a												
Male	Less than 13	7	1.2	0.8	4	0.6	0.5	5	0.6	0.6	2	0.3	0.2	3	0.4	0.4
	13-14	1	0.2	0.7	2	0.3	1.5	7	0.8	5.3	1	0.1	0.7	1	0.1	0.7
	15-19	15	2.7	4.5	7	1.0	2.1	23	2.7	6.7	10	1.4	2.9	7	1.0	2.0
	20-24	34	6.0	9.2	34	4.9	9.2	35	4.1	9.5	20	2.8	5.5	22	3.2	6.1
	25-29	35	6.2	10.8	63	9.1	18.8	50	5.8	14.4	47	6.7	13.1	49	7.2	13.4
	30-34	62	11.0	19.8	75	10.8	23.9	95	11.0	29.9	71	10.1	22.1	58	8.5	17.7
	35-39	77	13.6	25.2	98	14.1	31.7	137	15.9	43.6	115	16.4	36.2	88	12.9	27.4
	40-44	76	13.5	22.9	82	11.8	25.3	146	16.9	46.4	92	13.1	29.6	99	14.5	31.9
	45-49	61	10.8	18.6	79	11.4	23.8	90	10.4	26.6	72	10.3	21.1	82	12.0	24.1
	50-54	66	11.7	19.5	77	11.1	22.7	75	8.7	22.3	73	10.4	21.9	74	10.9	22.3
	55-59	51	9.0	16.2	62	8.9	19.3	76	8.8	23.3	67	9.5	20.3	46	6.7	13.8
	60-64	28	5.0	10.2	53	7.6	18.9	44	5.1	15.3	50	7.1	16.9	57	8.4	18.8
	65 and older	52	9.2	8.2	59	8.5	9.0	79	9.2	11.5	82	11.7	11.5	96	14.1	13.0
Total		565	100.0	11.7	695	100.0	14.2	862	100.0	17.4	702	100.0	14.0	682	100.0	13.5
Female	Less than 13	5	1.2	0.6	3	0.7	0.4	4	0.8	0.5	2	0.4	0.2	0	0.0	0.0
	13-14	2	0.5	1.5	0	0.0	0.0	1	0.2	0.8	1	0.2	0.8	3	0.7	2.3
	15-19	14	3.5	4.4	5	1.2	1.5	11	2.1	3.3	7	1.5	2.1	7	1.7	2.1
	20-24	35	8.6	10.3	24	5.8	7.1	41	7.9	12.1	26	5.5	7.7	25	6.2	7.4
	25-29	63	15.6	19.0	66	15.9	19.5	61	11.7	17.5	45	9.5	12.6	50	12.4	13.8
	30-34	58	14.3	17.8	61	14.7	18.7	64	12.3	19.5	62	13.1	18.7	53	13.2	15.7
	35-39	45	11.1	14.1	51	12.3	15.8	67	12.8	20.3	71	14.9	21.3	57	14.2	16.9
	40-44	41	10.1	11.8	32	7.7	9.4	55	10.5	16.7	48	10.1	14.7	28	7.0	8.6
	45-49	34	8.4	10.0	38	9.1	11.0	45	8.6	12.8	52	10.9	14.6	43	10.7	12.0
	50-54	32	7.9	8.9	26	6.3	7.2	47	9.0	13.2	31	6.5	8.8	32	8.0	9.2
	55-59	21	5.2	6.1	42	10.1	12.0	35	6.7	9.8	44	9.3	12.2	29	7.2	8.0
	60-64	20	4.9	6.4	33	7.9	10.3	39	7.5	11.9	30	6.3	8.9	24	6.0	7.0
	65 and older	35	8.6	4.2	35	8.4	4.1	52	10.0	5.9	56	11.8	6.1	51	12.7	5.4
Total		405	100.0	7.9	416	100.0	8.1	522	100.0	10.0	475	100.0	9.0	402	100.0	7.5

Continued

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 14 (Continued). Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis 2014-2018

Gender	Age at Diagnosis (Year)	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Total^b	Less than 13	12	1.2	0.7	7	0.6	0.4	9	0.7	0.6	4	0.3	0.2	3	0.3	0.2
	13-14	3	0.3	1.1	2	0.2	0.8	8	0.6	3.1	2	0.2	0.8	4	0.4	1.5
	15-19	29	3.0	4.4	12	1.1	1.8	34	2.5	5.0	17	1.4	2.5	14	1.3	2.0
	20-24	69	7.1	9.7	58	5.2	8.2	76	5.5	10.8	46	3.9	6.6	47	4.3	6.7
	25-29	98	10.1	14.9	129	11.6	19.1	111	8.0	15.9	92	7.8	12.9	99	9.1	13.6
	30-34	120	12.4	18.8	136	12.2	21.3	159	11.5	24.6	133	11.3	20.3	111	10.2	16.7
	35-39	122	12.6	19.5	149	13.4	23.5	204	14.7	31.7	186	15.8	28.6	145	13.4	22.0
	40-44	117	12.1	17.2	114	10.3	17.2	201	14.5	31.2	141	12.0	22.1	127	11.7	19.9
	45-49	95	9.8	14.2	117	10.5	17.3	135	9.8	19.6	124	10.5	17.8	125	11.5	17.9
	50-54	98	10.1	14.0	103	9.3	14.7	122	8.8	17.6	104	8.8	15.1	106	9.8	15.6
	55-59	72	7.4	10.9	104	9.4	15.5	111	8.0	16.3	111	9.4	16.1	75	6.9	10.8
	60-64	48	4.9	8.2	86	7.7	14.3	83	6.0	13.5	80	6.8	12.7	81	7.5	12.5
	65 and older	87	9.0	6.0	94	8.5	6.2	131	9.5	8.3	138	11.7	8.5	147	13.6	8.7
	Total	970	100.0	9.8	1,111	100.0	11.1	1,384	100.0	13.6	1,178	100.0	11.5	1,084	100.0	10.4

