# Viral Hepatitis Surveillance in Colorado

## 2020 Annual Report

April 2022


COLORADO
Department of Public
Health & Environment

# Table of Contents


Acknowledgments
- Acronyms

Executive Summary
- Hepatitis A
- Hepatitis B
- Hepatitis C

Data Sources and Methods
- Colorado Electronic Disease Reporting System (CEDRS)
- Population Data
- Center for Health and Environmental Data (CHED)

Background
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Case Definitions

Hepatitis A
- Summary
  - New HAV Diagnoses by Gender
  - New HAV Diagnoses by Age
  - New HAV Diagnoses by Race/Ethnicity
- Risk Factors
- Geographic Distribution

Acute Hepatitis B
- Summary
  - New Acute HBV Diagnoses by Gender
  - New Acute HBV Diagnoses by Age
  - New Acute HBV Diagnoses by Race/Ethnicity
- Risk Factors
- Geographic Distribution

Chronic Hepatitis B
- Summary
  - New Chronic HBV Diagnoses by Gender
  - New Chronic HBV Diagnoses by Age
  - New Chronic HBV Diagnoses by Race/Ethnicity
- Risk Factors
- Geographic Distribution

Acute Hepatitis C
- Summary
  - New Acute HCV Diagnoses by Gender
  - New Acute HCV Diagnoses by Age
  - New Acute HCV Diagnoses by Race/Ethnicity
- Risk Factors
- Geographic Distribution

Chronic Hepatitis C
  - New Chronic HCV Diagnoses by Gender
  - New Chronic HCV Diagnoses by Age
  - New Chronic HCV Diagnoses by Race/Ethnicity
- Risk Factors
- Geographic Distribution

Perinatal Hepatitis B and C

Coinfections and Liver Cancer

Priority Populations
- People Experiencing Homelessness
- People who are Incarcerated
- People who Inject Drugs

Strategies to Reduce the Burden of Viral Hepatitis

Data Tables
Definitions

# List of Tables and Figures


### Hepatitis A

Figure 1.1: Reported HAV Cases and Rate per 100,000, (2011-2020)
Figure 1.2: Rate per 100,000 of HAV cases by Gender, (2016-2020)
Figure 1.3: Rate per 100,000 of HAV Cases by Age Group, 2016-2020
Figure 1.4: Reported Risk Factors Among New HAV Diagnoses, 2020 Compared to 2016-2020
Figure 1.5: New HAV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2020)

### Acute Hepatitis B

Figure 2.1: Reported Acute HBV cases and rate per 100,000, 2011-2020
Figure 2.2: Rate per 100,000 of Acute HBV Cases by Gender, 2016-2020
Figure 2.3: Rate per 100,000 of Acute HBV Cases by Age Group, 2016-2020
Figure 2.4: New Acute HBV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2020)

### Chronic Hepatitis B

Figure 3.1: Reported Chronic HBV Cases and Rate per 100,000, 2011-2020
Figure 3.2: Rate per 100,000 of Chronic HBV Cases by Gender, 2016-2020
Figure 3.3: Rates per 100,000 of Chronic HBV by Age Group, 2016-2020
Figure 3.4: New Chronic HBV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2020)

### Acute Hepatitis C

Figure 4.1: Reported Acute HCV Cases and Rate per 100,000, 2011-2020
Figure 4.2: Rate per 100,000 of Acute HCV Cases by Gender, 2016-2020
Figure 4.3: Rates per 100,000 of Acute HCV by Age Group, 2016-2020
Figure 4.4: Reported Risk Factors Among New Acute HCV Diagnoses, 2020 compared to 2016-2020
Figure 4.5: New Acute HCV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2020)

### Chronic Hepatitis C

Figure 5.1: Reported Chronic HCV Cases and Rate per 100,000, 2011-2020
Figure 5.2: Rate per 100,000 of Chronic HCV Cases by Gender, 2016-2020
Figure 5.3: Rates per 100,000 of Chronic HCV by Age Group, 2016-2020
Figure 5.4: New Chronic HCV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2020)

### Data Tables

Table 0.1: Diagnoses and Rate per 100,000 of Hepatitis in Colorado, 2020
Table 1.1: Reported hepatitis A cases and rate per 100,000, 2011-2020
Table 1.2: Demographics of new hepatitis A cases, 2016-2020
Table 1.3: New hepatitis A cases and rate per 100,000 by county, 2016-2020
Table 2.1: Reported acute hepatitis B cases and rate per 100,000, 2011-2020
Table 2.2: Demographics of new acute hepatitis B cases, 2016-2020
Table 2.3: New acute hepatitis B cases and rate per 100,000 by county, 2016-2020
Table 3.1: Reported chronic hepatitis B cases and rate per 100,000, 2011-2020
Table 3.2: Demographics of new chronic hepatitis B cases, 2016-2020
Table 3.3: New chronic hepatitis B cases and rate per 100,000 by county, 2016-2020
Table 4.1: Reported acute hepatitis C cases and rate per 100,000, 2011-2020
Table 4.2: Demographics of new acute hepatitis C cases, 2016-2020
Table 4.3: New acute hepatitis C cases and rate per 100,000 by county, 2016-2020
Table 5.1: Reported chronic hepatitis C cases and rate per 100,000, 2011-2020
Table 5.2: Demographics of new chronic hepatitis C cases, 2016-2020
Table 5.3: New chronic hepatitis C cases and rate per 100,000 by county, 2016-2020
Table 6.1: Coinfections with Hepatitis Diagnoses from 2016-2020*

# Acknowledgments

This report is published by the Colorado Department of Public Health and Environment (CDPHE), Denver, Colorado.

This report describes the epidemiology of hepatitis A, B and C in Colorado. CDPHE uses available data resources to report the burden and distribution of these conditions, as well as trends over time. A summary of each of the three types of viral hepatitis is followed by a more detailed description. Data are presented for all hepatitis A, B, and C cases reported to CDPHE by Nov. 11, 2021 for diagnoses through Dec. 31, 2020.

**This report was prepared by:**

Kaitlyn Probst, MPH - Lead author

Robert McGoey

Megan Duffy, MPH

**Other contributors to the production and dissemination of this publication:**

Data Analytics Unit Staff

Communicable Disease Branch Staff

Registries and Vital Statistics Branch Staff

Colorado Central Cancer Registry Staff

We gratefully acknowledge the cooperation of health care providers, local public health agencies, infection control practitioners, laboratories and coroners throughout the state. Without their cooperation, it would not be possible to produce this report.

This publication is available on the web at www.colorado.gov/cdphe/hepatitis-data. This report is compliant with data release guidelines established by CDPHE's Division of Disease Control and Environmental Epidemiology to ensure the protection of sensitive health information.

The Colorado Department of Public Health and Environment (CDPHE) acknowledges that racism is a public health crisis. It is a risk factor, a social determinant of health, and a root cause of health inequities. CDPHE also acknowledges that generation-long social, economic, and environmental inequities result in adverse health outcomes. They affect communities differently and have a greater

influence on health outcomes than either individual choices or one's ability to access health care. Reducing health inequities through policies and organizational systems can help improve opportunities for all Coloradans. CDPHE aspires to present data humbly, recognizing statistics and numbers never tell the complete story. The goal is to work collaboratively with individuals and communities to learn and share their stories to build a collective understanding. Knowing that people have different lived experiences and have inequitable opportunities to achieve optimal health, we commit to pair data and stories to inform programs and systems change to improve health for all. (Partially adapted from the Denver Public Health, Health Equity Data Commitment and Principles).

# Acronyms

| | |
|---|---|
| CCCR | Colorado Central Cancer Registry |
| CDC | Centers for Disease Control and Prevention |
| CDOC | Colorado Department of Corrections |
| CDPHE | Colorado Department of Public Health and Environment |
| CEDRS | Colorado Electronic Disease Reporting System |
| CSTE | The Council for State and Territorial Epidemiologists |
| DAAs | Direct-acting Antivirals |
| ELR | Electronic Laboratory Reporting |
| HAV | Hepatitis A Virus |
| HBIG | Hepatitis B immune globulin |
| HBsAg | HBV surface Antigen |
| HBV | Hepatitis B Virus |
| HCC | Hepatocellular Carcinoma |
| HCV | Hepatitis C Virus |
| IDU | Injection Drug Use |
| MSM | Men who have Sex with Men |
| NH | Non-Hispanic |
| NHANES | National Health and Nutrition Examination Survey |
| PEH | People Experiencing Homelessness |
| PWID | People Who Inject Drugs |
| PHBPP | Perinatal Hepatitis B Prevention Program |
| SVR | Sustained Virologic Response |
| TGA | Transitional Grant Area |

# Executive Summary

Viral hepatitis is a significant public health challenge. Hepatitis A virus (HAV), hepatitis B virus (HBV), and hepatitis C virus (HCV) can be transmitted in different ways, but each virus causes damage to the liver and can lead to severe complications and premature death.

There were a total of 2,145 confirmed cases of hepatitis A, B, and C reported to CDPHE in 2020. From 2016 to 2020, there were a cumulative 15,657 reported cases, 95% of which were chronic conditions. Data for 2020 can be seen in **Table 0.1** below.

Hepatitis D and E are not covered in this report due to low incidence in Colorado.

**Table 0.1: Diagnoses and Rate per 100,000 of Hepatitis in Colorado, 2020**

| 2020 Data Snapshot | | |
|---|---|---|
| | Cases | Rate per 100,000 |
| Hepatitis A | 95 | 1.6 |
| Hepatitis B, Acute | 12 | 0.2 |
| Hepatitis B, Chronic | 176 | 3.0 |
| Hepatitis C, Acute | 10 | 0.2 |
| Hepatitis C, Chronic | 1,852 | 32.0 |

## Hepatitis A

HAV is preventable as there is a safe and effective vaccine available. As a result of the vaccine, the number of HAV cases has decreased. However, outbreaks of HAV among unvaccinated people still happen.[1]

In 2019, the United States experienced new or ongoing outbreaks of HAV in 33 states, including Colorado; Colorado's outbreak lasted until January 2021. The groups highest at risk for HAV are people who use drugs, people experiencing unstable housing or homelessness, men who have sex with men, and those that are or recently have been incarcerated.[2]

[1] CDC. Vaccine Information Statement - Hepatitis A. 2020. https://www.cdc.gov/vaccines/hcp/vis/vis-statements/hep-a.html

[2] CDC. Widespread person-to-person outbreaks of hepatitis A across the United States. 2020. https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm

## Hepatitis B

No cure exists for HBV but it is preventable through vaccination. However, vaccination coverage remains low. The most recent estimation of vaccination done by the CDC in 2017 showed that only 25.8% of adults had been adequately vaccinated for HBV.[3]

In 2020, the rate of reported acute HBV cases in Colorado dropped to 0.2 diagnoses per 100,000 (n=12). The rate of chronic HBV cases decreased from 4.2 to 3.0 diagnoses per 100,000 (n=176) from 2019 to 2020. These decreases were likely affected, or caused by, the COVID-19 pandemic. Worldwide, liver clinic visits and diagnostic imaging decreased drastically in the beginning of the pandemic in 2020[4] and HBV prevention, diagnosis, and treatment services were disrupted overall.[5]

There were zero perinatal hepatitis B cases in 2020 in Colorado. In Colorado, the hepatitis B birth dose vaccination rate was 84.3% in 2020.

## Hepatitis C

Currently, HCV does not have a vaccine. Fortunately, there are treatments that can cure most cases of HCV in eight to twelve weeks.[6]

Incidence of hepatitis C in Colorado and nationwide had been increasing until 2020, when the COVID-19 pandemic reduced overall testing and treatment for hepatitis C. Hepatitis C antibody and hepatitis C RNA testing decreased by 59% and 62% nationally in the spring of 2020, respectively.[7] Therefore, lower reported cases during pandemic years are likely a result of underreporting and underdiagnosing.

The most recent estimation of hepatitis C prevalence in the United States done by the CDC in 2018 showed that nearly 2.4 million Americans were living with HCV[8], and an estimated 44,000 people are newly infected every year.[9] Although HCV is curable as stated above, only an estimated 56% of people

[3] CDC. Vaccination Coverage among Adults in the United States, National Health Interview Survey, 2017. 2018. https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/pubs-resources/NHIS-2017.html

[4] Toyoda, Hidenori. Liver Care and Surveillance: The Global Impact of the COVID-19 Pandemic. Hepatology Communications. 2020 Aug 3;4(12):1751-1757.

[5] Pley, Caitlin. The global impact of the COVID-19 pandemic on the prevention, diagnosis and treatment of hepatitis B virus (HBV) infection. BMJ Global Health. 2021; 6(1):e004275.

[6] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm

[7] Kaufman, H. W.,et al. Decreases in hepatitis C testing and treatment during the COVID-19 pandemic. American Journal of Preventive Medicine, 2021; 61(3), 369–376.

[8] Hofmeister, MG, et al. Estimating Prevalence of Hepatitis C Virus Infection in the United States, 2013-2016. Hepatology. 2019 Mar;69(3):1020-1031.

[9] CDC. Surveillance for Viral Hepatitis – United States, 2017. https://www.cdc.gov/hepatitis/statistics/2017surveillance/index.htm

living with HCV are aware of their infection[10] and only about 1 of every 14 cases are reported to public health.[11]

The majority of both acute and chronic cases occurred in people aged 20-39. The rate of reported chronic HCV cases among 20-39 year olds surpassed the rate among 40-59 year olds for the first time in 2018. In 2020, the rate among 20-39 year olds continued to follow this trend, having the highest rate of diagnosis (50.1 per 100,000) of all age groups. These trends are seen nationally, as well. The rate of new hepatitis C cases reported to the CDC among young people aged 18-40 has been increasing since 2013, with injection drug use being the most commonly reported risk.[12]

From 2016 to 2020, more diagnoses of chronic HCV occurred in federal or state prisons than any one county in Colorado. In 2018, the Colorado Department of Corrections (CDOC) committed 41 million dollars over two years to treat the incarcerated population living with chronic HCV. By the end of the 2021 fiscal year (June 30, 2021), 2,094 offenders had been successfully treated for chronic HCV since 2018.

Perinatal HCV became a reportable condition in 2018. There were two cases of perinatal HCV in 2018, one case in 2019, and three cases in 2020.

[10] Kim HS, Yank JD, El-Serag HB, Kanwal F. Awareness of chronic viral hepatitis in the United States: An update from National Health and Nutrition Examination Survey. J Viral Hepat. 2019;26:596–602.

[11] Klevens RM, Liu S, Roberts H, Jiles RB, Holmberg SD. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health. 2014 Mar; 104(3):482-7.

[12] CDC. National Progress Report 2025: Reduce reported rate* of new hepatitis C virus infections among persons who inject drugs† by ≥25%. 2021. https://www.cdc.gov/hepatitis/policy/npr/2021/NationalProgressReport-HepC-ReduceInfectionsPWID.htm#:~:text=The%20rate%20of%20new%20hepatitis,of%202.1%20per%20100%2C000%20population.

# Data Sources and Methods

This report provides a summary of confirmed viral hepatitis cases reported to CDPHE by laboratories and health care providers in 2020. Data from 2011-2020 and 2016-2020 are also included to examine trends over time. Reported cases represent a combination of new cases and new diagnoses from previously acquired cases. Surveillance of reported cases helps to highlight trends in condition reporting but gives an underestimate of the true burden of conditions.

## Colorado Electronic Disease Reporting System (CEDRS)

Colorado law requires both laboratories and health care providers to report cases of viral hepatitis to CDPHE. Reports of diagnosis for HBV, HCV, and other viral hepatitis cases must be submitted to CDPHE within four calendar days. HAV reports must be submitted to CDPHE within one working day. Viral hepatitis surveillance in Colorado is primarily based on laboratory reporting of serologic results.

The data that form the basis of this report are principally reports of hepatitis among people living in Colorado at the time of their diagnosis. Cases are reported via electronic lab reporting (ELR) and are entered into the Colorado Electronic Disease Reporting System (CEDRS). Per state reporting requirements, laboratories must report all tests indicative of hepatitis, such as antibody tests and hepatitis viral loads. Upon receipt of these reports, CDPHE uses established case definitions to assign the appropriate diagnosis for each patient. If a case is listed as “probable” in CEDRS and a new test confirms the case, the case is reassigned as “confirmed” but retains the original reporting year.

Exposure or behavioral risk factor data can be obtained through patient interviews, medical record reviews, and information provided by a physician, hospital, or other health care provider. Information is more complete for those who are interviewed. These risk behavior data are collected with options of “Yes”, “No”, and “Unknown” when indicated, or as checkboxes. The time period of inquiry is generally the six months prior to onset of symptoms for acute cases. Due to capacity and limited hepatitis funding, exposure and behavioral risk data is limited and should be interpreted with caution.

CDPHE attempts to interview all newly reported HAV, acute HBV, and acute HCV cases but does not have the capacity to interview chronic cases. Local public health agencies sometimes perform acute case interviews. Due to the COVID-19 pandemic in 2020, staffing capacity issues prevented case ascertainment work from taking place. Therefore, acute HBV and HCV cases were not consistently interviewed in 2020.

Additionally, CDPHE follows all women 14 to 45 years of age who are reported to be living with HBV to ensure that, if they become pregnant, they are enrolled in the Perinatal Hepatitis B Prevention Program (PHBPP) to help prevent perinatal transmission. Infants born to women living with HBV should receive hepatitis B immune globulin (HBIG) and the first dose of the three dose HBV vaccine series within 12 hours of birth to begin immediate protection. PHBPP ensures infants receive these crucial shots at birth in addition to completing the vaccine series and receiving post vaccination serology to determine immune protection.

A Colorado Board of Health rule change in 2019 made negative confirmatory results for chronic HCV reportable which has enabled the identification of those who have been cured of HCV. Prior to 2019, this information was not available. Additionally, most demographic and risk information remains missing for chronic events, since most events are reported by laboratories, and the resources do not exist to follow up with cases.

Data collection options that included transgender identities were not available until March 2017, and case counts are small. No data collection options currently exist to analyze viral hepatitis among gender non-binary/non-conforming individuals. Additionally, some of the data may represent the sex assigned at birth rather than the current gender identity of individuals but this level of detail does not exist within the data.

## Population Data

Population information from the Colorado Division of Local Affairs State Demography Office is used to compare the population to people reported with hepatitis by gender, age, race, ethnicity and county. If a person reported with hepatitis is incarcerated in a county jail, that event is assigned to the county of the jail location; however, if an event is identified in a state or federal prison, a county is not assigned. Instead, an institution type is selected in the event, and for the purposes of this report, the county is labeled “Prison”.