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 15. Newly Diagnosed Chronic Hepatitis B Annual Rates in North Carolina by Gender, Race/Ethnicity, and Year of Diagnosis, 2014-2018

Gender	Race/Ethnicity	2014			2015			2016			2017			2018		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Male	American Indian/Alaska Native ^b	1	0.2	1.7	5	0.7	8.6	4	0.5	6.8	10	1.4	16.9	1	0.1	1.7
	Asian/Pacific Islander ^b	134	23.7	98.7	155	22.3	109.0	201	23.3	133.6	136	19.4	85.7	131	19.2	79.1
	Black/African American ^b	174	30.8	16.9	193	27.8	18.6	246	28.5	23.4	200	28.5	18.8	200	29.3	18.6
	Hispanic/Latino	14	2.5	3.0	15	2.2	3.2	17	2.0	3.5	12	1.7	2.4	24	3.5	4.7
	White/Caucasian ^b	124	21.9	3.9	175	25.2	5.5	192	22.3	6.0	176	25.1	5.5	198	29.0	6.1
	Multiple Races ^c	14	2.5	--	30	4.3	--	28	3.2	--	21	3.0	--	20	2.9	--
	Unknown/Unspecified ^c	104	18.4	--	122	17.6	--	174	20.2	--	147	20.9	--	108	15.8	--
Total		565	100.0	11.7	695	100.0	14.2	862	100.0	17.4	702	100.0	14.0	682	100.0	13.5
Female	American Indian/Alaska Native ^b	1	0.2	1.6	2	0.5	3.2	1	0.2	1.6	1	0.2	1.6	0	0.0	0.0
	Asian/Pacific Islander ^b	145	35.8	99.1	145	34.9	95.0	183	35.1	113.7	144	30.3	85.1	114	28.4	64.4
	Black/African American ^b	114	28.1	9.8	86	20.7	7.3	130	24.9	10.9	115	24.2	9.5	80	19.9	6.5
	Hispanic/Latino	14	3.5	3.3	14	3.4	3.2	10	1.9	2.2	9	1.9	1.9	13	3.2	2.7
	White/Caucasian ^b	59	14.6	1.8	89	21.4	2.7	85	16.3	2.5	107	22.5	3.2	126	31.3	3.7
	Multiple Races ^c	18	4.4	--	11	2.6	--	16	3.1	--	24	5.1	--	12	3.0	--
	Unknown/Unspecified ^c	54	13.3	--	69	16.6	--	97	18.6	--	75	15.8	--	57	14.2	--
Total		405	100.0	7.9	416	100.0	8.1	522	100.0	10.0	475	100.0	9.0	402	100.0	7.5
Total	American Indian/Alaska Native ^b	2	0.2	1.7	7	0.6	5.8	5	0.4	4.1	11	0.9	9.0	1	0.1	0.8
	Asian/Pacific Islander ^b	279	28.8	98.9	300	27.0	101.8	384	27.7	123.3	281	23.9	85.7	245	22.6	71.5
	Black/African American ^b	288	29.7	13.1	279	25.1	12.6	376	27.2	16.8	315	26.7	13.9	280	25.8	12.2
	Hispanic/Latino	28	2.9	3.2	29	2.6	3.2	27	2.0	2.9	21	1.8	2.2	37	3.4	3.7
	White/Caucasian ^b	183	18.9	2.8	264	23.8	4.1	277	20.0	4.2	283	24.0	4.3	324	29.9	4.9
	Multiple Races ^c	32	3.3	--	41	3.7	--	44	3.2	--	45	3.8	--	32	3.0	--
	Unknown/Unspecified ^c	158	16.3	--	191	17.2	--	271	19.6	--	222	18.8	--	165	15.2	--
Total		970	100.0	9.8	1,111	100.0	11.1	1,384	100.0	13.6	1,178	100.0	11.5	1,084	100.0	10.4

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 16. Newly Diagnosed Chronic Hepatitis B Cases in North Carolina by Gender, Risk of Exposure^a, and Year of Diagnosis, 2014-2018

Gender	Exposure Category	2014		2015		2016		2017		2018	
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male	Heterosexual ^b	194	34.3	207	29.8	281	32.6	225	32.1	255	37.4
	IDU ^c	19	3.4	35	5.0	43	5.0	58	8.3	61	8.9
	MSM ^c	20	3.5	23	3.3	27	3.1	25	3.6	18	2.6
	Other Risks ^d	15	2.7	16	2.3	14	1.6	21	3.0	19	2.8
	Unknown ^e	346	61.2	447	64.3	539	62.5	423	60.3	372	54.5
Total		565	100.0	695	100.0	862	100.0	702	100.0	682	100.0
Female	Heterosexual ^b	191	47.2	183	44.0	199	38.1	184	38.7	177	44.0
	IDU ^c	5	1.2	10	2.4	26	5.0	20	4.2	28	7.0
	Other Risks ^d	15	3.7	15	3.6	13	2.5	6	1.3	11	2.7
	Unknown ^e	210	51.9	226	54.3	307	58.8	276	58.1	212	52.7
Total		405	100.0	416	100.0	522	100.0	475	100.0	402	100.0
Total	Heterosexual ^b	385	39.7	390	35.1	480	34.7	409	34.7	432	39.9
	IDU ^c	24	2.5	45	4.1	69	5.0	78	6.6	89	8.2
	MSM ^c	20	2.1	23	2.1	27	2.0	25	2.1	18	1.7
	Other Risks ^d	30	3.1	31	2.8	27	2.0	27	2.3	30	2.8
	Unknown ^e	556	57.3	673	60.6	846	61.1	700	59.4	584	53.9
Total		970	100.0	1,111	100.0	1,384	100.0	1,178	100.0	1,084	100.0

^aPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^bHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^cIDU = injection drug use; MSM = men who report sex with men.

^dOther risk includes health care exposure or contact with a positive hepatitis B individual.

^eUnknown is defined as individuals who did not report any risks for acquiring hepatitis B.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 17. Acute Hepatitis C Annual Rates in North Carolina by Selected Demographics, 2014-2018[^]

Demographics	2014		2015		2016 [^]		2017 [^]		2018 [^]	
	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Gender										
Male	67	1.4	70	1.4	108	2.2	97	1.9	110	2.2
Female	59	1.2	48	0.9	94	1.8	91	1.7	81	1.5
Missing	2	--	3	--	1	--	0	--	0	--
Age at Diagnosis										
Less than 13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	4	0.6	8	1.2	7	1.0	3	0.4	2	0.3
20-24	28	3.9	22	3.1	28	4.0	27	3.9	29	4.2
25-29	28	4.3	25	3.7	45	6.5	36	5.0	51	7.0
30-34	16	2.5	16	2.5	31	4.8	34	5.2	31	4.7
35-39	13	2.1	12	1.9	34	5.3	21	3.2	27	4.1
40-44	13	1.9	13	2.0	20	3.1	19	3.0	15	2.4
45-49	10	1.5	9	1.3	15	2.2	19	2.7	12	1.7
50-54	8	1.1	9	1.3	11	1.6	13	1.9	13	1.9
55-59	5	0.8	5	0.7	7	1.0	7	1.0	4	0.6
60-64	0	0.0	1	0.2	4	0.6	6	0.9	6	0.9
65 and older	2	0.1	1	0.1	1	0.1	3	0.2	1	0.1
Missing	1	--	0	--	0	--	0	--	0	--
Race/Ethnicity										
American Indian/Alaska Native ^b	3	2.5	3	2.5	9	7.4	9	7.3	12	9.7
Asian/Pacific Islander ^b	0	0.0	1	0.3	0	0.0	1	0.3	0	0.0
Black/African American ^b	7	0.3	6	0.3	12	0.5	12	0.5	12	0.5
Hispanic/Latino	5	0.6	1	0.1	3	0.3	4	0.4	2	0.2
White/Caucasian ^b	109	1.7	105	1.6	163	2.5	146	2.2	140	2.1
Multiple Race ^c	1	--	0	--	1	--	0	--	4	--
Unknown/Unspecified ^c	3	--	5	--	15	--	16	--	21	--
Exposure Category^d										
Heterosexual Contact ^e	51	--	48	--	84	--	83	--	79	--
IDU ^f	46	--	49	--	88	--	87	--	96	--
MSM ^f	2	--	0	--	1	--	1	--	0	--
Other Risk ^g	9	--	11	--	9	--	12	--	30	--
Unknown ^h	53	--	47	--	76	--	64	--	66	--
Totalⁱ	128	1.3	121	1.2	203	2.0	188	1.8	191	1.8

[^]Case definition of Hepatitis C changed in 2016. See Appendix A: Technical Notes for the change.

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

^dPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^eHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^fIDU = injection drug use; MSM = men who report sex with men.

^gOther risk includes health care exposure or contact with a positive hepatitis B individual.

^hUnknown is defined as individuals who did not report any risks (including missing) for acquiring hepatitis B.

ⁱTotals includes cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 18. Acute Hepatitis C Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis, 2014-2018[^]