## Health Care Policy and Financing Data (HCPF)

Race and ethnicity data from the Colorado Department of Health Care Policy and Financing (HCPF) is used to improve viral hepatitis surveillance data. Records are matched on name and date of birth to improve these data.

## Center for Health and Environmental Data (CHED)

CDPHE's Vital Statistics Branch provided cause of death data from 2011 to 2020. The Colorado Central Cancer Registry (CCCR) Branch of CDPHE provided data on liver cancer from 2011 to 2020.

# Background

## Hepatitis A

HAV is a viral infection that affects the liver and appears only as an acute (newly occurring) infection that does not become chronic. The virus is transmitted fecal-orally through contact with a person infected with HAV. This can include sexual activity, shared drug use, or through eating or drinking contaminated food or water. Other risk factors for HAV transmission include homelessness or unstable housing, international travel, and men who have sex with men (MSM). People with HAV can have a mild illness lasting a few weeks to a more severe illness requiring hospitalization but mortality is low. A safe and effective vaccine to prevent HAV was introduced in 1995 and has been a recommended routine vaccination of all children aged 12-23 months since 2006. If a person knows they have been exposed to HAV, post-exposure prophylaxis (either immune globulin or HAV vaccine) can be administered within two weeks of exposure to prevent illness.

## Hepatitis B

HBV is a bloodborne illness that can occur as an acute or chronic infection. It can range in severity from a mild illness that clears on its own to a serious, lifelong illness that can result in death. The virus can replicate in the liver for years causing damage, often without symptoms. However, HBV is preventable and can be managed if treated appropriately.

Transmission of HBV occurs most often by three routes: perinatally (mother to child at birth), through direct contact with blood, or through direct contact with semen or vaginal fluids. The likelihood of perinatal transmission ranges from 30% to 90%. Additionally 90% of infants who perinatally acquire HBV and 5% of adults will develop a chronic, incurable infection.[13]

There is no cure for chronic HBV. A safe and effective vaccine to prevent HBV has been a recommended routine vaccination of all infants since 1991.

[13] CDC. Hepatitis B Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hbv/bfaq.htm

## Hepatitis C

HCV is a bloodborne illness that can be transmitted perinatally or through direct contact with blood. Acute HCV infection occurs an average of 14 (two to 26) weeks after exposure to the virus. Approximately 70 to 80% of people with acute HCV will not exhibit symptoms, and most remain unaware of the infection.[14] Abnormal liver function tests are one of the most characteristic features of HCV infection.

The screening test for probable chronic HCV infection is an antibody test that, if positive, indicates a past or present exposure to HCV. An estimated 15 to 25% of people exposed to the virus will clear it spontaneously, while the remainder will develop chronic infection.[15] Due to the unknown number of past cases that have either cleared the virus spontaneously or have been cured, only cases that have confirmatory lab results are included in this report. HCV is often asymptomatic until later stages of the condition and can result in liver fibrosis, cirrhosis, cancer and/or death. Of people living with unresolved, chronic HCV, 10 to 20% will develop cirrhosis over a period of 20 to 30 years.[16]

Today, the most common exposure to HCV in the United States is through sharing needles, syringes, or other materials used to prepare and inject drugs.[17]

While there is no vaccine for HCV, it is curable. Current treatments often involve 8 to 12 weeks of oral medication. This treatment is effective in 90% of cases and causes few side effects. Those with HCV should be closely monitored by their health care provider, even if they have been cured, because of the risk of liver conditions including cancer.[18]

[14] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm
[15] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm
[16] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm
[17] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm
[18] CDC. Hepatitis C Questions and Answers for the Public. 2019. https://www.cdc.gov/hepatitis/hcv/cfaq.htm

# Case Definitions

The Council for State and Territorial Epidemiologists (CSTE) develops and maintains case definitions for hepatitis A, B, and C to standardize reporting at the state and national level. Case definitions are modified or added when new technologies, methodologies, or clinical data become available.[19] Details of all case definitions can be found at https://ndc.services.cdc.gov/

Changes to case definitions have an impact on the number of cases reported and the status of cases. **Reported trends over time should be interpreted with caution if the case definition for that condition has changed.** In 2017, CDPHE conducted an analysis of the impact of the 2016 case definition change on chronic HCV case counts and found a possible artificial decrease in the number of confirmed cases due to a more restrictive case definition.[20]

This report focuses largely on five-and ten year trends in data. The following changes have occurred during these time periods:

- In 2016, **the case definition of chronic HCV infection changed** to require RNA or NAAT tests to confirm cases. Previously, the laboratory criteria for diagnosis included positive antibodies to HCV with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC.
- In 2016, **the clinical description for acute HCV infection changed** from ALT level at >400 IU/L to ALT level >200 IU/L. The time frame for seroconversion was changed from six months to 12 months. These changes **made criteria less restrictive when determining if a case met acute case definition**.
- In 2017, **the case definition of perinatal HBV infection was updated** to include additional labs that were added as options to diagnosis of a case. This may make it easier for case finding, however, it was also added that the HBsAg-positive acceptance is dependent on there being at least four weeks between the last dose of hepatitis B vaccine and testing to avoid false positivity. This in turn could make case finding more challenging if the child's vaccination status is unknown or cannot be located.
- In 2018, **a case definition of perinatal HCV infection was established** for the first time.
    - Prior to 2018, perinatal HCV cases were not considered to meet case definition and were not included in the case counts.
- In 2019, **the case definition for HAV infection was updated** to require bilirubin levels of 3.0 mg/dL or higher, ALT levels at >200 IU/L, and the absence of a more likely diagnosis to diagnose

[19] CDC. Surveillance for Viral Hepatitis - United States. 2018.
[20] CDPHE. 2017 Surveillance Report: Viral Hepatitis in Colorado. 2017.

HAV. To confirm a case of HAV, laboratory criteria were expanded to include nucleic amplification tests in addition to IgM antibodies.

- In 2020, **the case definition of acute HCV was updated.** Clinically, cases must be at least 36 months of age, have bilirubin levels of 3.0 mg/dL or higher, ALT levels at >200 IU/L, or jaundice and another more likely diagnosis should be absent. To confirm an acute case of HCV, there must be a positive HCV virus detection test or a test indicating the presence of HCV viral antigen. These changes **made criteria more restrictive when determining if a case met acute case definition**.
- In 2020, **the case definition of chronic HCV was updated.** Clinically, cases must be at least 36 months of age, have bilirubin levels of 3.0 mg/dL or higher, ALT levels at >200 IU/L, or jaundice and another more likely diagnosis should be absent. To confirm a chronic case of HCV, there must be a positive HCV virus detection test or a test indicating the presence of HCV viral antigen. Cases are only considered Probable if there is not a known negative HCV RNA result.

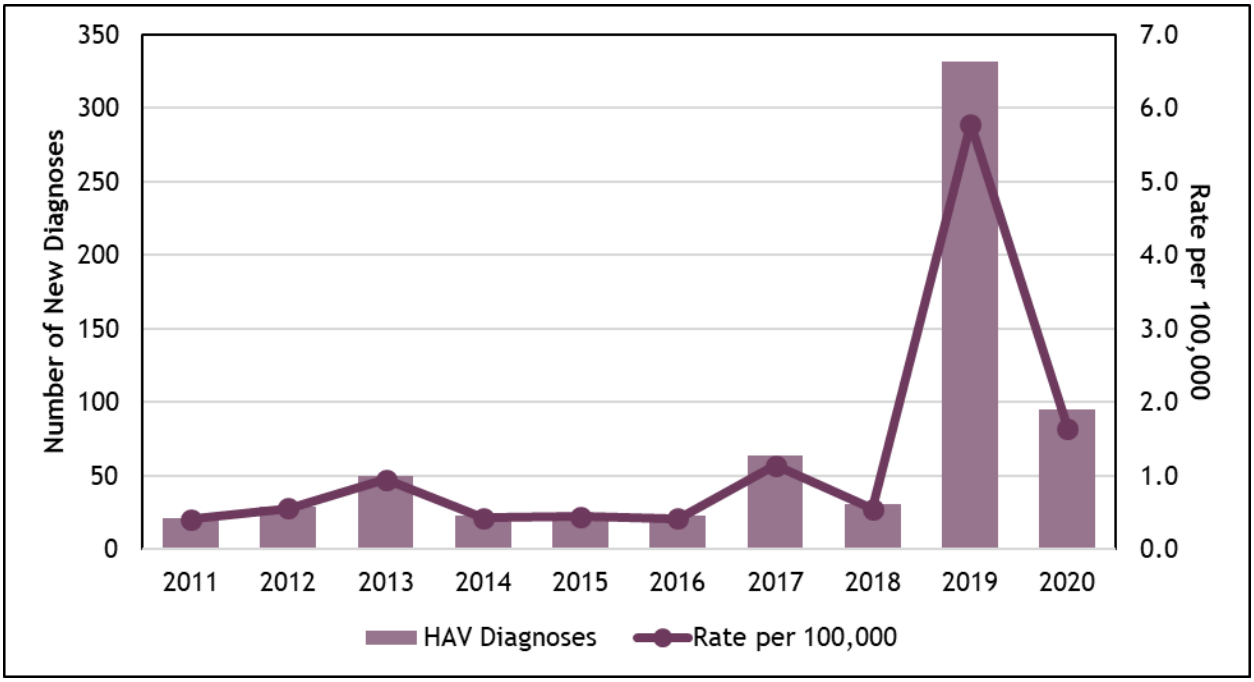
Some conditions have case definitions that are broken down into "Probable" and "Confirmed" cases statuses. **This report only includes data on viral hepatitis cases classified as "Confirmed".**

# Hepatitis A

## Summary

- In 2020, there were 95 reported cases of HAV in Colorado.
- Colorado experienced an outbreak of HAV from October 2018 through January 2021 primarily among people that were experiencing homelessness, those with substance use disorders, and people incarcerated in city or county jails.
- Of the people diagnosed with HAV in 2020, 96.7% were reported in urban counties which include Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld Counties.
- A common risk factor reported for 2020 diagnoses was injection drug use, reported among 30.6% of cases.

**Figure 1.1: Reported HAV Cases and Rate per 100,000, 2011-2020**

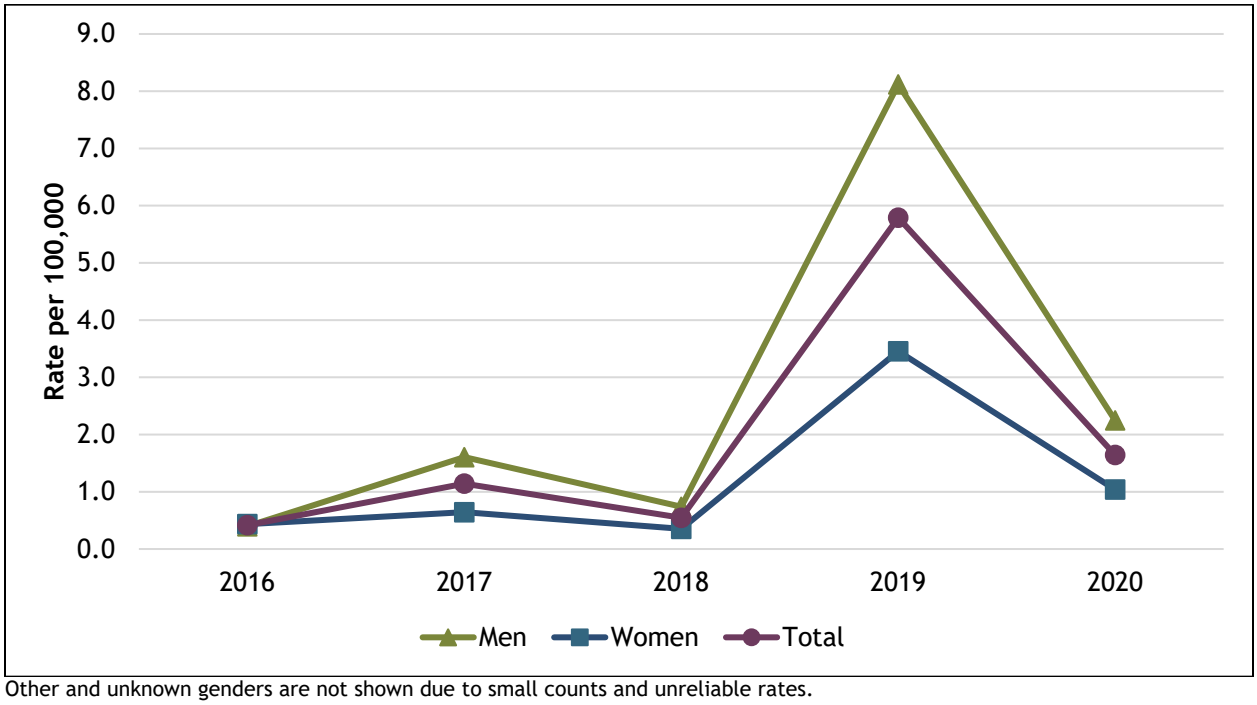



Data used in this graph can be found in Table 1.1 in the Appendix.

## New HAV Diagnoses by Gender

In 2020, men accounted for over half (68.4%) of reported HAV cases. Rates among males and females dramatically increased in 2019 due to a statewide outbreak of HAV as seen in **Figure 1.2**. In 2020, rates decreased. The rate among men has been consistently higher than women since 2017. An outbreak of HAV among MSM in 2017 accounted for 70.3% of cases that year being among men.

**Figure 1.2: Rate per 100,000 of HAV Cases by Gender, 2016-2020**



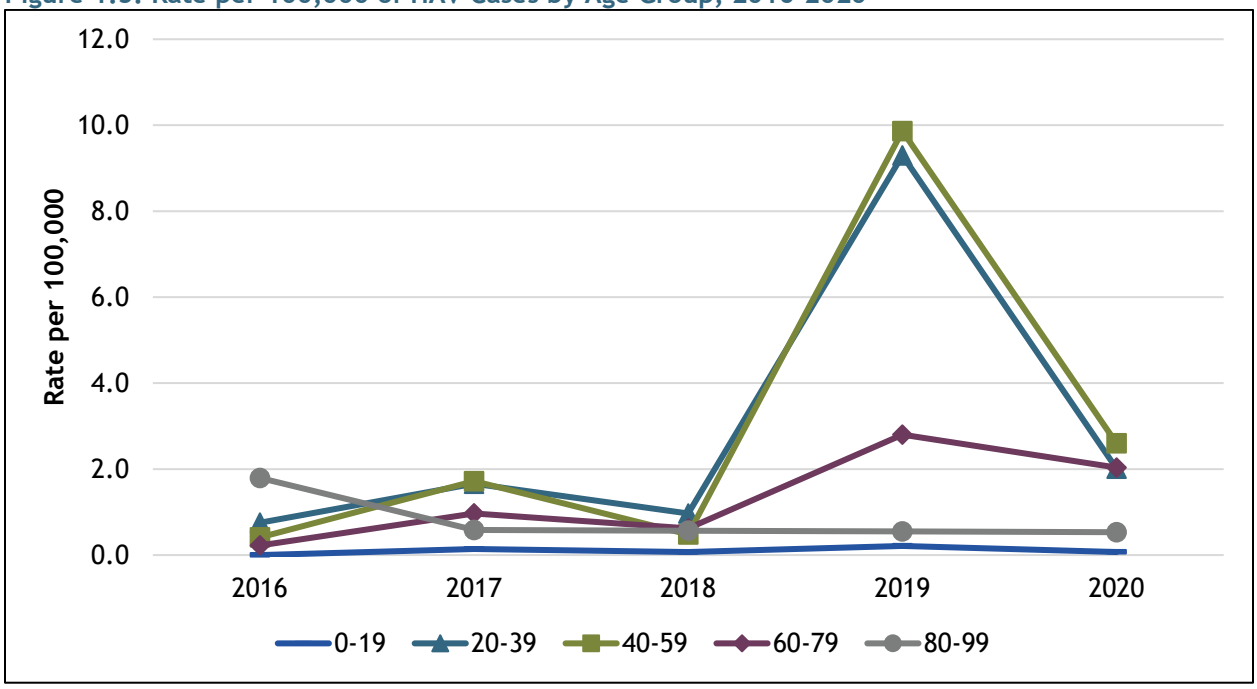

Other and unknown genders are not shown due to small counts and unreliable rates.

Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.

## New HAV Diagnoses by Age

The rate of HAV diagnosis in 2020 was highest among 40-59 year olds at 2.6 diagnoses per 100,000 population as shown in **Figure 1.3**. Those aged 40-59 years also experienced the highest rate of HAV diagnosis during the 2019 outbreak. This age group likely experiences higher rates because they did not receive an HAV vaccine as a routine immunization. The average and median age of those diagnosed with HAV in 2020 was 47. More data on age of diagnoses can be found in **Table 1.2** in the appendix.

**Figure 1.3: Rate per 100,000 of HAV Cases by Age Group, 2016-2020**




## New HAV Diagnoses by Race/Ethnicity

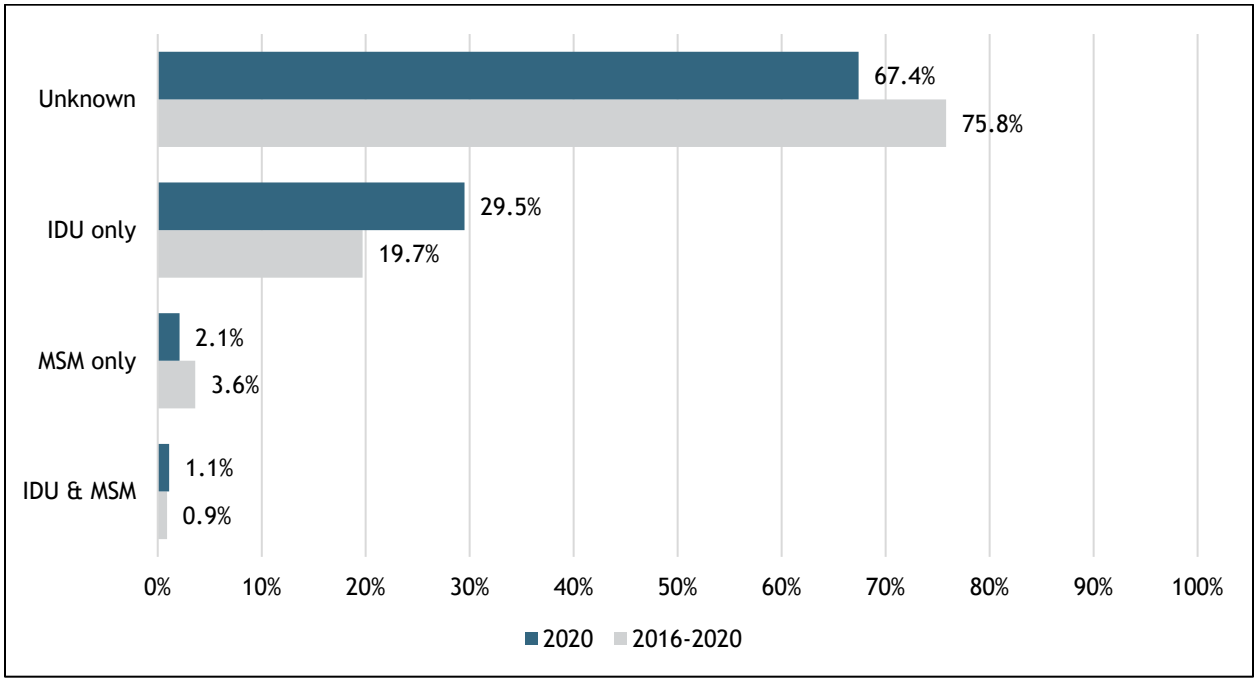
Race/ethnicity data were available for 86.3% of HAV cases in 2020. Among cases, 63.2% were non-Hispanic White, 15.8% were Hispanic/Latino/a/x (all races), and 4.2% were non-Hispanic Black/African American. Additional data can be found in **Table 1.2** in the appendix.