Gender	Age at Diagnosis (Year)	2014			2015			2016 [^]			2017 [^]			2018 [^]		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Male	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	3	4.5	0.9	1	1.4	0.3	4	3.7	1.2	1	1.0	0.3	2	1.8	0.6
	20-24	12	17.9	3.3	12	17.1	3.2	9	8.3	2.4	9	9.3	2.5	15	13.6	4.2
	25-29	21	31.3	6.5	16	22.9	4.8	29	26.9	8.3	19	19.6	5.3	33	30.0	9.0
	30-34	6	9.0	1.9	13	18.6	4.1	15	13.9	4.7	20	20.6	6.2	11	10.0	3.4
	35-39	7	10.4	2.3	5	7.1	1.6	20	18.5	6.4	14	14.4	4.4	17	15.5	5.3
	40-44	4	6.0	1.2	9	12.9	2.8	13	12.0	4.1	7	7.2	2.3	8	7.3	2.6
	45-49	5	7.5	1.5	5	7.1	1.5	7	6.5	2.1	10	10.3	2.9	6	5.5	1.8
	50-54	5	7.5	1.5	6	8.6	1.8	5	4.6	1.5	9	9.3	2.7	10	9.1	3.0
	55-59	3	4.5	1.0	2	2.9	0.6	5	4.6	1.5	2	2.1	0.6	4	3.6	1.2
	60-64	0	0.0	0.0	1	1.4	0.4	1	0.9	0.3	4	4.1	1.4	3	2.7	1.0
	65 and older	1	1.5	0.2	0	0.0	0.0	0	0.0	0.0	2	2.1	0.3	1	0.9	0.1
Total		67	100.0	1.4	70	100.0	1.4	108	100.0	2.2	97	100.0	1.9	110	100.0	2.2
Female	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	1	1.7	0.3	7	14.6	2.2	3	3.2	0.9	2	2.2	0.6	0	0.0	0.0
	20-24	15	25.4	4.4	9	18.8	2.7	19	20.2	5.6	18	19.8	5.4	14	17.3	4.2
	25-29	7	11.9	2.1	9	18.8	2.7	16	17.0	4.6	17	18.7	4.8	18	22.2	5.0
	30-34	10	16.9	3.1	3	6.3	0.9	16	17.0	4.9	14	15.4	4.2	20	24.7	5.9
	35-39	6	10.2	1.9	6	12.5	1.9	14	14.9	4.2	7	7.7	2.1	10	12.3	3.0
	40-44	9	15.3	2.6	4	8.3	1.2	6	6.4	1.8	12	13.2	3.7	7	8.6	2.1
	45-49	4	6.8	1.2	3	6.3	0.9	8	8.5	2.3	9	9.9	2.5	6	7.4	1.7
	50-54	3	5.1	0.8	3	6.3	0.8	6	6.4	1.7	4	4.4	1.1	3	3.7	0.9
	55-59	2	3.4	0.6	3	6.3	0.9	2	2.1	0.6	5	5.5	1.4	0	0.0	0.0
	60-64	0	0.0	0.0	0	0.0	0.0	3	3.2	0.9	2	2.2	0.6	3	3.7	0.9
	65 and older	1	1.7	0.1	1	2.1	0.1	1	1.1	0.1	1	1.1	0.1	0	0.0	0.0
Missing	1	1.7	--	0	0.0	--	0	0.0	--	0	0.0	--	0	0.0	--	
Total		59	100.0	1.2	48	100.0	0.9	94	100.0	1.8	91	100.0	1.7	81	100.0	1.5

Continued

[^]Case definition of Hepatitis C changed in 2016. See Appendix A: Technical Notes for the change.

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 18 (Continued). Acute Hepatitis C Annual Rates in North Carolina by Gender, Age, and Year of Diagnosis 2014-2018[^]

Gender	Age at Diagnosis (Year)	2014			2015			2016 [^]			2017 [^]			2018 [^]		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Total^b	Less than 13	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	15-19	4	3.1	0.6	8	6.6	1.2	7	3.4	1.0	3	1.6	0.4	2	1.0	0.3
	20-24	28	21.9	3.9	22	18.2	3.1	28	13.8	4.0	27	14.4	3.9	29	15.2	4.2
	25-29	28	21.9	4.3	25	20.7	3.7	45	22.2	6.5	36	19.1	5.0	51	26.7	7.0
	30-34	16	12.5	2.5	16	13.2	2.5	31	15.3	4.8	34	18.1	5.2	31	16.2	4.7
	35-39	13	10.2	2.1	12	9.9	1.9	34	16.7	5.3	21	11.2	3.2	27	14.1	4.1
	40-44	13	10.2	1.9	13	10.7	2.0	20	9.9	3.1	19	10.1	3.0	15	7.9	2.4
	45-49	10	7.8	1.5	9	7.4	1.3	15	7.4	2.2	19	10.1	2.7	12	6.3	1.7
	50-54	8	6.3	1.1	9	7.4	1.3	11	5.4	1.6	13	6.9	1.9	13	6.8	1.9
	55-59	5	3.9	0.8	5	4.1	0.7	7	3.4	1.0	7	3.7	1.0	4	2.1	0.6
	60-64	0	0.0	0.0	1	0.8	0.2	4	2.0	0.6	6	3.2	0.9	6	3.1	0.9
	65 and older	2	1.6	0.1	1	0.8	0.1	1	0.5	0.1	3	1.6	0.2	1	0.5	0.1
	Missing	1	0.8	--	0	0.0	--	0	0.0	--	0	0.0	--	0	0.0	--
	Total^b		128	100.0	1.3	121	100.0	1.2	203	100.0	2.0	188	100.0	1.8	191	100.0

[^]Case definition of Hepatitis C changed in 2016. See Appendix A: Technical Notes for the change.

^aRate is expressed per 100,000 population.

^bTotals include cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 19. Acute Hepatitis C Annual Rates in North Carolina by Gender, Race/Ethnicity, and Year of Diagnosis, 2014-2018[^]

Gender	Race/Ethnicity	2014			2015			2016 [^]			2017 [^]			2018 [^]		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Male	American Indian/Alaska Native ^b	1	1.5	1.7	0	0.0	0.0	5	4.6	8.5	5	5.2	8.5	6	5.5	10.1
	Asian/Pacific Islander ^b	0	0.0	0.0	1	1.4	0.7	0	0.0	0.0	1	1.0	0.6	0	0.0	0.0
	Black/African American ^b	2	3.0	0.2	3	4.3	0.3	2	1.9	0.2	8	8.2	0.8	6	5.5	0.6
	Hispanic/Latino	2	3.0	0.4	1	1.4	0.2	3	2.8	0.6	3	3.1	0.6	2	1.8	0.4
	White/Caucasian ^b	59	88.1	1.9	64	91.4	2.0	90	83.3	2.8	70	72.2	2.2	76	69.1	2.3
	Multiple Races ^c	1	1.5	--	0	0.0	--	0	0.0	--	0	0.0	--	3	2.7	--
	Unknown/Unspecified ^c	2	3.0	--	1	1.4	--	8	7.4	--	10	10.3	--	17	15.5	--
Total		67	100.0	1.4	70	100.0	1.4	108	100.0	2.2	97	100.0	1.9	110	100.0	2.2
Female	American Indian/Alaska Native ^b	2	3.4	3.2	3	6.3	4.8	4	4.3	6.3	4	4.4	6.3	6	7.4	9.3
	Asian/Pacific Islander ^b	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
	Black/African American ^b	5	8.5	0.4	3	6.3	0.3	10	10.6	0.8	4	4.4	0.3	6	7.4	0.5
	Hispanic/Latino	3	5.1	0.7	0	0.0	0.0	0	0.0	0.0	1	1.1	0.2	0	0.0	0.0
	White/Caucasian ^b	48	81.4	1.5	38	79.2	1.1	72	76.6	2.2	76	83.5	2.3	64	79.0	1.9
	Multiple Races ^c	0	0.0	--	0	0.0	--	1	1.1	--	0	0.0	--	1	1.2	--
	Unknown/Unspecified ^c	1	1.7	--	4	8.3	--	7	7.4	--	6	6.6	--	4	4.9	--
Total		59	100.0	1.2	48	100.0	0.9	94	100.0	1.8	91	100.0	1.7	81	100.0	1.5
Total^d	American Indian/Alaska Native ^b	3	2.3	2.5	3	2.5	2.5	9	4.4	7.4	9	4.8	7.3	12	6.3	9.7
	Asian/Pacific Islander ^b	0	0.0	0.0	1	0.8	0.3	0	0.0	0.0	1	0.5	0.3	0	0.0	0.0
	Black/African American ^b	7	5.5	0.3	6	5.0	0.3	12	5.9	0.5	12	6.4	0.5	12	6.3	0.5
	Hispanic/Latino	5	3.9	0.6	1	0.8	0.1	3	1.5	0.3	4	2.1	0.4	2	1.0	0.2
	White/Caucasian ^b	109	85.2	1.7	105	86.8	1.6	163	80.3	2.5	146	77.7	2.2	140	73.3	2.1
	Multiple Races ^c	1	0.8	--	0	0.0	--	1	0.5	--	0	0.0	--	4	2.1	--
	Unknown/Unspecified ^c	3	2.3	--	5	4.1	--	15	7.4	--	16	8.5	--	21	11.0	--
Total^d		128	100.0	1.3	121	100.0	1.2	203	100.0	2.0	188	100.0	1.8	191	100.0	1.8

[^]Case definition of Hepatitis C changed in 2016. See Appendix A: Technical Notes for the change.

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

^dTotals include cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 20. Acute Hepatitis C Cases in North Carolina by Gender, Risk of Exposure^a, and Year of Diagnosis, 2014-2018[^]

Gender	Exposure Category	2014		2015		2016 [^]		2017 [^]		2018 [^]	
		Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a	Cases	Rate ^a
Male	Heterosexual ^b	24	--	25	--	41	--	39	--	38	--
	IDU ^c	26	--	27	--	50	--	45	--	56	--
	MSM ^c	2	--	0	--	1	--	1	--	0	--
	Other Risks ^d	5	--	6	--	3	--	3	--	14	--
	Unknown ^e	30	--	29	--	41	--	37	--	44	--
Total		67	--	70	--	108	--	97	--	110	--
Female	Heterosexual ^b	27	--	23	--	43	--	44	--	41	--
	IDU ^c	18	--	20	--	38	--	42	--	40	--
	Other Risks ^d	4	--	3	--	6	--	9	--	16	--
	Unknown ^e	23	--	17	--	34	--	27	--	22	--
Total		59	--	48	--	94	--	91	--	81	--
Total^f	Heterosexual ^b	51	--	48	--	84	--	83	--	79	--
	IDU ^c	46	--	49	--	88	--	87	--	96	--
	MSM ^c	2	--	0	--	1	--	1	--	0	--
	Other Risks ^d	9	--	11	--	9	--	12	--	30	--
	Unknown ^e	53	--	47	--	76	--	64	--	66	--
Total^f		128	--	121	--	203	--	188	--	191	--

^aPeople may report more than one risk, so totals may not add up to the case total in bold. Rates are not presented due to the lack of population data for the exposure groups.

^bHeterosexual risk is defined as a person reporting sexual contact with a partner of the opposite sex.

^cIDU = injection drug use; MSM = men who report sex with men.

^dOther risk includes health care exposure or contact with a positive hepatitis B individual.

^eUnknown is defined as individuals who did not report any risks for acquiring hepatitis B.

^fTotals include cases with missing gender, and race/ethnicity information.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 21. Newly Reported Chronic Hepatitis C* in North Carolina by Selected Demographics, as of 12/31/2018