## Risk Factors

Injection drug use (IDU) was identified as a common risk factor reported among HAV diagnoses in 2020 (29.5%) and over the past five years (19.7%) as shown in **Figure 1.4**. However, from 2016-2020, 75.8% of risk factors were unknown. This decreased to only 67.4% of risk factors being unknown in 2020, indicating an improvement in data collection for risks associated with HAV diagnosis.

A third (33.7%) of diagnoses in 2020 were reported as experiencing homelessness at the time of their diagnosis, which is a decrease from 2019 where over half of HAV diagnoses were among people experiencing homelessness (53.9%). In the Denver Transitional Grant Area (TGA), which includes Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson, 16.8% of cases were reported as experiencing homelessness. In urban, non-TGA counties - El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder - 15.8% of cases were reported as experiencing homelessness. The remaining 1.1% of persons reported as experiencing homelessness lived in rural counties.

**Figure 1.4: Reported Risk Factors Among New HAV Diagnoses, 2020 Compared to 2016-2020**



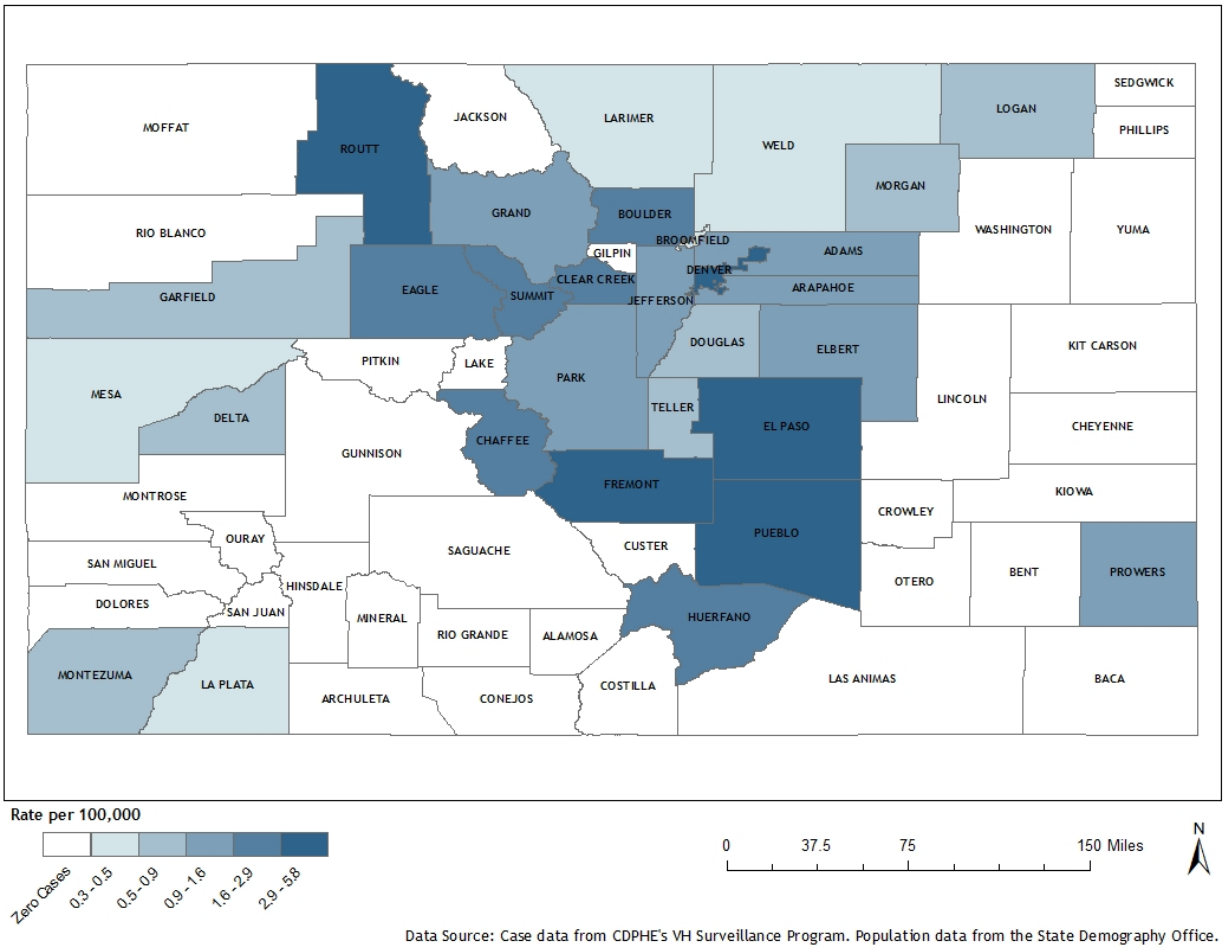
## Geographic Distribution

Since 2017, over 40% of HAV diagnoses have occurred in the Denver TGA. In 2020, 52.6% of cases occurred in the Denver TGA, and another 38.9% of cases occurred in non-TGA urban counties. In the Denver TGA, 16.8% of cases were among those experiencing homelessness. In non-TGA urban counties, which include El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder, 15.8% were experiencing homelessness. In total, people experiencing homelessness accounted for 33.7% of cases. Denver County accounted for 20.0% of cases in 2020, followed by Boulder County accounting for 18.9%.

From 2016-2020, 46.2% of all HAV diagnoses occurred in the Denver TGA. However, El Paso has experienced the most HAV diagnoses of any county - accounting for 28.3% of all HAV diagnoses in Colorado from 2016-2020. El Paso county rates were heavily influenced by the statewide HAV outbreak.

From 2016-2020, the average rate of diagnosis over the past five years for HAV diagnosis has been highest in Denver, El Paso, Fremont, Huerfano, Pueblo, and Routt counties as seen in **Figure 1.5** on the following page. Due to smaller populations in Fremont, Huerfano, and Routt counties, higher rates are not always a result of higher case counts. For all case counts and rates by county, refer to **Table 1.3** in the appendix. An explanation of how incidence rates are calculated can be found in the **Definitions** section.

## Figure 1.5: New HAV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2016-2020)



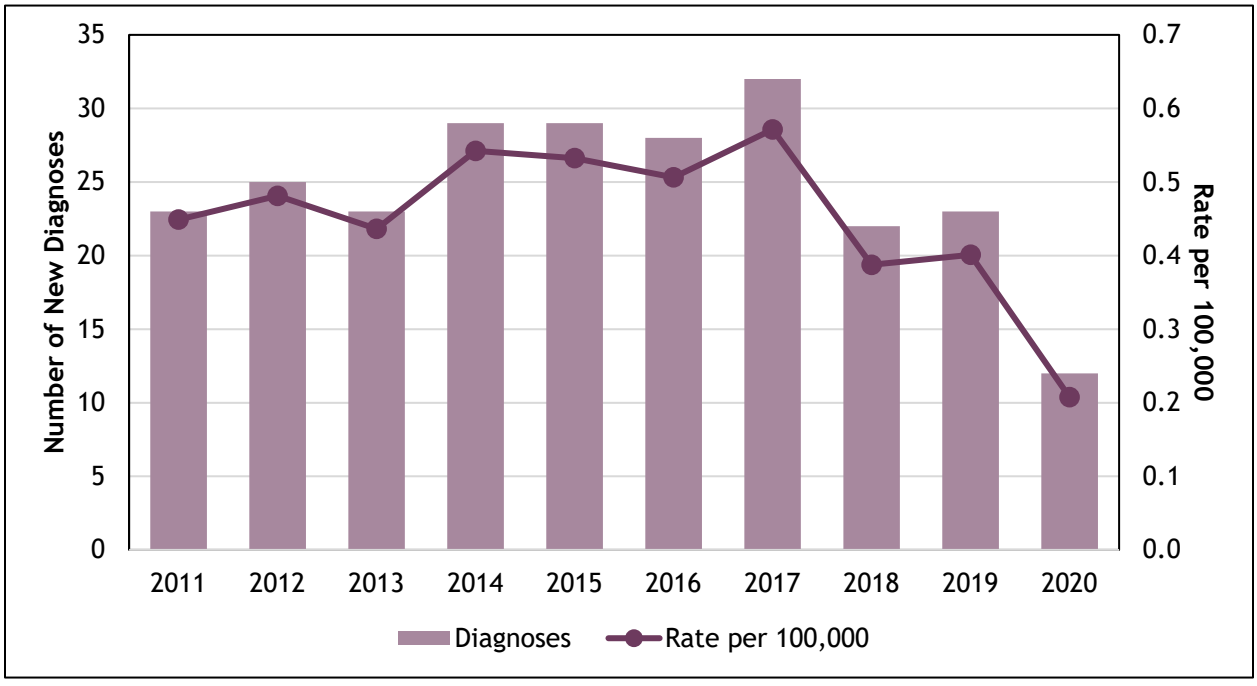

Data Source: Case data from CDPHE's VH Surveillance Program. Population data from the State Demography Office.

# Acute Hepatitis B

## Summary

- In 2020, there were 12 reported cases of acute HBV.
    - This represents a 47.9% decrease in diagnoses from 2019.
- According to the CDC, acute HBV cases are underreported by a factor of 6.5.[21] Accounting for this underreporting, there would be an estimated 78 cases of acute HBV in 2020.
    - Due to decreased testing during the COVID-19 pandemic, this number is likely still an underestimation.
- The overall rate of acute HBV in 2020 was 0.2 per 100,000 population which represents a 50% decrease from the rate in 2019.
- 91.7% of cases in 2020 occurred in urban counties which include Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld Counties, with 75.0% occurring in the Denver TGA.
- 40-59 year olds had the highest rate of acute HBV diagnosis at 0.5 diagnoses per 100,000 population.

**Figure 2.1: Reported Acute HBV Cases and Rate per 100,000, 2011-2020**



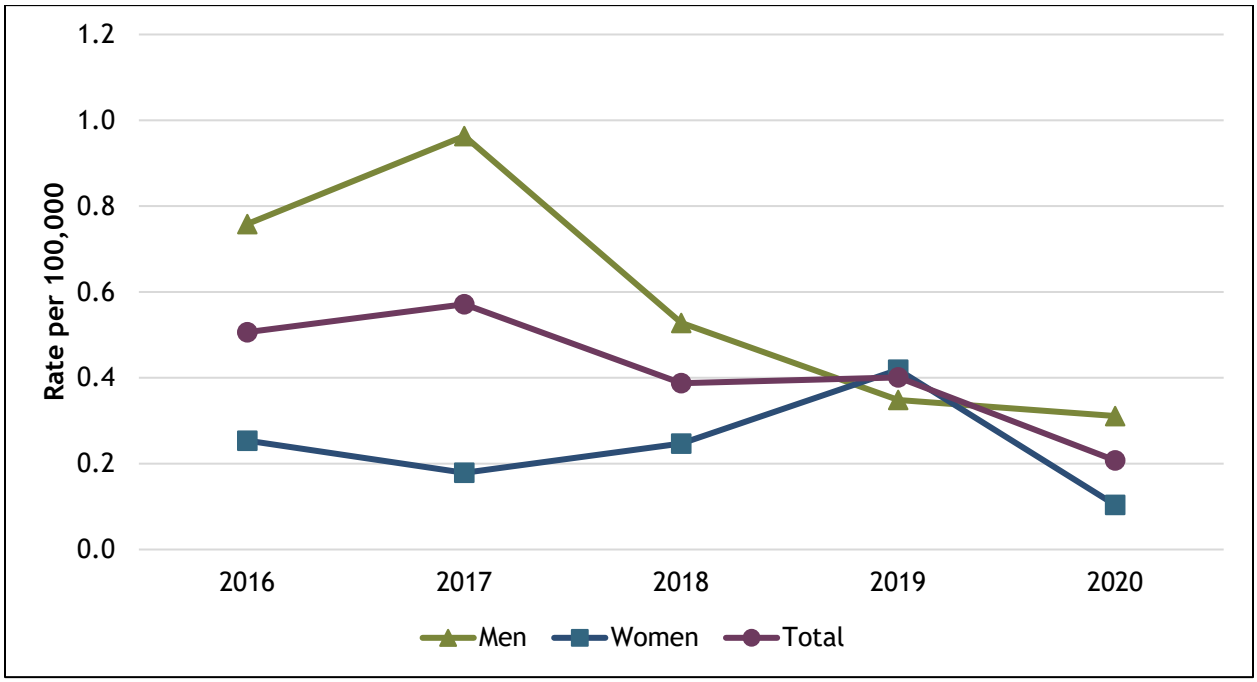

Data used in this graph can be found in **Table 2.1** in the Appendix.

[21] CDC. Viral Hepatitis Surveillance -2019 - United States. 2019.

## New Acute HBV Diagnoses by Gender

From 2016-2020, men accounted for 70.1% of all acute HBV diagnosis. Nationally, men have had consistently higher rates of reported acute HBV than women.[22] Four out of the past five years, Colorado has mirrored these trends - the rate of acute HBV diagnosis among men was at least double the rate among women, as seen in Figure 2.2. Rates among both women and men decreased in 2020 due to an overall decrease of viral hepatitis testing during the COVID-19 pandemic.[23]

**Figure 2.2: Rate per 100,000 of Acute HBV Cases by Gender, 2016-2020**




Other and unknown genders are not shown due to small counts and unreliable rates.

Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.

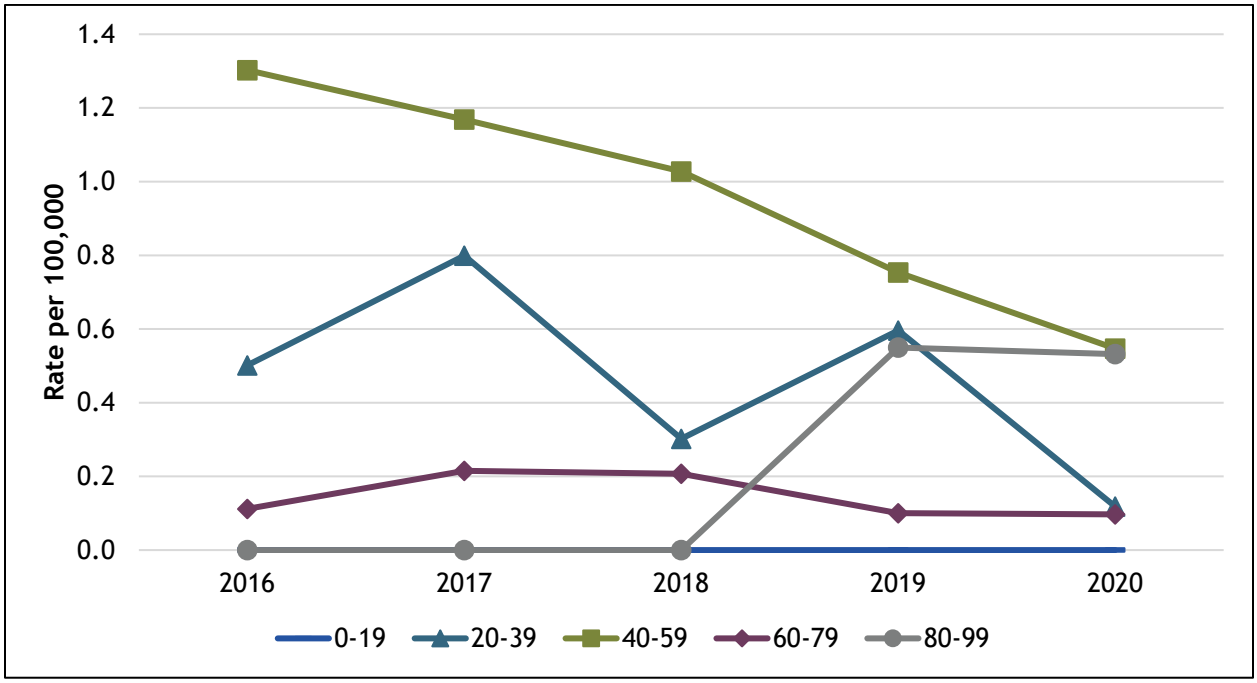
[22] CDC. Viral Hepatitis Statistics and Surveillance. Figure 2.5 Rates of reported acute hepatitis B virus infection, by sex - United States, 2004-2019. https://www.cdc.gov/hepatitis/statistics/2019surveillance/Figure2.5.htm

[23] Pley, Caitlin. The global impact of the COVID-19 pandemic on the prevention, diagnosis and treatment of hepatitis B virus (HBV) infection. BMJ Global Health. 2021; 6(1):e004275.

## New Acute HBV Diagnoses by Age

People between the ages of 40-59 had the highest rate of diagnosis amongst cases in 2020 (0.5 per 100,000) as seen in **Figure 2.3**. Since 2015, there have been no reported acute cases in an individual less than 20 years old. People older than 19 years are less likely to be immunized for HBV based on a school-entry requirement that began in 1997. The majority of acute cases being among individuals ages 40-59 underscores the need for catch-up vaccination, particularly for individuals in priority populations.