Demographics	Males			Females			Total ^d		
	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Age at Report (Year)									
Less than 13	49	0.2	5.9	71	0.4	8.8	120	0.3	7.3
13-14	2	0.0	1.5	4	0.0	3.1	6	0.0	2.3
15-19	96	0.4	27.6	173	1.0	51.5	271	0.7	39.6
20-24	1,052	4.3	291.3	1,335	8.0	396.5	2,390	5.8	342.5
25-29	2,446	10.1	667.2	2,397	14.3	662.2	4,852	11.8	666.0
30-34	2,328	9.6	712.2	2,032	12.1	601.7	4,367	10.6	657.1
35-39	2,017	8.3	628.4	1,415	8.4	419.1	3,439	8.4	522.2
40-44	1,419	5.8	457.5	996	5.9	304.4	2,421	5.9	379.9
45-49	1,733	7.1	509.0	1,138	6.8	318.9	2,874	7.0	412.2
50-54	2,913	12.0	878.7	1,730	10.3	495.6	4,646	11.3	682.7
55-59	4,064	16.7	1,220.9	2,169	12.9	597.3	6,239	15.2	896.4
60-64	3,594	14.8	1,184.2	1,767	10.5	514.4	5,364	13.1	829.0
65 and older	2,521	10.4	341.4	1,508	9.0	158.6	4,033	9.8	238.7
Unknown ^b	51	0.2	--	15	0.1	--	74	0.3	--
Race/Ethnicity									
American Indian/Alaska Native ^c	114	0.5	192.6	95	0.6	148.0	209	0.5	169.4
Asian/Pacific Islander ^c	37	0.2	22.3	27	0.2	15.3	64	0.2	18.7
Black/African American ^c	2,772	11.4	258.0	1,427	8.5	116.8	4,201	10.2	182.9
Hispanic/Latino	162	0.7	31.4	90	0.5	18.7	252	0.6	25.3
White/Caucasian ^c	6,056	24.9	187.2	5,120	30.6	151.1	11,186	27.2	168.9
Multiple Race ^b	196	0.8	--	168	1.0	--	365	0.9	--
Unknown/Unspecified ^b	14,948	61.6	--	9,823	58.6	--	24,819	60.4	--
Total^d	24,285	100.0	480.8	16,750	100.0	314.1	41,096	100.0	395.8

*Chronic hepatitis C became reportable in North Carolina in late-2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Risk of exposure data is not collected for chronic hepatitis C cases, as these cases are not investigated at this time. Newly diagnosed hepatitis C is also not available at this time.

^aRate is expressed per 100,000 population.

^bRates are not available due to the lack of overall population data for the unknown age, multiple race, and unknown/unspecified race/ethnicity groups.

^cNon-Hispanic/Latino.

^dTotals includes cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 22. Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by Gender, Age, and Year of Report, 2016-2018*

Gender	Age at Diagnosis (Year)	2016			2017			2018		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Male	Less than 13	5	0.2	0.6	21	0.2	2.5	23	0.2	2.8
	13-14	0	0.0	0.0	2	0.0	1.5	0	0.0	0.0
	15-19	8	0.3	2.3	45	0.4	13.0	43	0.4	12.4
	20-24	143	4.7	38.9	501	4.3	137.9	408	4.2	113.0
	25-29	258	8.5	74.2	1,163	10.1	324.6	1,025	10.6	279.6
	30-34	273	9.0	86.1	1,098	9.5	341.6	957	9.9	292.8
	35-39	217	7.1	69.1	924	8.0	291.1	876	9.1	272.9
	40-44	165	5.4	52.4	676	5.8	217.4	578	6.0	186.4
	45-49	249	8.2	73.6	820	7.1	240.3	664	6.9	195.0
	50-54	419	13.8	124.4	1,438	12.4	430.4	1,056	10.9	318.6
	55-59	573	18.9	175.5	1,967	17.0	596.9	1,524	15.7	457.9
	60-64	454	15.0	157.7	1,762	15.2	595.4	1,378	14.2	454.0
	65 and older	269	8.9	39.3	1,140	9.9	160.3	1,098	11.3	148.7
	Missing	3	0.1	--	14	0.1	--	48	0.5	--
Total		3,036	100.0	61.4	11,571	100.0	231.5	9,678	100.0	191.6
Female	Less than 13	3	0.1	0.4	40	0.5	5.0	28	0.4	3.5
	13-14	0	0.0	0.0	3	0.0	2.3	1	0.0	0.8
	15-19	31	1.5	9.3	80	1.0	23.9	62	0.9	18.4
	20-24	180	8.5	53.3	687	8.6	204.4	468	7.0	139.0
	25-29	310	14.7	88.8	1,126	14.2	315.2	961	14.4	265.5
	30-34	220	10.4	67.0	900	11.3	270.9	912	13.6	270.0
	35-39	174	8.2	52.8	627	7.9	187.8	614	9.2	181.9
	40-44	112	5.3	34.0	455	5.7	139.4	429	6.4	131.1
	45-49	162	7.7	46.0	528	6.6	148.3	448	6.7	125.5
	50-54	239	11.3	67.0	901	11.3	255.2	590	8.8	169.0
	55-59	292	13.8	82.1	1,040	13.1	289.4	837	12.5	230.5
	60-64	218	10.3	66.5	866	10.9	257.7	683	10.2	198.8
	65 and older	174	8.2	19.7	682	8.6	74.4	647	9.7	68.1
	Missing	0	0.0	--	8	0.1	--	12	0.2	--
Total		2,115	100.0	40.6	7,943	100.0	150.7	6,692	100.0	125.5

Continued

*Chronic hepatitis C became reportable in North Carolina in late-2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Risk of exposure data is not collected for chronic hepatitis C cases, as these cases are not investigated at this time. Newly diagnosed hepatitis C is also not available at this time.

^aRate is expressed per 100,000 population.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 22 (Continued). Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by Gender, Age, and Year of Report 2016-2018*

Gender	Age at Diagnosis (Year)	2016			2017			2018		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Total^b	Less than 13	8	0.2	0.5	61	0.3	3.7	51	0.3	3.1
	13-14	0	0.0	0.0	5	0.0	1.9	1	0.0	0.4
	15-19	39	0.8	5.8	126	0.6	18.5	106	0.6	15.5
	20-24	324	6.3	45.9	1,189	6.1	170.0	877	5.3	125.7
	25-29	571	11.1	82.0	2,293	11.7	320.5	1,988	12.1	272.9
	30-34	494	9.6	76.5	1,998	10.2	305.7	1,875	11.4	282.1
	35-39	393	7.6	61.0	1,553	7.9	238.4	1,493	9.1	226.7
	40-44	279	5.4	43.3	1,132	5.8	177.6	1,010	6.2	158.5
	45-49	412	8.0	59.7	1,349	6.9	193.5	1,113	6.8	159.6
	50-54	658	12.7	94.9	2,342	12.0	340.8	1,646	10.0	241.9
	55-59	865	16.8	126.8	3,010	15.4	436.9	2,364	14.4	339.7
	60-64	672	13.0	109.1	2,629	13.5	416.0	2,063	12.6	318.8
	65 and older	444	8.6	28.3	1,823	9.3	112.0	1,746	10.6	103.4
	Missing	3	0.1	--	25	0.1	--	66	0.4	--
Total^b		5,162	100.0	50.8	19,535	100.0	190.2	16,399	100.0	157.9

*Chronic hepatitis C became reportable in North Carolina in late-2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Risk of exposure data is not collected for chronic hepatitis C cases, as these cases are not investigated at this time. Newly diagnosed hepatitis C is also not available at this time.

^aRate is expressed per 100,000 population.

^bTotals includes cases with missing gender.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

Table 23. Newly Reported Chronic Hepatitis C Annual Rates in North Carolina by Gender, Race/Ethnicity, and Year of Report, 2016-2018*

Gender	Race/Ethnicity	2016			2017			2018		
		Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Male	American Indian/Alaska Native ^b	13	0.4	22.2	53	0.5	89.8	48	0.5	81.1
	Asian/Pacific Islander ^b	5	0.2	3.3	19	0.2	12.0	13	0.1	7.8
	Black/African American ^b	325	10.7	30.9	1,330	11.5	125.1	1,117	11.5	103.9
	Hispanic/Latino	14	0.5	2.9	66	0.6	13.2	82	0.8	15.9
	White/Caucasian ^b	580	19.1	18.1	2,666	23.0	82.9	2,810	29.0	86.8
	Multiple Races ^c	30	1.0	--	88	0.8	--	78	0.8	--
	Unknown/Unspecified ^c	2,069	68.1	--	7,349	63.5	--	5,530	57.1	--
Total		3,036	100.0	61.4	11,571	100.0	231.5	9,678	100.0	191.6
Female	American Indian/Alaska Native ^b	9	0.4	14.2	39	0.5	61.2	47	0.7	73.2
	Asian/Pacific Islander ^b	2	0.1	1.2	11	0.1	6.5	14	0.2	7.9
	Black/African American ^b	149	7.0	12.5	642	8.1	53.1	636	9.5	52.1
	Hispanic/Latino	2	0.1	0.4	47	0.6	10.1	41	0.6	8.5
	White/Caucasian ^b	484	22.9	14.5	2,293	28.9	68.1	2,343	35.0	69.2
	Multiple Races ^c	24	1.1	--	80	1.0	--	64	1.0	--
	Unknown/Unspecified ^c	1,445	68.3	--	4,831	60.8	--	3,547	53.0	--
Total		2,115	100.0	40.6	7,943	100.0	150.7	6,692	100.0	125.5
Total^d	American Indian/Alaska Native ^b	22	0.4	18.1	92	0.5	74.9	95	0.6	77.0
	Asian/Pacific Islander ^b	7	0.1	2.2	30	0.2	9.2	27	0.2	7.9
	Black/African American ^b	475	9.2	21.2	1,973	10.1	86.9	1,753	10.7	76.3
	Hispanic/Latino	16	0.3	1.7	113	0.6	11.7	123	0.8	12.3
	White/Caucasian ^b	1,066	20.7	16.3	4,962	25.4	75.4	5,158	31.5	77.9
	Multiple Races ^c	54	1.0	--	168	0.9	--	143	0.9	--
	Unknown/Unspecified ^c	3,522	68.2	--	12,197	62.4	--	9,100	55.5	--
Total^d		5,162	100.0	50.8	19,535	100.0	190.2	16,399	100.0	157.9

*Chronic hepatitis C became reportable in North Carolina in late-2016. Labs are only reportable by electronic lab reporting. These numbers are likely an underestimation. Risk of exposure data is not collected for chronic hepatitis C cases, as these cases are not investigated at this time. Newly diagnosed hepatitis C is also not available at this time.

^aRate is expressed per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race and unknown/unspecified race/ethnicity groups.

^dTotals includes cases with missing gender, and race/ethnicity information.

Please use caution when interpreting reported numbers less than 10 and the corresponding rates based on these numbers.

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

APPENDIX A: Technical Notes

Readers should be aware that acute hepatitis B and C, and chronic hepatitis B data are all presented by date of diagnosis rather than date of report. Chronic hepatitis C data are presented by date of report. Please see the individual surveillance disease notes below for more information.

About the Authors

North Carolina law requires that diagnoses of certain communicable diseases, including STDs, be reported to local health departments that in turn report the information to the state. The HIV/STD/Hepatitis Surveillance Unit is the designated recipient for STD and viral hepatitis B (HBV) and hepatitis C (HCV) morbidity reports at the state level. From these reports, the HIV/STD/Hepatitis Surveillance Unit is responsible for aggregating these reports and providing county, regional, and statewide information about STDs and viral HBV and HCV to others, including the CDC. The HIV/STD/Hepatitis Surveillance Unit is part of the Communicable Disease Branch within the North Carolina Division of Public Health.