**Figure 2.3: Rate per 100,000 of Acute HBV Cases by Age Group, 2016-2020**




## New Acute HBV Diagnoses by Race/Ethnicity

In 2020, non-Hispanic Whites accounted for 50.0% of acute HBV diagnoses. Hispanics of all races made up 25.0% of the diagnoses and non-Hispanic Black/African Americans made up 8.3%. More data on race and ethnicity can be found in **Table 2.2** in the appendix.

# Risk Factors

Risk factors were unknown for 100.0% of reported acute HBV cases in 2020. In the previous four years, 2016-2019, on average 59.5% of risk factors were unknown. In the same time period, 30.9% of acute HBV diagnoses reported injection drug use as a risk factor. Due to staffing shortages during the COVID-19 pandemic in 2020, no interviews were conducted on acute HBV cases and no risk information was collected. Therefore, no risk data will be displayed for 2020.

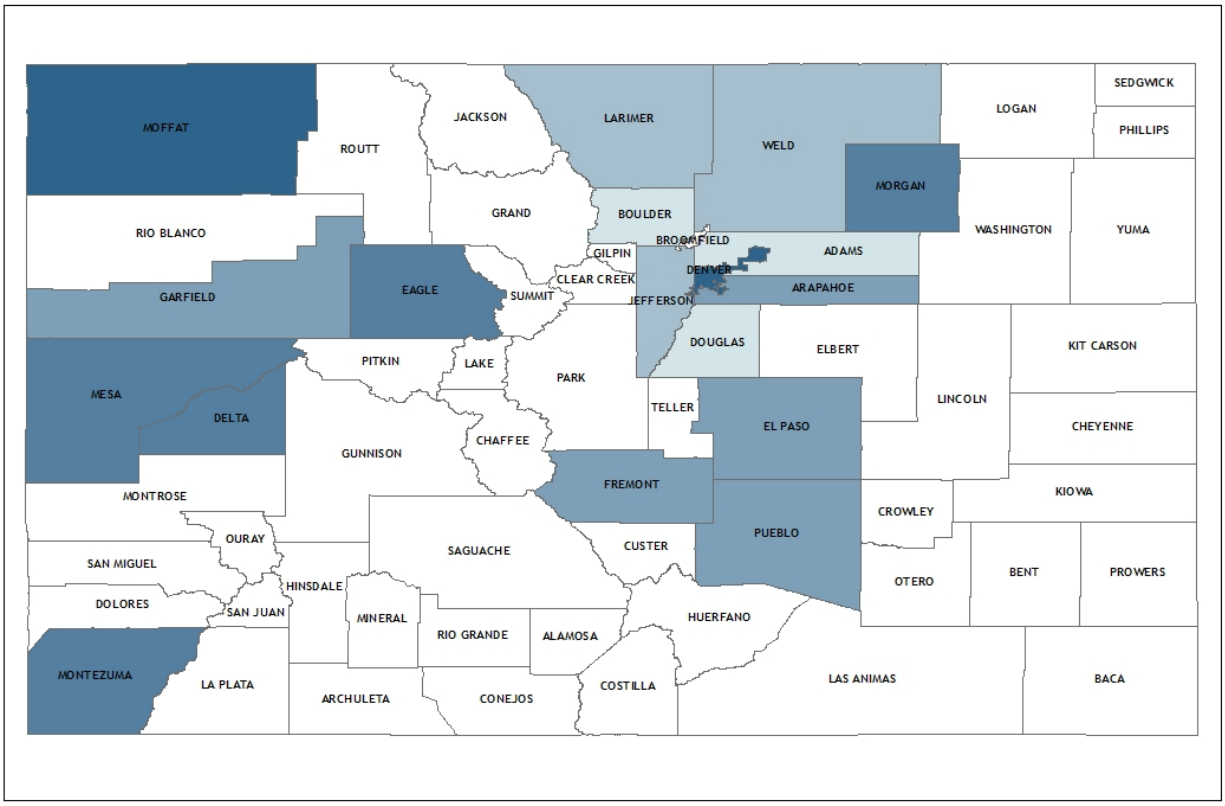
## Geographic Distribution

The majority of acute HBV cases from 2016-2020 were reported in urban counties, with the Denver TGA accounting for 64.1% of diagnoses. Denver County, with forty-seven reported cases over the past five years, representing the majority of cases (40.2%). Denver County was followed by El Paso county, accounting for 10.3% of diagnoses from 2016-2020. Average rates of diagnosis from 2016-2020 by county can be seen in **Figure 2.4** on the following page.

From 2016-2020, 19.6% of acute HBV cases were experiencing homelessness at the time of their diagnosis.

Rates of diagnosis were highest in Denver, Moffat, and Montezuma counties. Due to smaller populations in Moffat and Montezuma counties, higher rates do not necessarily indicate high case counts. For all case counts by county as well as rates, refer to **Table 2.3** in the appendix. An explanation of how rates are calculated can be found in the **Definitions** section.

## Figure 2.4: New Acute HBV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2016-2020)



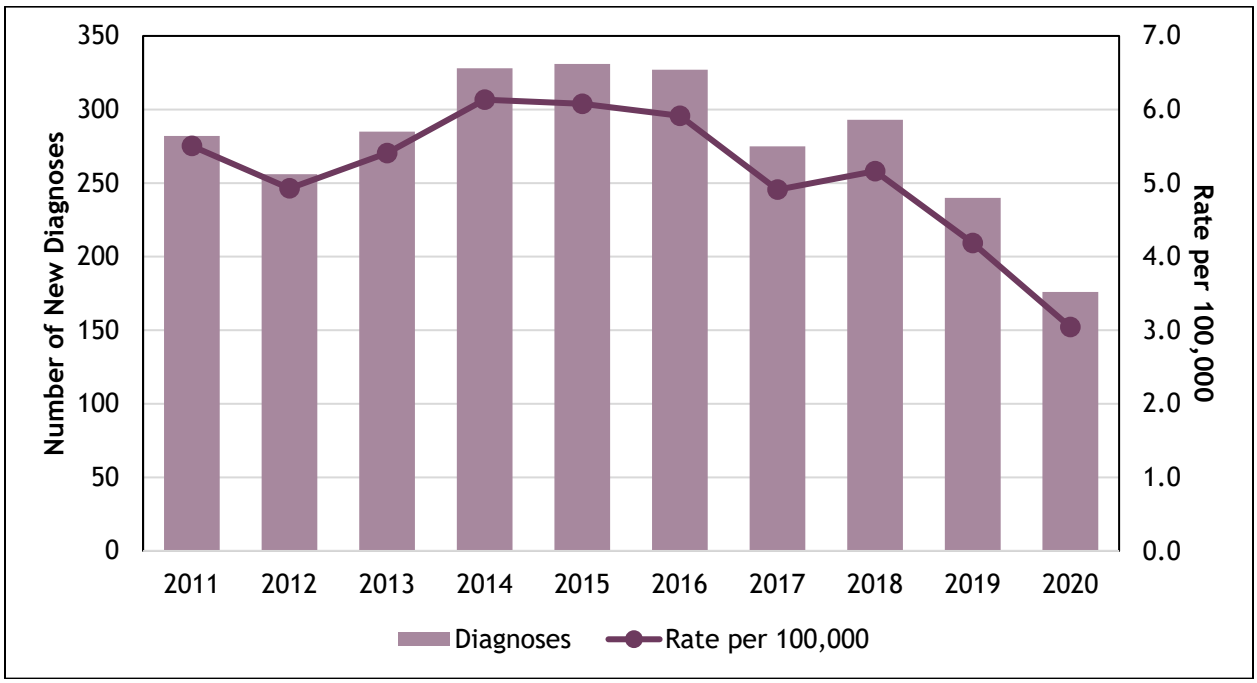

Data Source: Case data from CDPHE's VH Surveillance Program. Population data from the State Demography Office.

# Chronic Hepatitis B

## Summary

- In 2020, there were 176 reported cases of chronic HBV.
    - This is a 26.7% decrease from the diagnoses in 2019.
- Over half of the cases reported in 2020 were among men.
- The majority of cases occurred in 20-39 year olds (47.7%) and 20-39 year olds also experienced the highest rates of diagnosis at 4.9 diagnoses per 100,000 population.
- 64.8% of cases occurred in the Denver TGA.
- Non-Hispanic Asian/Native Hawaiian/Pacific Islanders made up approximately 19.3% of cases in 2020 while only accounting for an estimated 3.9% of Colorado's population in 2020.

**Figure 3.1: Reported Chronic HBV Cases and Rate per 100,000, 2011-2020**

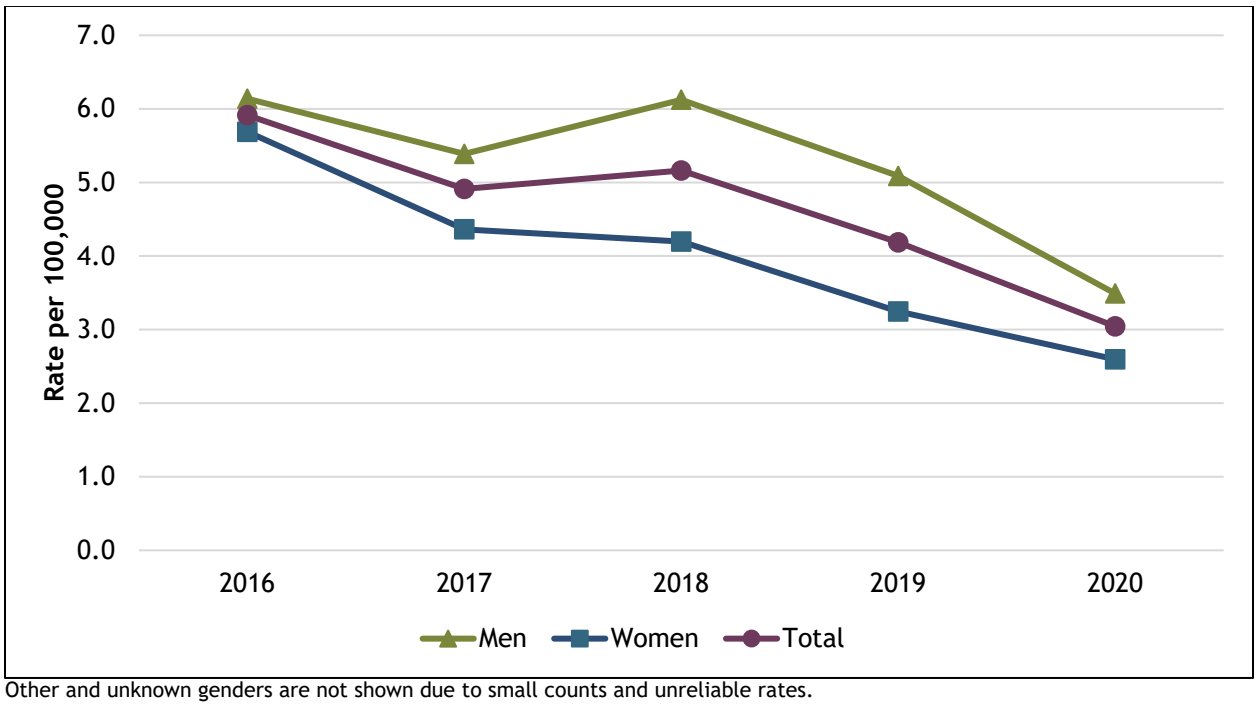



Data used in this graph can be found in Table 3.1 in the Appendix.

## New Chronic HBV Diagnoses by Gender

Over the past five years (2016-2020), men have consistently made up the majority (56.6%) of chronic HBV diagnoses. In 2020, 57.4% of cases were among men and men had a rate of diagnosis of 3.5 diagnoses per 100,000 compared to a rate of 2.6 diagnoses per 100,000 in women, as shown in Figure 3.2 on the following page.

**Figure 3.2: Rate per 100,000 of Chronic HBV Cases by Gender, 2016-2020**




Other and unknown genders are not shown due to small counts and unreliable rates.

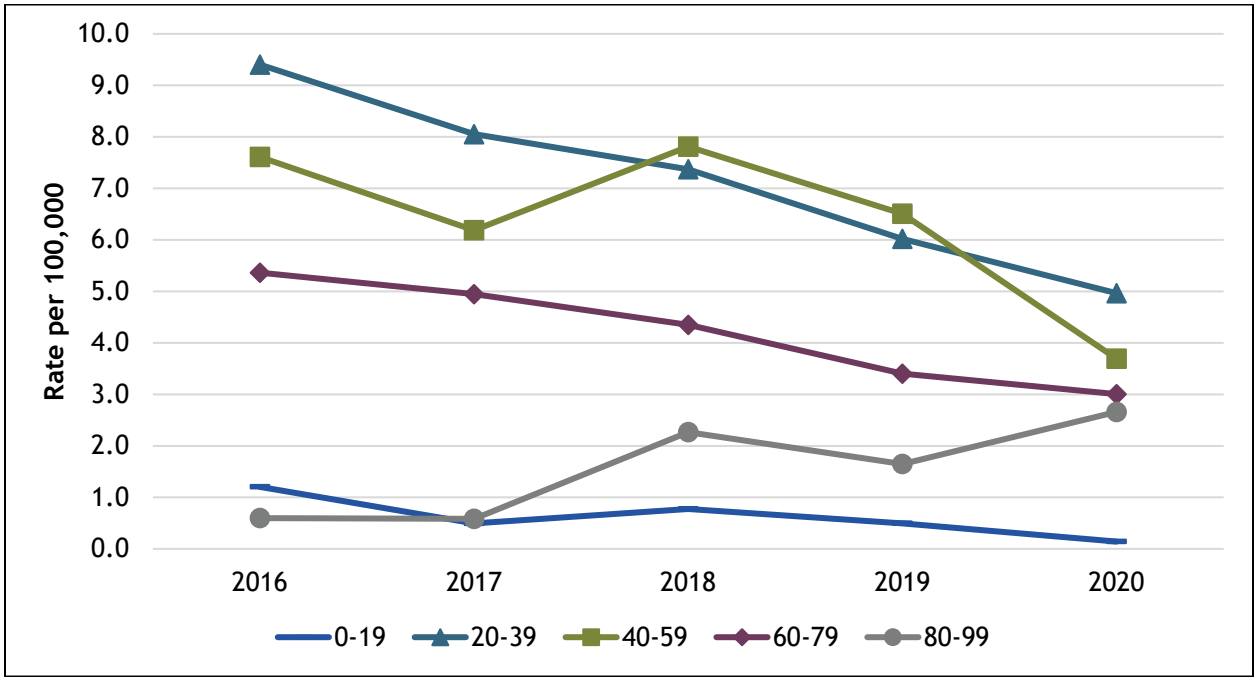
Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.

## New Chronic HBV Diagnoses by Age

Rates of chronic HBV diagnosis amongst those aged 20-59 remain highest. People between the ages of 20-39 had the highest rate of cases (5.0 per 100,000), surpassing the rate of diagnosis among 40-59 year olds for the first time since 2017 as shown in **Figure 3.3** on the following page.

There were 44 diagnoses in the 0-19 age group from 2016-2020. While the HBV vaccine has been a mandated childhood vaccination since 1997 in Colorado, 40.9% of the people in this age group from 2016-2020 were known to be born outside of the United States. The number of cases among people under twenty highlights the importance of PHBPP to prevent possible perinatal transmission in families. Catch-up vaccination is important for those who were born before HBV vaccination became routine.

**Figure 3.3: Rates per 100,000 of Chronic HBV by Age Group, 2016-2020**




## New Chronic HBV Diagnoses by Race/Ethnicity

Race/ethnicity data is not routinely reported for chronic HBV cases in Colorado, and 48.9% of reported cases in 2020 were missing data. Non-Hispanic Asian/Native Hawaiian/Pacific Islanders have accounted for 25.1% of all chronic HBV diagnoses from 2016-2020. In 2020, non-Hispanic Asian/Native Hawaiian/Pacific Islanders made up 19.3% of chronic HBV diagnoses and were followed by non-Hispanic Whites (16.5%) and non-Hispanic Black/African Americans (10.8%).

While non-Hispanic Asian/Native Hawaiian/Pacific Islanders and non-Hispanic Black/African Americans represent over thirty-five percent of diagnoses in 2020, they were estimated to only represent 3.9% and 4.7% of Colorado's population in 2020, respectively. Non-Hispanic Asian/Native Hawaiian/Pacific Islanders had a rate of diagnosis of 14.8 diagnoses per 100,000 and non-Hispanic Black/African Americans had a rate of 6.9 diagnoses per 100,000. Comparatively, the overall rate of chronic HBV diagnosis was 3.0 diagnoses per 100,000.

These trends are seen nationwide. A study done in 2020 found that, from 2015 to 2018, national prevalence of HBV was highest among non-Hispanic Asians (20.5%) and non-Hispanic Black/African Americans (10.8%).[24]

[24] CDC. Prevalence and Trends in Hepatitis B Virus Infection in the United States, 2015-2018. 2020. https://www.cdc.gov/nchs/products/databriefs/db361.htm#:~:text=The%20prevalence%20of%20any%20past%20or%20present%20HBV%20infection%20during,Hispanic%20black%20adults%20(10.8%25).