About the Content of This Report

This document, the *2018 North Carolina Hepatitis B and C Surveillance Report*, includes summary tables of surveillance reports and other information for HBV (acute, chronic, and perinatal), and HCV (acute and chronic). In some instances, total numbers of reports may not agree between separate cross-tabulations due to missing values for some variables.

Rates are presented for several categories of race/ethnicity, age group, and gender for each disease. Rates are also presented for counties across the state and are expressed as cases per 100,000 population. Rate denominators were calculated using the available bridged-race population estimates for 2018 from the National Center for Health Statistics. More information about bridged-race categories is available at the website http://www.cdc.gov/nchs/nvss/bridged_race.htm.

Rates that are based on a small number of cases (generally fewer than 10) should be viewed with caution and are considered unreliable because these rates have large standard errors and can vary widely with small changes in case numbers. Data is suppressed in this document according to the North Carolina Division of Public Health Communicable Disease Branch data release guidelines, which were updated in March 2018. These data are suppressed for table cells with a population denominator less than 500.

Hepatitis B Surveillance Data

Acute HBV case reports are people who have a confirmed acute illness with discrete onset of symptoms, jaundice or elevated serum aminotransferase levels, and either a positive IgM antibody to HBV core antigen (anti-HBc) or HBV surface antigen (HBsAg).¹⁷ Chronic HBV case reports are people who do not have discrete onset of symptoms with either a single HBsAg, HBV DNA, or HBV e antigen (HBeAg) positive lab (probable) or negative anti-HBc and a positive HBsAg, HBeAg, or HBV DNA.¹⁸ Perinatal HBV are classified as children born to HBV-infected mothers who are ≤ 24 months of age and have one or more of the following: positive HBsAg (only if at least four weeks after last dose of HBV vaccine), positive HBeAg, or detectable HBV DNA.²⁰

Hepatitis C Surveillance Data

Acute HCV case reports are people who have a confirmed acute illness with discrete onset of symptoms, jaundice or elevated serum aminotransferase levels, and meet the laboratory criteria of: serum alanine aminotransferase levels greater than seven times the upper limit of normal and IgM anti-hepatitis A negative, and IgM anti-HBc negative or HBsAg negative, and antibody to hepatitis C (anti-HCV) positive by EIA, verified by an additional assay (like a nucleic acid test for HCV RNA) or anti-HCV positive with a signal cut-off ratio predictive of a true positive as determined for the particular assay.²¹ In 2016, the case definition for acute HCV was updated. Clinical criteria for acute HCV include a discrete onset of symptoms and jaundice or a peak elevated serum aminotransferase level >200 IU/L during the period of acute illness, and the laboratory criteria for diagnosis includes a positive test for antibodies for anti-HCV (probable) or a HCV detection test (nucleic acid test or positive test indicating the presence of hepatitis C viral antigen) (confirmed). Therefore, starting in 2016, both confirmed cases (a case that meets the clinical criteria and positive hepatitis C detection test or a documented negative HCV antibody, HCV antigen, or NAT laboratory test followed within 12 months by a positive result) and probable cases (a case that meets the clinical criteria, has a positive anti-HCV test, but no reports of a positive HCV NAT or antigen test and does not have a test conversion within the past 12 months) are reported as acute HCV cases.²¹ Chronic HCV case reports are people who do not have discrete onset of symptoms and are either positive anti-HCV (probable) or positive HCV RNA, HCV genotype, or have the presence of HCV antigen (confirmed).²²

¹⁷Centers for Disease Control and Prevention. (2015). Guidelines for viral hepatitis surveillance and case management. Updated May 31, 2015. Accessed July 13, 2017. Retrieved from <https://www.cdc.gov/hepatitis/statistics/surveillanceguidelines.htm>.

¹⁸Centers for Disease Control and Prevention (2012). National Notifiable Disease Surveillance System (NNDSS): Hepatitis B, chronic 2012 case definition. <https://wwwn.cdc.gov/nndss/conditions/hepatitis-b-chronic/case-definition/2012/>.

²⁰Centers for Disease Control and Prevention (2017). National Notifiable Disease Surveillance System (NNDSS): Hepatitis B, perinatal infection 2017 case definition. <https://wwwn.cdc.gov/nndss/conditions/hepatitis-b-perinatal-virus-infection/case-definition/2017/>.

²¹Centers for Disease Control and Prevention. (2017). National Notifiable Disease Surveillance System (NNDSS): Hepatitis C, Acute 2016 Case Definition. Retrieved from <https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-acute/case-definition/2016/>.

²²Centers for Disease Control and Prevention. (2017). National Notifiable Disease Surveillance System (NNDSS): Hepatitis C, Chronic 2016 Case Definition. Retrieved from <https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2016/>.

Chronic HCV became reportable in North Carolina in late-2016. These numbers are likely an underestimation, as chronic HCV is only reportable by electronic lab reporting. Risk of exposure data is not collected for chronic HCV cases, as these cases are not investigated at this time.

Reports are summarized by the **date of diagnosis** not **date of report** for both acute, chronic, and perinatal hepatitis B and acute hepatitis C. Reports for chronic hepatitis C are summarized by the **date of report**, not **date of diagnosis**; since reporting for chronic hepatitis C is new and therefore incomplete, we can't identify whether a report reflects a new diagnosis or a new laboratory test on a previously diagnosed person.