## Risk Factors

Risk factor data is not routinely collected for chronic cases, but individuals born in countries where HBV is endemic are considered to be at greater risk than individuals born in the United States.[25]

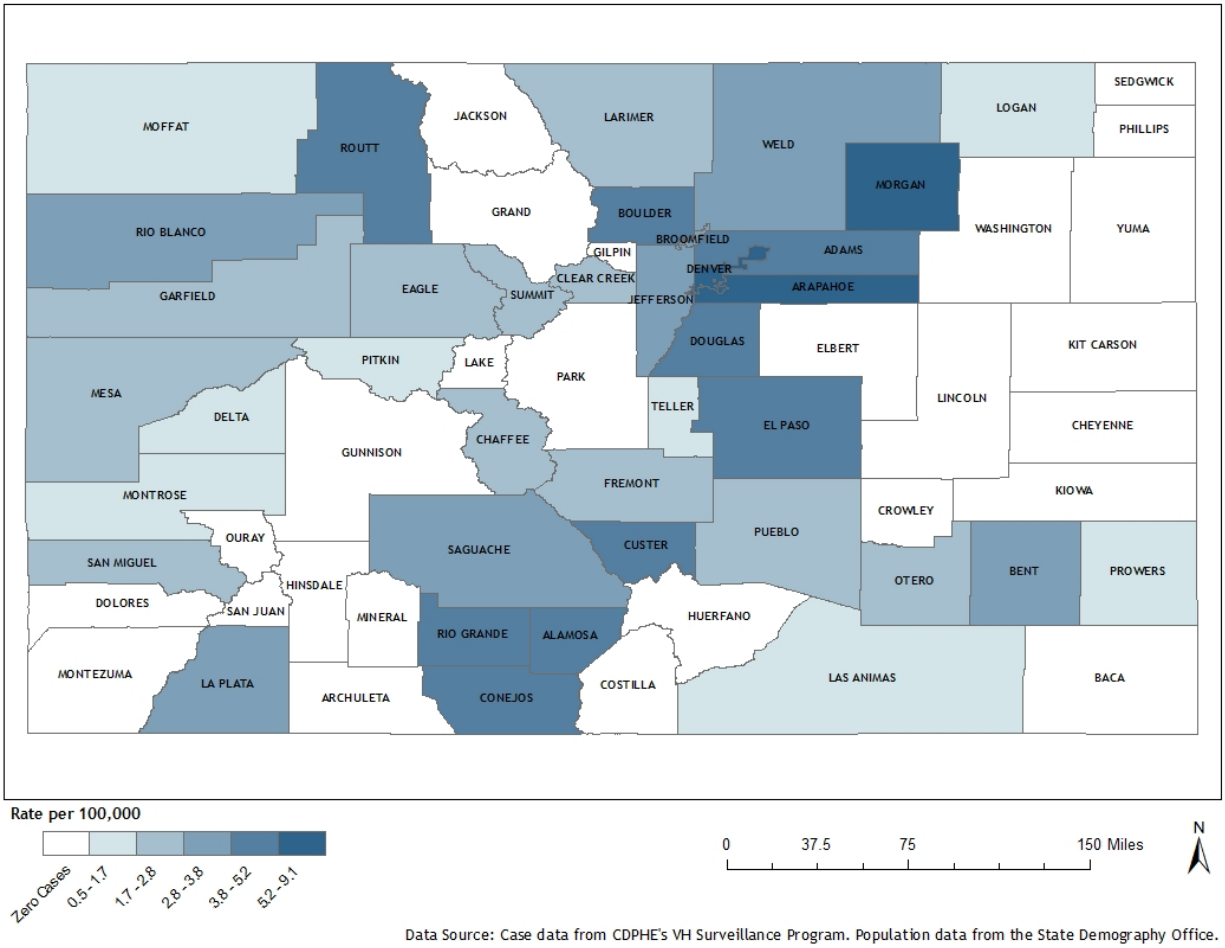
## Geographic Distribution

Chronic HBV diagnoses over the past five years (2016-2020) have been concentrated in Arapahoe (20.9%), Denver (18.0%), and El Paso (11.6%) counties. In 2020, nearly a quarter of cases occurred in Denver County. Denver County was followed by Arapahoe (20.5%) and El Paso (10.2%) counties.

From 2016-2020, rates were highest in Morgan, Arapahoe, Denver, and Conejos counties as shown in **Figure 3.4** on the following page. Due to smaller populations in these counties, higher rates do not necessarily indicate high case counts. Full case counts by county as well as rates can be found in **Table 3.3** in the Appendix. An explanation of how rates are calculated can be found in the **Definitions** section of this report.

[25] Roberts H, Kruszon-Moran D, Ly KN, Hughes E, Iqbal K, Jiles RB, et al. Prevalence of chronic hepatitis B virus (HBV) infection in U.S. households: National Health and Nutrition Examination Survey (NHANES), 1988-2012. Hepatology. 2015 Aug 6;63(2):388-97.

## Figure 3.4: New Chronic HBV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2016-2020)



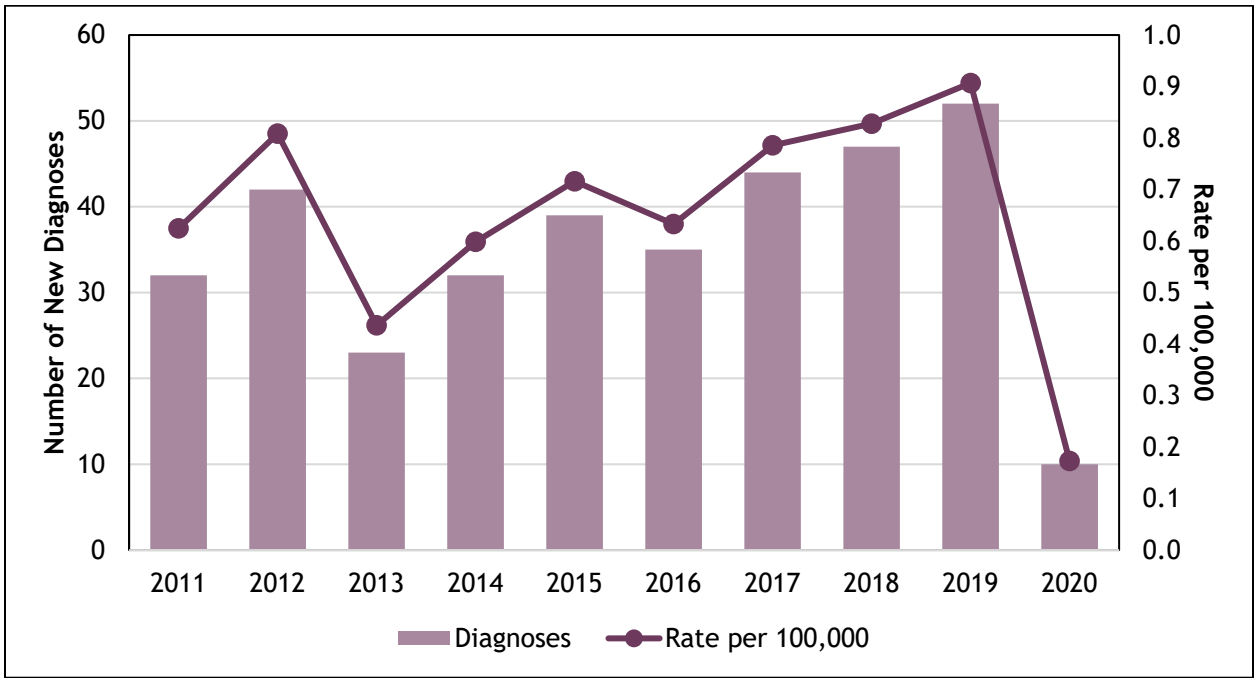

Data Source: Case data from CDPHE's VH Surveillance Program. Population data from the State Demography Office.

# Acute Hepatitis C

## Summary

- In 2020, there were 10 cases of acute HCV reported to CDPHE.
- Before the effects of the COVID-19 pandemic, acute HCV diagnoses were increasing in Colorado.
- From 2016 to 2020, 51.6% of cases occurred in the Denver TGA.
- The majority of cases from 2016-2020 were among people that were 20-39 years old (74.5%).

**Figure 4.1: Reported Acute HCV Cases and Rate per 100,000, 2011-2020**



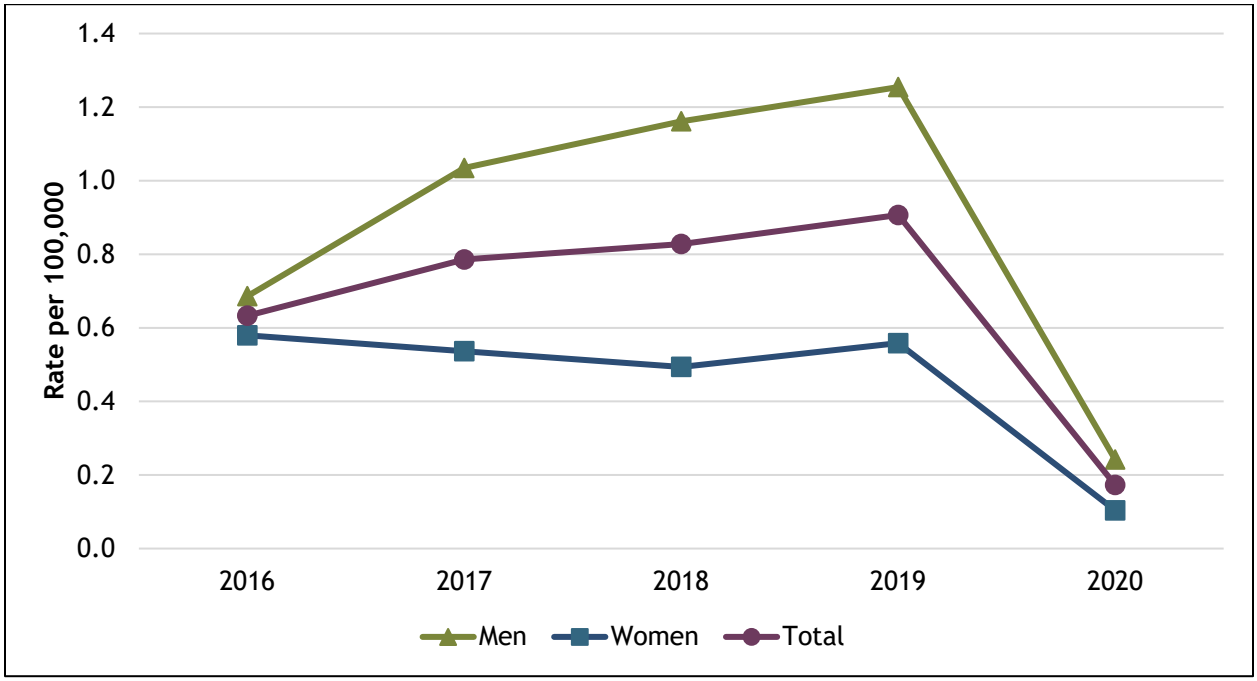

Data used in this graph can be found in Table 4.1 in the Appendix.

To correctly identify and assign an acute HCV diagnosis, case ascertainment staff utilize lab and medical data concerning a hepatitis diagnosis. Due to the COVID-19 pandemic and staffing shortages, this follow-up on reported HCV cases was not conducted. Therefore, many acute HCV diagnoses were likely misclassified as a chronic HCV case and the low case count of acute HCV diagnoses is likely inaccurate. Before the COVID-19 pandemic, acute HCV was increasing in Colorado. There was a 48.6% increase in diagnoses from 2016 to 2019 - where there were 52 diagnoses. In these four years, the primary risk factor reported amongst acute HCV cases was injection drug use.

## New Acute HCV Diagnoses by Gender

Rates of diagnosis in men have remained higher than rates in women. In 2019, rates among men were approximately 124% higher than women. Rates among men and women had been steadily increasing until 2020, where the COVID-19 pandemic affected testing for HCV, which can be seen in **Figure 4.2**.

**Figure 4.2: Rate per 100,000 of Acute HCV Cases by Gender, 2016-2020**



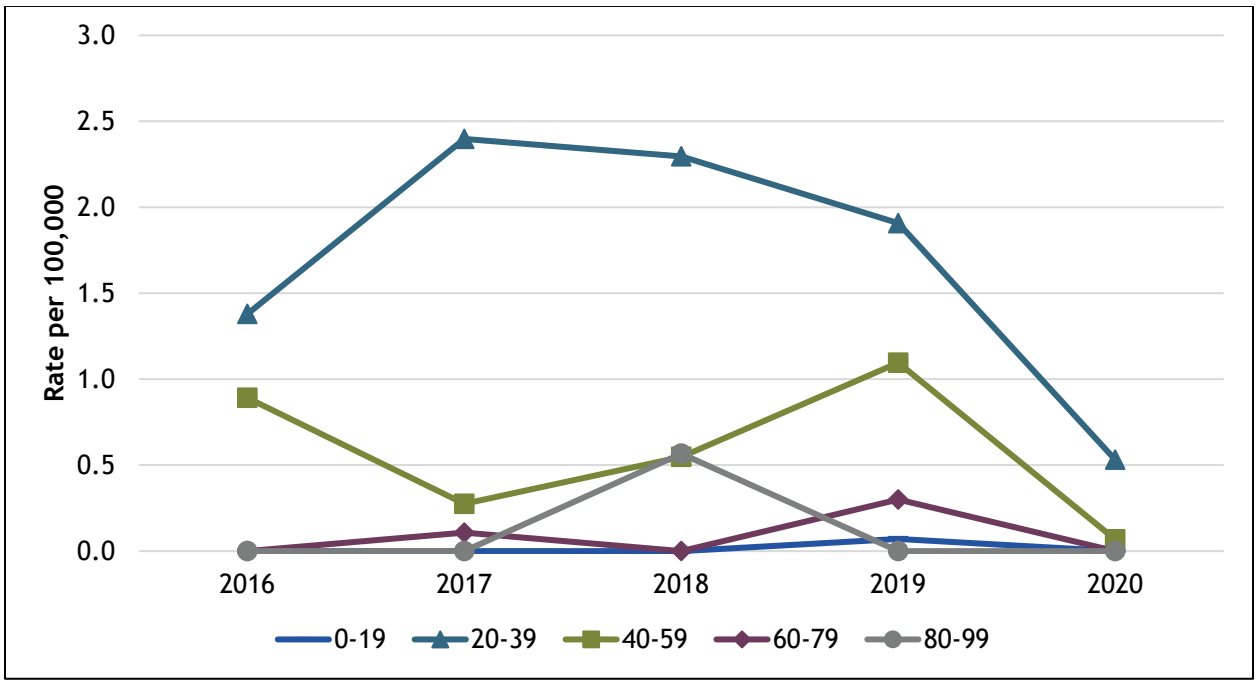

Other and unknown genders are not shown due to small counts and unreliable rates.

Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.

## New Acute HCV Diagnoses by Age

People between the ages of 20-39 have made up almost seventy-five percent of acute HCV diagnoses since 2016. The average rate of diagnosis of acute HCV from 2016-2020 among this age group was 1.7 diagnoses per 100,000 population. For comparison, the average rate of diagnosis of acute HCV amongst all age groups from 2016-2020 was 0.7 diagnoses per 100,000 population. These trends can be seen in **Figure 4.3** on the following page.

Figure 4.3: Rates per 100,000 of Acute HCV by Age Group, 2016-2020



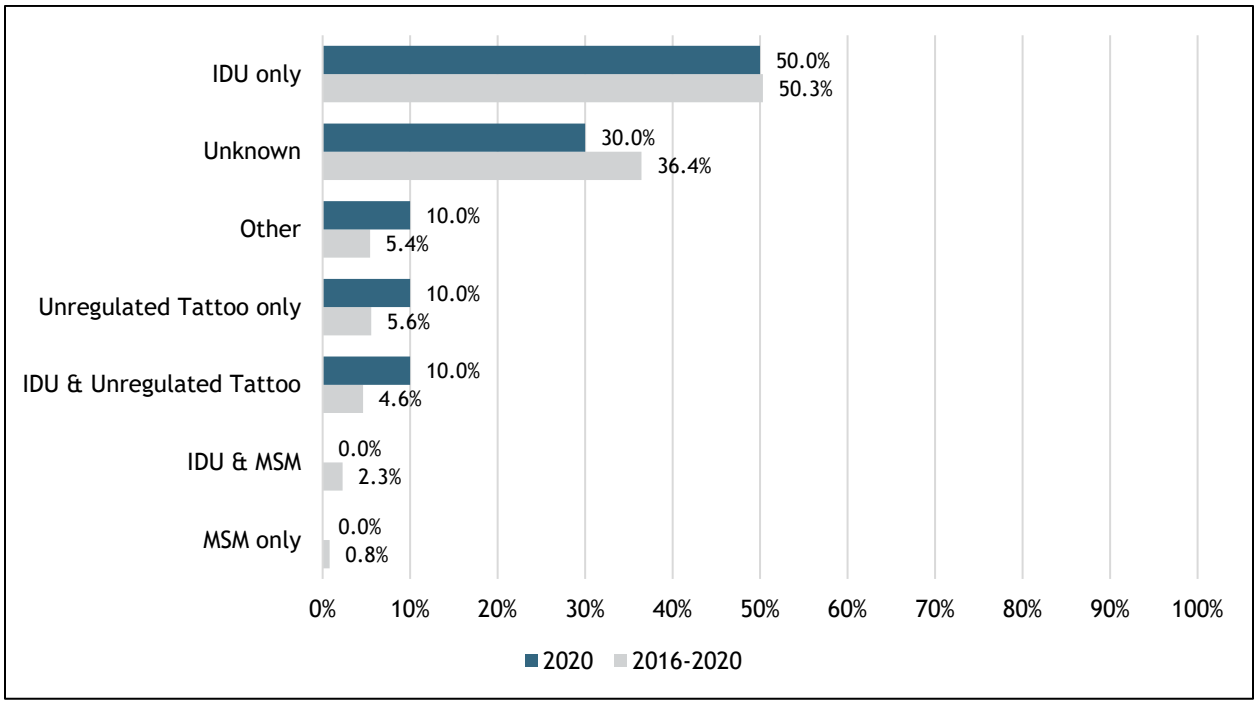

## New Acute HCV Diagnoses by Race/Ethnicity

Race and ethnicity data were available for 97.3% of cases from 2016-2020. The majority of diagnoses over the past five years were among non-Hispanic Whites (68.1%). Hispanics of all races represented nearly a quarter of all cases (23.9%) from 2016-2020.

## Risk Factors

Injection drug use was identified as a risk factor for 60.0% of cases in 2020 and an average of 57.2% of cases from 2016-2020. Nationally, the opioid epidemic is driving an increase in acute HCV incidence[26]. Over the past five years, 16.0% of acute HCV diagnoses were among people experiencing homelessness. Risk factors among acute HCV diagnoses can be seen in Figure 4.4.

**Figure 4.4: Reported Risk Factors Among New Acute HCV Diagnoses, 2020 Compared to 2016-2020**



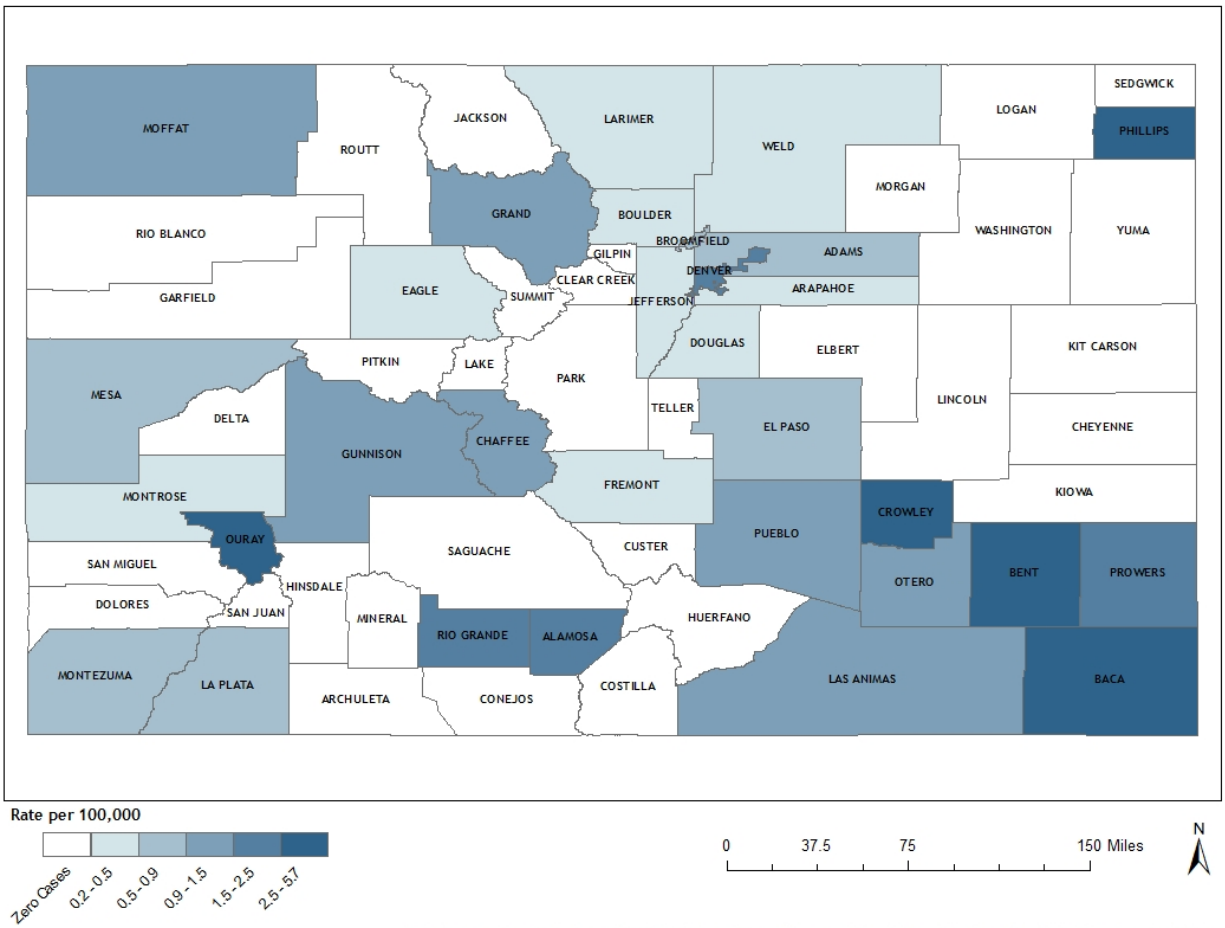

[26] CDC. Surveillance for Viral Hepatitis - United States. 2018.

## Geographic Distribution

The majority of acute HCV diagnoses over the past five years (2016-2020) have occurred in Denver (30.9%), El Paso (10.6%), and Adams (7.4%) counties. During the same time period, 9.0% of cases were diagnosed in federal or state prisons.

Rates were highest in Baca, Phillips, Ouray, Crowley, and Alamosa counties from 2016-2020 as seen in Figure 4.5. However, due to small populations in these counties, rates should be interpreted with caution. Total case counts and rates by county can be found in Table 4.3 in the Appendix. An explanation of how rates are calculated can be found in the Definitions section.

### Figure 4.5: New Acute HCV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2016-2020)



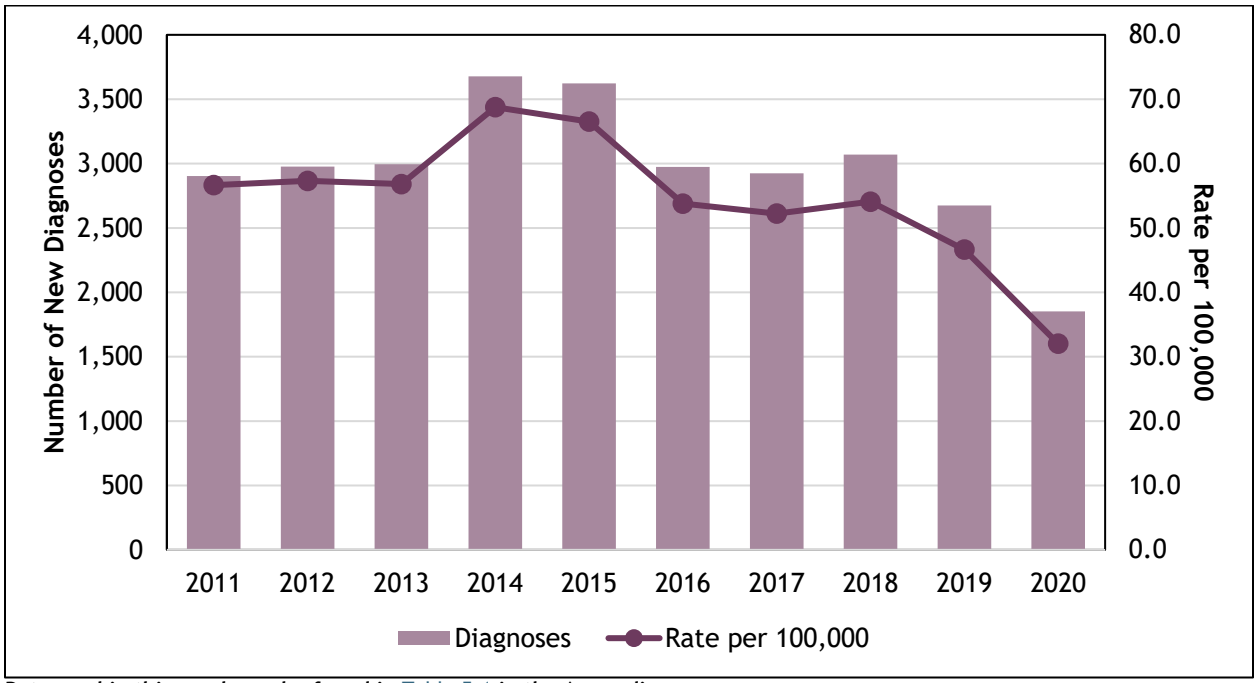

Data Source: Case data from CDPHE's VH Surveillance Program. Population data from the State Demography Office.

# Chronic Hepatitis C

## Summary

- In 2020, there were 1,852 cases of chronic HCV.
    - This represents a 36.4% decrease in diagnoses from 2019.
- 70.5% of diagnoses in 2020 were among men.
- In 2020, 20-39 year olds were disproportionately affected by chronic HCV and made up 45.7% of diagnoses.
- Due to large increases of incident cases among 15 to 44 year olds, the prevalence of chronic HCV is projected to rise in this age group, indicating a shift in the demographics of people living with HCV in Colorado.[27]
- In 2020, 36.5% of cases occurred in the Denver TGA.
- Diagnoses in federal or state prisons from 2016-2020 accounted for more diagnoses than any single county (20.2%).

**Figure 5.1: Reported Chronic HCV Cases and Rate per 100,000, 2011-2020**




**Data used in this graph can be found in Table 5.1 in the Appendix.**

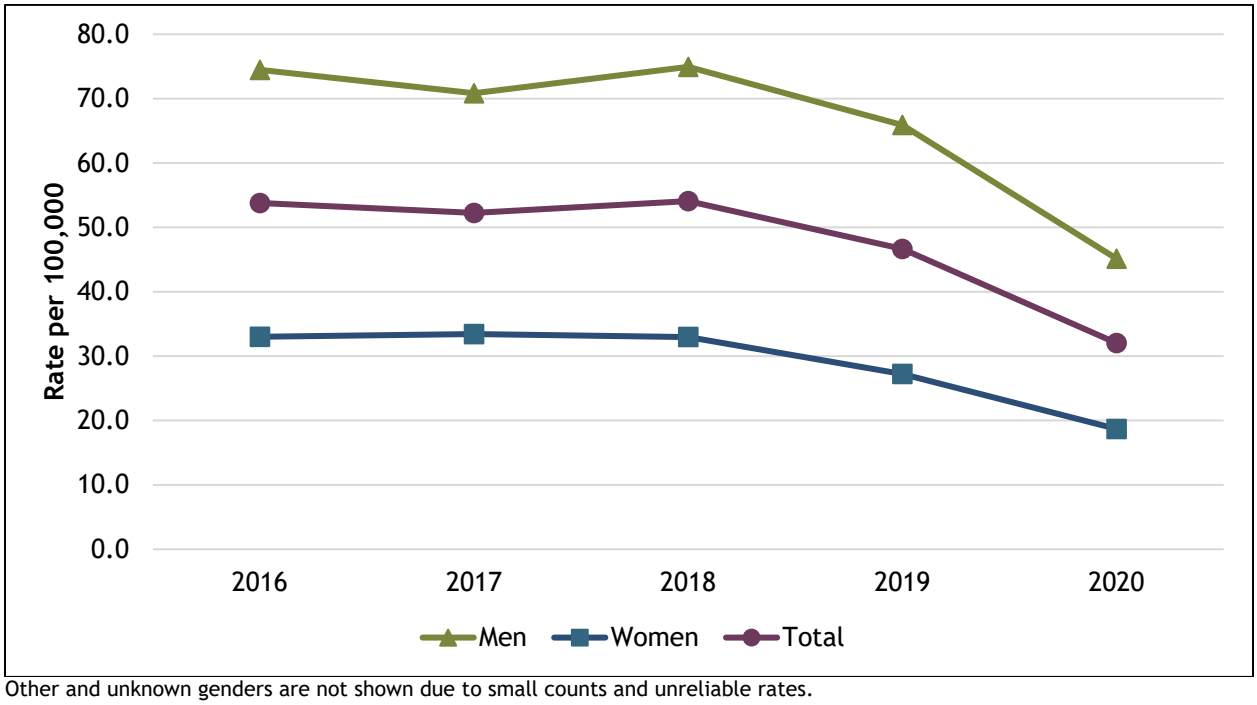
[27] CDPHE. Colorado Prevalence and Incidence of Hepatitis C Virus Infection: A Modeling Study (2018 update). Denver, CO; 2018.

Nationwide, hepatitis C testing and treatment decreased during the beginning of the COVID-19 pandemic; therefore, the decrease in diagnoses from 2019 to 2020 is likely a result of a decrease in testing and not actual transmission and acquisition of new infections.

## New Chronic HCV Diagnoses by Gender

The rate of cases among men in 2020 was 45.1 per 100,000 and 18.7 per 100,000 among women, as shown in **Figure 5.2**. The gender gap has been consistent over the past ten years, with men accounting for at least 63% of cases annually. As explained in the **Priority Populations** section of this report, IDU is more associated with men than women.[28] Therefore, it is likely that this trend will continue into future years.

**Figure 5.2: Rate per 100,000 of Chronic HCV Cases by Gender, 2016-2020**




Other and unknown genders are not shown due to small counts and unreliable rates.

Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.

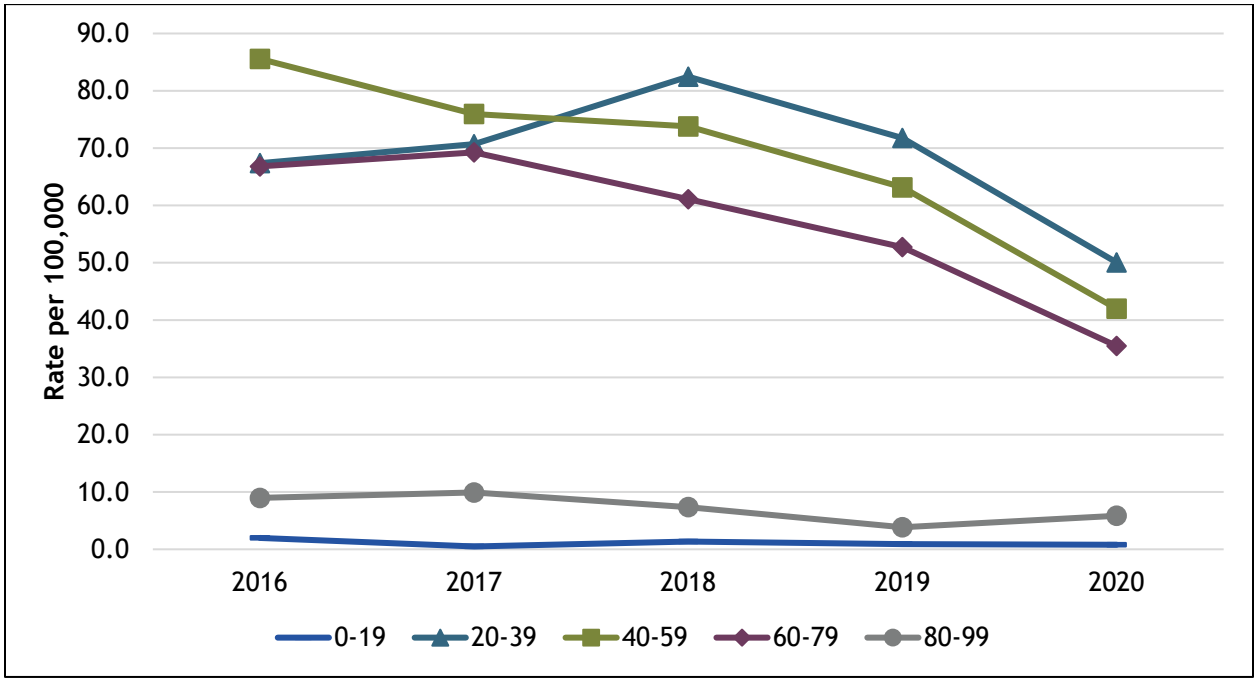
## New Chronic HCV Diagnoses by Age

People between the ages of 20-39 had the highest rate of cases (82.5 per 100,000) for the first time in 2018, surpassing the "Baby Boomer" generation, and this trend continued into 2019 and 2020 which can be seen in **Figure 5.3** on the following page. In 2020 20-39 year olds only made up 29.3% of the overall population of Colorado but accounted for 45.7% of all chronic HCV diagnoses.

[28] NIH. Sex and Gender Differences in Substance Use. 2020. https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/sex-gender-differences-in-substance-use

In 2020, those aged 20-39 years old had the highest rate of diagnosis amongst age groups, with a rate of 50.1 per 100,000. In comparison, 40-59 year olds had a rate of 41.9 per 100,000 and 60-79 year olds had a rate of 35.4 per 100,000. This shift of the primary age group affected by chronic HCV is significant because people in the 20-39 age group have been most affected by the opioid crisis nationally.[29]

**Figure 5.3: Rates per 100,000 of Chronic HCV by Age Group, 2016-2020**




## New Chronic HCV Diagnoses by Race/Ethnicity

Race/ethnicity data is not routinely reported for chronic HCV cases in Colorado. To improve race and ethnicity reporting among chronic HCV cases, cases were matched to Medicaid data sources which have better data on race and ethnicity. Before this match, roughly 70% of cases had an unknown race/ethnicity. After this match, only 43% were still unknown.

From 2016-2020, 43.0% of cases had an unknown race and ethnicity. During this same time period, 39.9% of cases were among non-Hispanic Whites and 11.5% of cases were among Hispanic/Latino/a/x of all races.

[29] CDC. Surveillance for Viral Hepatitis - United States. 2018.

## Risk Factors

Risk factor data is not routinely collected for chronic cases, but the rising rate of cases among 20-39 year olds in Colorado and nationally mirrors national trends related to the opioid epidemic.[30]

People experiencing homelessness at the time of reporting made up 7.6% (n = 140) of cases in 2020.

From 2016-2020, 263 of those diagnosed with chronic HCV were also living with/diagnosed with HIV. Of this group, 15.2% (n=40) were diagnosed with HIV and chronic HCV within 30 days. Those living with HIV and chronic HCV were primarily 30-39 years old (30.9%) and the primary reported risk factors for their HIV diagnosis were being a man who has sex with men (46.0%) and injection drug use (45.6%).

## Geographic Distribution

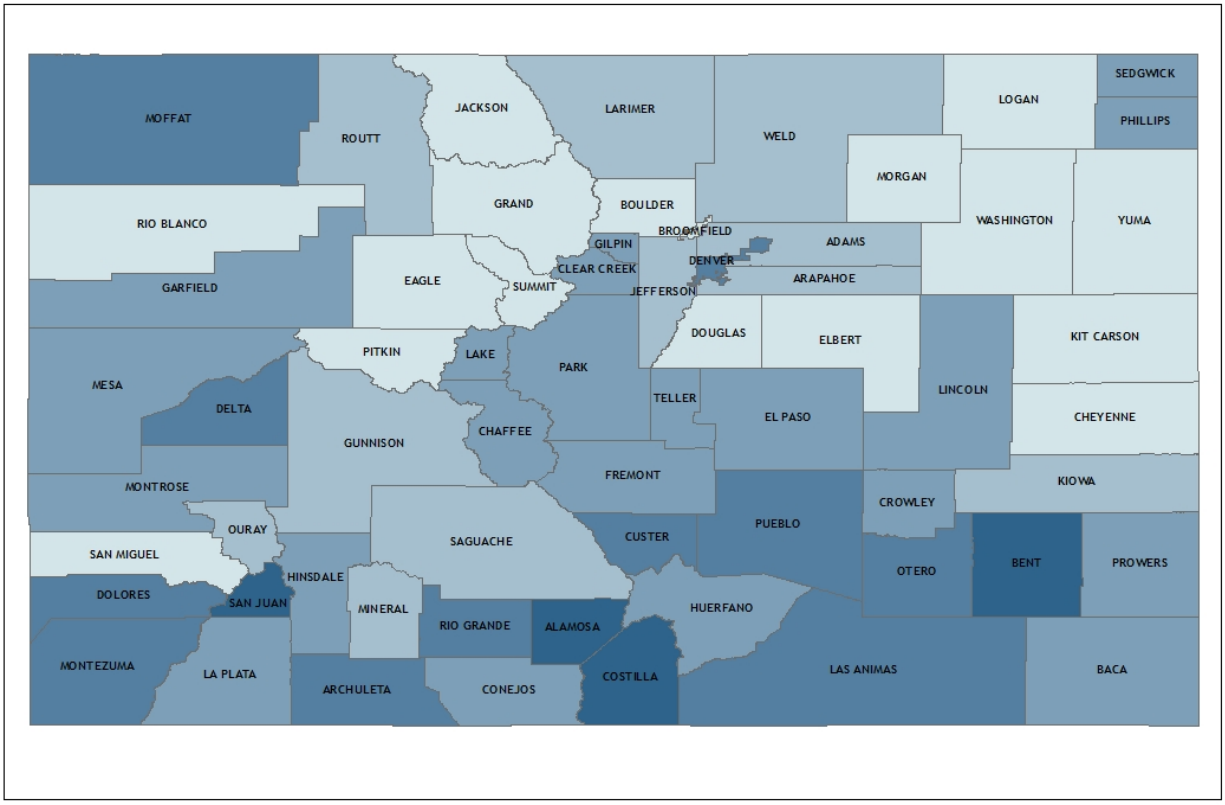
Cases among incarcerated individuals represented 20.2% of all reported cases from 2016-2020, which was higher than the proportion of any individual county. In 2020, 18.1% of all cases occurred in prisons. This percentage was followed by Denver County, which made up 16.9% of diagnoses in 2020.

Rates of diagnosis for chronic HCV have been highest in rural counties over the past five years (2016-2020). Bent, Costilla, and San Juan counties all had an average rate of diagnosis over 100 diagnoses per 100,000 population from 2016-2020. For comparison, the average rate of diagnosis in Colorado from 2016-2020 was 47.8 diagnoses per 100,000. These average rates of diagnosis can be seen in **Figure 5.5** on the following page. Case counts by county, as well as rates, can be found in **Table 5.3** in the Appendix.

While rates were high in Bent, Costilla, and San Juan counties from 2016-2020 due to small populations in these counties, rates should be interpreted with caution. An explanation of how rates are calculated can be found in the **Definitions** section.

[30] CDC. Surveillance for Viral Hepatitis - United States. 2018.

## Figure 5.5: New Chronic HCV Diagnosis Rate per 100,000 Population by County of Residence at the Time of Diagnosis – Colorado (2016-2020)




Data Source: Case data from CDPHE's VH Surveillance Program. Population data from the State Demography Office.

## Chronic Hepatitis C Care Cascade

Negative HCV RNA tests became reportable to CDPHE in 2019. These labs have allowed surveillance staff to track individuals with chronic HCV that have reached a sustained virologic response (SVR) and those who have experienced a reinfection.

Due to the time it takes to pursue treatment and achieve SVR, this report will focus on the care cascade of those diagnosed with confirmed chronic HCV in 2019.

To be included in the care cascade, individuals needed to have one positive HCV RNA test reported to CDPHE to first confirm their HCV diagnosis. A subsequent negative or undetected HCV RNA is the next step in the cascade, which is used as an indication that an individual initiated treatment. Many providers will conduct a HCV RNA test 4 weeks into treatment to monitor a patient's response to treatment, and the RNA results at 4 weeks into treatment will, for most individuals, be negative or undetectable even though they have not yet completed the treatment regimen.

To verify that an individual has achieved SVR, a HCV RNA test at least three months after completing the treatment regimen is needed. Therefore, a second negative or undetected HCV RNA at least three months after an initial negative or undetected HCV RNA is used here as evidence that they completed treatment and achieved SVR. These individuals that have achieved SVR are considered cured of their HCV infection. If these steps are reached and an individual has a reported positive HCV RNA at least three months after SVR, they are considered to be reinfected with HCV.

Only 2019 diagnoses are included in this report to allow for at least a calendar year for an individual to pursue treatment. There are limitations to these data - only labs that occurred in Colorado are reported here; therefore, if an individual living with chronic HCV were to move outside of Colorado and pursue treatment, they would not be counted here. Additionally, beginning in 2021, Colorado Medicaid stopped requiring that an HCV RNA test be performed 4 weeks into a patient’s treatment regimen. Due to this change, it is possible that certain Medicaid clients in this cohort have reached SVR despite only having one negative HCV RNA test reported to CDPHE, potentially showing an underestimation of overall SVR in Colorado among 2019 diagnoses.

## Definitions

People with a positive HCV RNA test: People with at least one positive HCV RNA test reported in the 2019 calendar year.

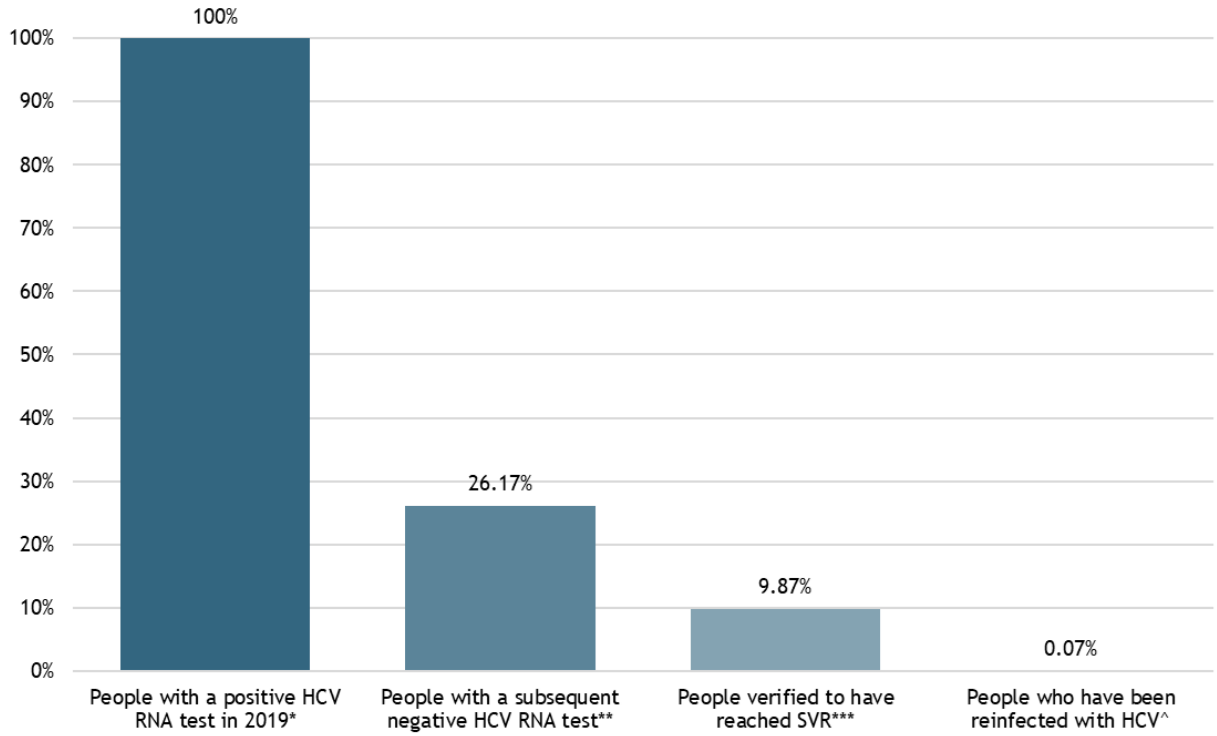
People with a subsequent negative HCV RNA test: Percent of people with a negative HCV RNA test reported after a positive HCV RNA test during the time period January 1, 2019 through March 31, 2022.

People who have reached SVR: Percent of people with a second negative HCV RNA test reported at least three months after a previous negative HCV RNA test during the time period January 1, 2019 through March 31, 2022.

People who have been reinfected with HCV: Percent of people that had been confirmed to have achieved SVR and had a reported positive HCV RNA at least three months after achieving SVR during the time period January 1, 2019 through March 31, 2022.

As shown in **Figure 6.1**, of all confirmed diagnoses in 2019 (n=2,675) only 9.9% had reached SVR as of March 2022. The average time from diagnosis to SVR was 1.4 years. The low numbers of individuals reaching SVR and being cured of their hepatitis C infection implies there is still a high number of individuals living with hepatitis C. This along with the new diagnoses every year implies an increasing prevalence of chronic HCV in Colorado.

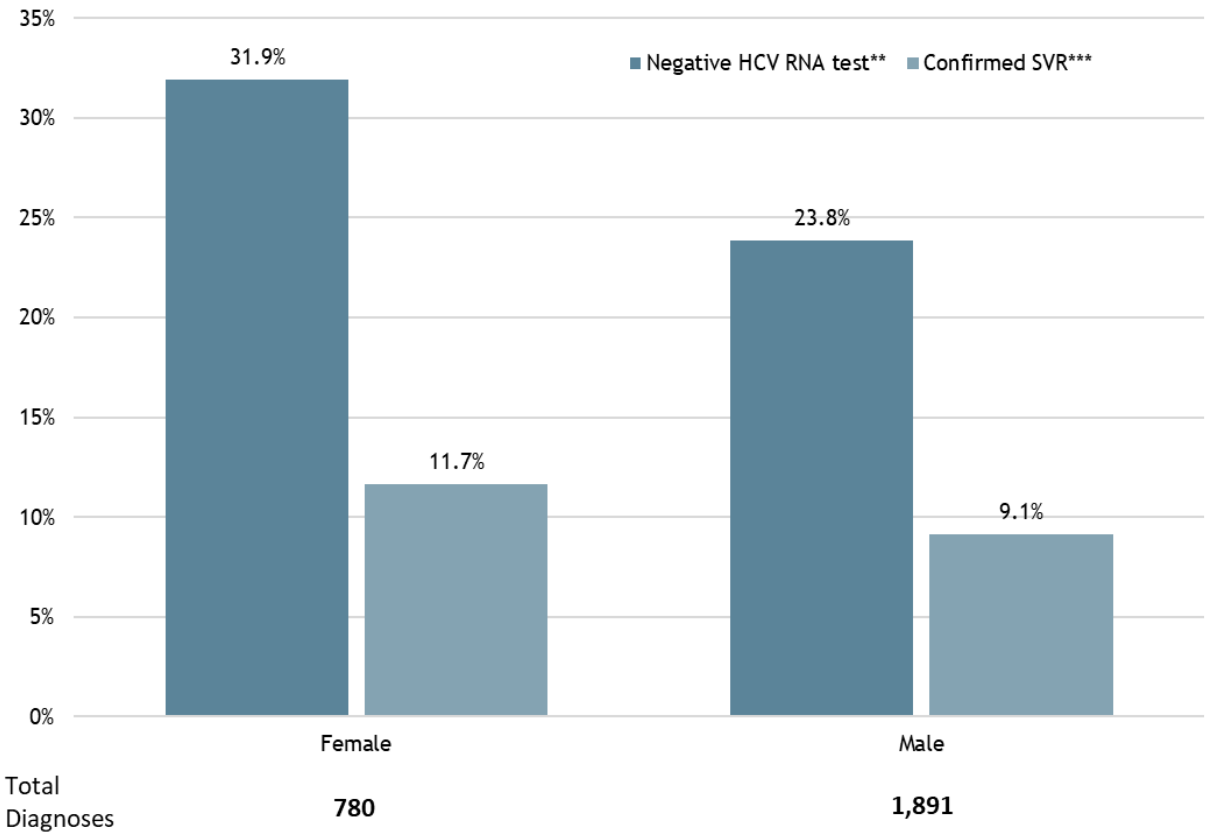
**Figure 6.1: Chronic HCV Care Cascade; 2019 Colorado Diagnoses**




Data source: CEDRS. *Defined as persons diagnosed with chronic hepatitis C virus through year-end 2019. **Percentage of those with a negative viral load test reported to CDPHE after their positive viral load. ***Percentage of total diagnoses that reached SVR which is defined as two negative viral loads at least 3 months apart. ^Percentage of total diagnoses that reached SVR and had a positive viral load 6 months after reaching SVR.

While the majority of diagnoses in 2019 were among males, females were slightly more likely to reach SVR than males by March 2022 - as depicted in **Figure 6.2**. Additionally, a higher percentage of females had received an initial negative HCV RNA test by March 2022 than males.

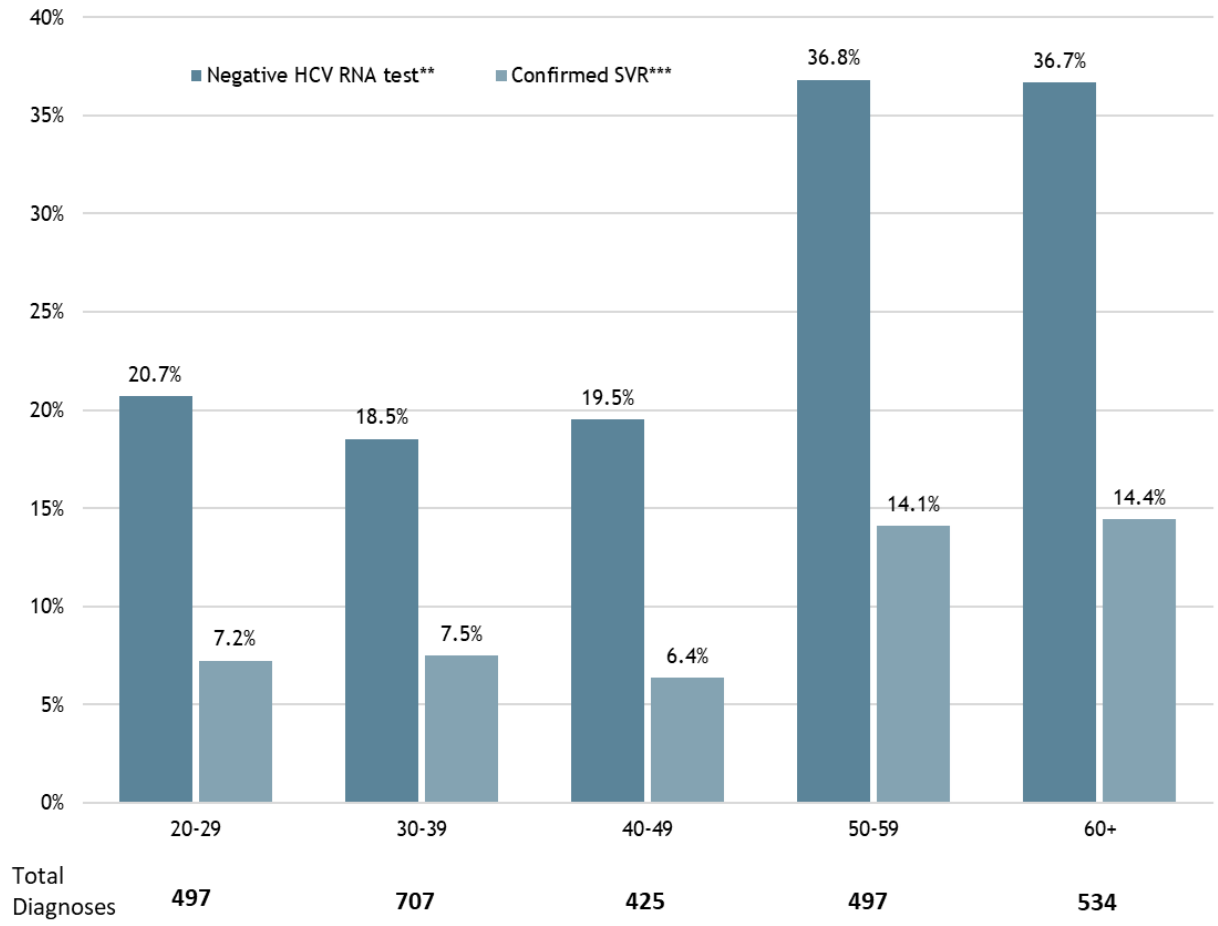
### Figure 6.2: Chronic HCV Care Cascade; 2019 Diagnoses by Sex




Data source: CEDRS. All cases had a positive HCV RNA test. **Percentage of those with a negative viral load test reported to CDPHE after their positive viral load. ***Percentage of total diagnoses that reached SVR which is defined as two negative viral loads at least 3 months apart.

By age, as depicted in **Figure 6.3**, the majority of diagnoses that had reached SVR by March 2022 were 50 and older when they were diagnosed with hepatitis C. Additionally, this age group had the highest percentages of receiving an initial negative HCV RNA test whereas only 19.6% of 20-39 year olds had received an initial negative HCV RNA test by March 2022. While 20-39 year olds made up 45.0% of new diagnoses in 2019 (n=1,204), only 7.4% (n=89) of this cohort had reached SVR by March 2022, implying that the prevalence of HCV in this age group is increasing in the community.

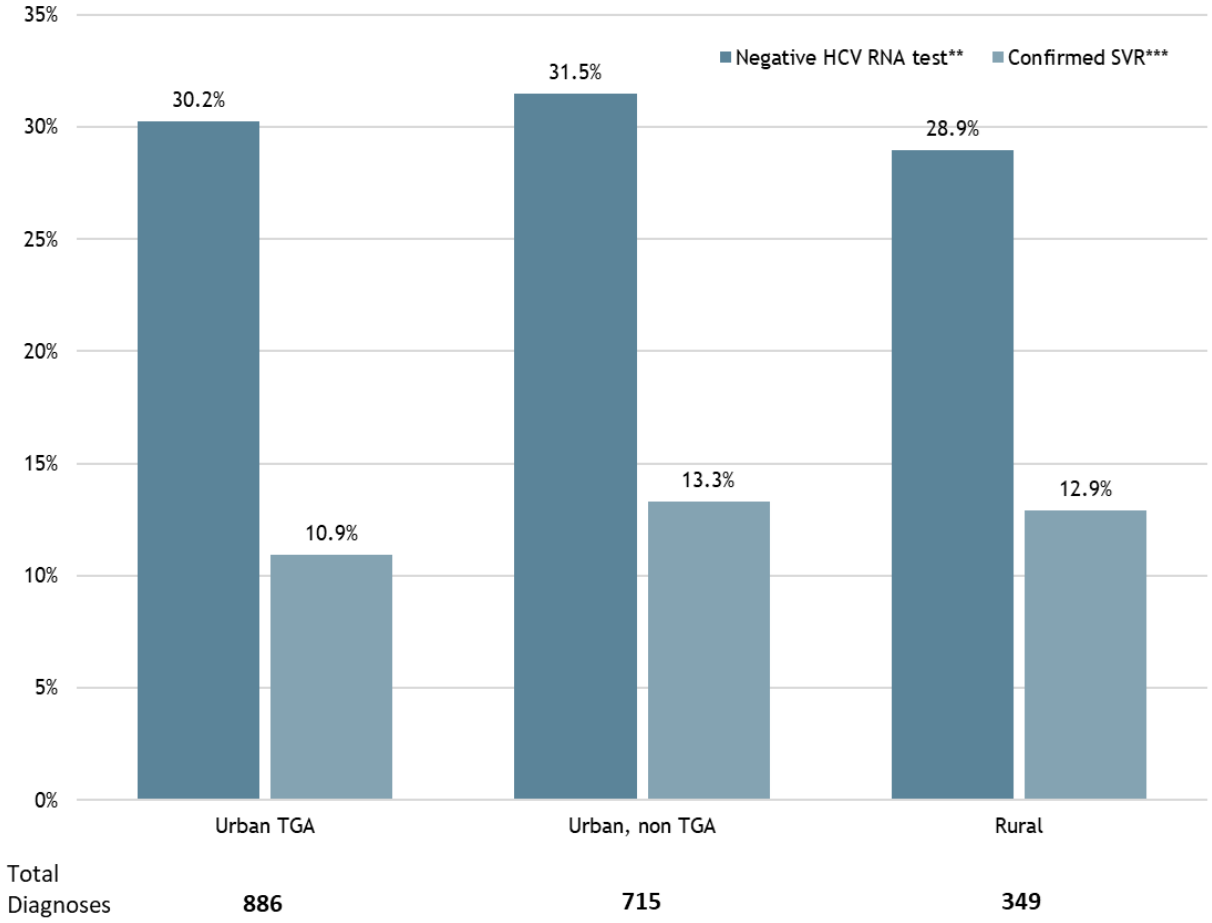
### Figure 6.3: Chronic HCV Care Cascade; 2019 Diagnoses by Age at Diagnosis




Data source: CEDRS. All cases had a positive HCV RNA test. **Percentage of those with a negative viral load test reported to CDPHE after their positive viral load. ***Percentage of total diagnoses that reached SVR which is defined as two negative viral loads at least 3 months apart.

As shown in **Figure 6.4**, the majority of diagnoses that had reached SVR by March 2022 occurred in individuals initially diagnosed in an urban, non-TGA county. Individuals diagnosed in urban-TGA counties were the least likely to reach SVR - only 10.9% of 2019 diagnoses (n=97) had reached SVR by March 2022. The majority of diagnoses in 2019 occurred in urban TGA counties and this trend continued into 2020, implying that the prevalence of chronic HCV in this community is likely increasing.

**Figure 6.4: Chronic HCV Care Cascade; 2019 Diagnoses by Region**




Data source: CEDRS. All cases had a positive HCV RNA test. **Percentage of those with a negative viral load test reported to CDPHE after their positive viral load. ***Percentage of total diagnoses that reached SVR which is defined as two negative viral loads at least 3 months apart.

# Perinatal Hepatitis B and C

There were zero perinatal HBV cases reported in Colorado in 2020. Over the past ten years (2011-2020), there were three cases of **perinatal HBV**.

CDPHE had 137 pregnant people enrolled in the PHBPP with an estimated due date (EDD) in 2020. This number is not inclusive of all pregnant people that were enrolled in the PHBPP in 2020. Of the 137 people enrolled in PHBPP, 76 pregnant people had never been enrolled in the program, and 61 had previously been enrolled in the program but had a new pregnancy with an EDD in 2020. CDC, Advisory Committee on Immunizations Practices (ACIP), and the U.S. Preventive Services Taskforce recommend that all people are screened for HBV during pregnancy.

Colorado birth certificate data for 2020 shows that of 62,111 total births, 60,340 pregnant people had a known screening status (97.1%). This is up from 96.1% in 2019. Colorado had a hepatitis B birth dose vaccination rate of 84.3% in 2020, which is consistent with rates in 2019.

**Perinatal HCV** became reportable in 2018. In Colorado, there were two perinatal HCV cases reported in 2018, one reported in 2019, and three reported in 2020 - all had confirmatory test results.

# Coinfections and Liver Cancer

There were 39 cases of individuals diagnosed with both HBV and HCV from 2016 to 2020. Living with HBV and HCV is associated with faster progression of disease as well as higher rates of hepatocellular carcinoma (HCC) development. Managing patients who are living with both hepatitis B and C presents unique challenges. In some cases, treatment with direct-acting antivirals (DAAs) for HCV may result in reactivation of previously suppressed HBV infection.[31]

Among diagnoses that occurred from 2011 to 2020, there were 432 cases of liver cancer diagnosed in Colorado among previously reported HCV cases, and 36 among previously reported HBV cases during the same time period. The “Baby Boomer” generation (those born from 1945-1965) made up 88.9% of liver cancer diagnoses associated with a previously reported HCV diagnosis from 2011-2020. The average time from hepatitis diagnosis reporting to liver cancer diagnosis was 2.1 years among reported HCV

[31] Mavilia MG, Wu GY. HBV-HCV Coinfection: Viral Interactions, Management, and Viral Reactivation. J Clin Transl Hepatol. 2018/07/06. 2018 Sep 28;6(3):296–305.

cases, and 2.3 years among reported HBV cases, illustrating the need to connect more people to treatment in the course of their illness as well as focusing on earlier diagnosis of HBV and HCV.

# Priority Populations

## People Experiencing Homelessness

People experiencing homelessness (PEH) are disproportionately affected by hepatitis A and C and make up high proportions of reported cases for these conditions in Colorado.

In the past five years, PEH made up 16.5% (n = 31) of acute HCV cases, and 7.8% (n = 1,047) of chronic HCV cases in Colorado. The majority of these cases were among young people aged 20-39 years old.

According to the 2020 Annual Homeless Assessment Report to Congress, there were an estimated 9,846 PEH in Colorado, 2,834 of whom were chronically homeless.[32] Prevalence estimates of HCV RNA, indicative of a current case of HCV, among PEH range from 10.8% to 31.2%.[33] Using these estimates of the homeless population and HCV prevalence, there were an estimated 1,063 to 3,072 PEH in Colorado living with chronic hepatitis C in 2020. However, depending on the proportion of PEH who inject drugs, the estimated HCV prevalence could well be higher. The estimates of the number of PEH may also be an underestimate.

Whether or not a person is experiencing homelessness at the time of reporting is based on address reporting, case notes, and/or case interviews. This methodology likely results in underestimates, especially for reported chronic HCV cases, since routine follow-up of chronic HCV cases is not conducted. No address or institution was reported for 5.2% (n = 708) of reported chronic HCV cases from 2016-2020. PEH may also report the permanent address of a friend or family member in medical records.

Outreach organizations, homeless shelters, and existing syringe services programs work to connect PEH and other marginalized populations to testing and care. The effectiveness of the efforts of these organizations to test individuals for viral hepatitis may contribute to the high numbers of reported cases among PEH. However, the data also mirror national trends in the increasing burden of viral

[32] HUD. The 2020 Annual Homeless Assessment Report to Congress. Washington, D.C.; 2020.

[33] Hofmeister MG, Rosenthal EM, Barker LK, Rosenberg ES, Barranco MA, Hall EW, et al. Estimating Prevalence of Hepatitis C Virus Infection in the United States, 2013-2016. Hepatology. 2019 Mar 1;69(3):1020–31.

hepatitis among this population compared to other groups such as people born between 1945 and 1965 (often referred to as "Baby Boomers").[34]

## People who are Incarcerated

The CDOC offers HCV testing to inmates upon intake into a prison. Since 2016, there have been 2,726 chronic HCV cases reported to CDPHE from prisons - which represents 20.2% of all chronic HCV cases in Colorado during the past five years.

In 2018, a settlement was finalized between the American Civil Liberties Union (ACLU) and CDOC where CDOC agreed to spend $41 million over two years to treat prisoners living with HCV. [35] In the 2020 fiscal year (July 2019 - June 2020), 776 offenders had completed treatment and had a sustained virologic response and 157 were released mid-treatment. In the 2021 fiscal year (July 2020 - June 2021), 323 offenders had completed treatment and had a sustained virologic response and 44 were released mid-treatment.

## People who Inject Drugs

IDU was reported as a risk factor for 30.6% of HAV diagnoses and 50.0% of acute HCV diagnoses in 2020. While risk factors for acute HBV cases were unknown in 2020, from 2016-2019 30.9% of acute HBV cases reported injection drug use. In the past five years, 2016-2020, approximately 20.6% of HAV diagnoses and 52.6% of acute HCV diagnoses were attributed to IDU.

The increasing diagnoses of chronic HCV in young people mirrors the trends of the opioid epidemic in Colorado. In 2020, 25 to 34 year olds made up 25.1% of all fatal drug overdoses. The average drug overdose rate in this age group in 2020 was 42.1 drug overdose deaths per 100,000. For comparison, the average drug overdose rate for all age groups was 25.4 per 100,000.[36] The rate of drug overdose deaths among this age group increased by 36.2% from 2019 and the overall rate increased by 36.6% - indicating an increase in overall drug use in Colorado.

Differences in sex for chronic HCV diagnosis and the opioid epidemic are also similar. For the past five years, males have accounted for at least 60% of chronic HCV diagnoses annually. In 2020, the rate of cases among males was 45.1 per 100,000 and 18.7 per 100,000 among females. These trends may be

[34] CDC. Surveillance for Viral Hepatitis - United States. 2018.

[35] ACLU of Colorado. ACLU and Colorado Department of Corrections Reach Historic Settlement to Treat All Colorado Prisoners with Hepatitis C. 2018. https://aclu-co.org/aclu-and-colorado-department-of-corrections-reach-historic-settlement-to-treat-all-colorado-prisoners-with-hepatitis-c/

[36] Opioid Overdose Prevention Program, Colorado Department of Public Health and Environment. Drug Overdose Dashboard. Accessed 11/2020. https://cohealthviz.dphe.state.co.us/t/PSDVIP-MHPPUBLIC/views/DrugOverdoseDashboard/LandingPage?:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link

able to be explained by patterns in drug use. Males, on average, are more likely than females to use drugs.[37] Additionally, males are more likely than females to inject drugs like heroin.[38] In 2020, males made up 67.8% of drug overdose deaths in Colorado while only accounting for 50.0% of the overall Colorado population in 2020.

In the 2019 Colorado Behavioral Risk Factor Surveillance System (BRFSS), the most recent year where injection drug use behavior was asked about, 1.7% of those interviewed indicated that they had used a needle to inject a drug not prescribed by a doctor at least once.[39] Of that group, 5.8% had injected drugs recently, within the past 30 days of when the interview was conducted.[40] Explanation of the BRFSS can be found in the **Definitions** section of this report. Applying these percentages to Colorado's adult population in 2019, an estimated 75,231 Coloradans over 18 years old had ever injected drugs not prescribed by a doctor and 4,363 had done so recently.

Those that are currently injecting drugs are at risk for hepatitis. Prevention and treatment targeted at people who inject drugs (PWID) can help prevent the transmission of viral hepatitis and link more people at risk to screening and care.

# Strategies to Reduce the Burden of Viral Hepatitis

Both public health and clinical strategies are needed to stop the spread of viral hepatitis and limit the impact on people who are living with viral hepatitis. Public health must work with communities and health care providers to identify new cases and stop transmission. Hepatitis A and B have safe and effective vaccines while screening, education, and treatment are the primary tools available to prevent new HCV diagnoses and treat current chronic cases.

Nineteen syringe services programs exist in Colorado and serve 12 Colorado counties, providing numerous benefits to priority populations, which include access to new, sterile injection equipment, engagement with public health workers, and wound care. Harm reduction strategies, if implemented according to the needs of the local community, can help prevent the transmission of viral hepatitis and link more people to screening and care.

[37] NIH. Sex and Gender Differences in Substance Use. 2020. https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/sex-gender-differences-in-substance-use

[38] NIH. Sex and Gender Differences in Substance Use. 2020. https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/sex-gender-differences-in-substance-use

[39] 2019 Colorado Behavioral Risk Factor Surveillance System (BRFSS), Colorado Department of Public Health and Environment. https://drive.google.com/file/d/1uimVB49TVrtS1n1eldupJCHBIwTj4Wo9/view

[40] 2019 Colorado Behavioral Risk Factor Surveillance System (BRFSS), Colorado Department of Public Health and Environment. https://drive.google.com/file/d/1uimVB49TVrtS1n1eldupJCHBIwTj4Wo9/view

People living with chronic HBV and/or chronic HCV can benefit from additional medical management and evaluation for treatment. These patients also need counseling and education related to their diagnosis. Providing treatment for viral hepatitis can prevent complications of the condition including fibrosis, cirrhosis and HCC. There are effective treatments that can now cure HCV, and current treatments can suppress HBV which decreases the likelihood of transmission.

The introduction in 2014 of Direct-Acting Antiviral Agents (DAAs) to treat HCV has dramatically improved care for HCV and made treatment as prevention a viable strategy for HCV elimination. The four most commonly used DAAs have SVR rates over 95%, provide options for treating all HCV genotypes, have minimal side effects and regimen lengths of 8 to 12 weeks for most patients, and can be used for patients with decompensated cirrhosis or who have experienced previous treatment failure.

In recent years there has been a steady easing of the previously very strict eligibility criteria for HCV treatment imposed by Medicaid and other payers in Colorado. As of January 1, 2022, Colorado Medicaid's prior authorization criteria does not require any evidence of fibrosis, allows for treatment of acute HCV, removes all restrictions for patients with substance use disorders, minimizes lab work requirements, and makes it easier for primary care providers to prescribe DAAs. The eased criteria makes HCV treatment less complicated for providers and more accessible for more patients. With this improved access there is the opportunity to introduce innovative strategies to expand HCV treatment such providing HCV treatment in primary care, through telehealth, or at substance use treatment or harm reduction programs.

To effectively reduce viral hepatitis incidence and prevalence as well as morbidity and mortality related to viral hepatitis in Colorado, the state needs cross-cutting strategies, including expanding harm reduction policies and services, improving public education, increasing screening and confirmatory testing (specifically for HCV), expanding professional education (including for HCV treatment in primary care settings), and providing HCV treatment to more Coloradans. Screening for HBV among pregnant people and people born in endemic countries should be increased and HAV and HBV vaccines should be offered to all populations and should be part of routine care for both children and adults. Special attention to the needs of priority populations should be provided so that the burden of viral hepatitis is not disproportionately placed on any community or population.

# Data Tables

### Table 1.1: Reported hepatitis A cases and rate per 100,000, 2011-2020

| Measure | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 21 | 29 | 50 | 23 | 24 | 23 | 64 | 31 | 332 | 95 |
| Rate | 0.4 | 0.6 | 0.9 | 0.4 | 0.4 | 0.4 | 1.1 | 0.5 | 5.8 | 1.6 |

2011-2020 population estimates from the Colorado State Demography Office

### Table 1.2: Demographics of new hepatitis A cases, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Total** | 23 | 100.0% | 64 | 100.0% | 31 | 100.0% | 332 | 100.0% | 95 | 100.0% |
| **Gender*** | | | | | | | | | | |
| Female | 12 | 52.2% | 18 | 28.1% | 10 | 32.3% | 99 | 29.8% | 30 | 31.6% |
| Male | 11 | 47.8% | 45 | 70.3% | 21 | 67.7% | 233 | 70.2% | 65 | 68.4% |
| Transgender Woman | 0 | 0.0% | 1 | 1.6% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Transgender Man | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unknown Gender | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| **Age Group** | | | | | | | | | | |
| 0-19 | 0 | 0.0% | 2 | 3.1% | 1 | 3.2% | 3 | 0.9% | 1 | 1.1% |
| 20-39 | 5 | 21.7% | 10 | 15.6% | 9 | 29.0% | 38 | 11.4% | 11 | 11.6% |
| 40-59 | 7 | 30.4% | 17 | 26.6% | 7 | 22.6% | 118 | 35.5% | 23 | 24.2% |
| 60-79 | 3 | 13.0% | 8 | 12.5% | 3 | 9.7% | 90 | 27.1% | 16 | 16.8% |
| 80-99 | 3 | 13.0% | 17 | 26.6% | 4 | 12.9% | 54 | 16.3% | 22 | 23.2% |
| Unknown | 2 | 8.7% | 9 | 14.1% | 3 | 9.7% | 21 | 6.3% | 14 | 14.7% |
| **Race/Ethnicity** | | | | | | | | | | |
| NH, Asian/Pacific Islander | 1 | 4.3% | 1 | 1.6% | 0 | 0.0% | 4 | 1.2% | 2 | 2.1% |
| NH, Black/African | 0 | 0.0% | 1 | 1.6% | 0 | 0.0% | 21 | 6.3% | 6 | 6.3% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| American | | | | | | | | | | |
| Hispanic/Latino/a/x , all races | 3 | 13.0% | 8 | 12.5% | 4 | 12.9% | 42 | 12.7% | 16 | 16.8% |
| NH, Indigenous/Native American | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 2 | 0.6% | 0 | 0.0% |
| NH, Multi Race | 0 | 0.0% | 1 | 1.6% | 0 | 0.0% | 9 | 2.7% | 1 | 1.1% |
| NH White | 17 | 73.9% | 43 | 67.2% | 20 | 64.5% | 211 | 63.6% | 62 | 65.3% |
| Unknown Race | 2 | 8.7% | 10 | 15.6% | 7 | 22.6% | 43 | 13.0% | 8 | 8.4% |
| **County Class**** | | | | | | | | | | |
| TGA | 6 | 26.1% | 31 | 48.4% | 14 | 45.2% | 151 | 45.5% | 50 | 52.6% |
| Homeless | 0 | 0.0% | 0 | 0.0% | 1 | 3.2% | 83 | 25.0% | 16 | 16.8% |
| Urban, non-TGA | 11 | 47.8% | 28 | 43.8% | 16 | 51.6% | 151 | 45.5% | 37 | 38.9% |
| Homeless | 0 | 0.0% | 1 | 1.6% | 5 | 16.1% | 85 | 25.6% | 15 | 15.8% |
| Rural | 6 | 26.1% | 4 | 6.3% | 1 | 3.2% | 27 | 8.1% | 8 | 8.4% |
| Homeless | 0 | 0.0% | 1 | 1.6% | 0 | 0.0% | 11 | 3.3% | 1 | 1.1% |
| Prison | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 3 | 0.9% | 0 | 0.0% |
| Unknown | 0 | 0.0% | 1 | 1.6% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |

*Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.
** Percentages for county class will not add to 100% as homeless cases are counted in overall county class cases.
TGA counties include: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson.
Urban, non-TGA counties include: El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.

### Table 1.3: New hepatitis A cases and rate per 100,000 by county, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| **Total** | 23 | 0.4 | 64 | 1.1 | 31 | 0.5 | 332 | 5.8 | 95 | 1.6 | 545 | 1.9 | 100.0% |
| Adams | 2 | 0.4 | 9 | 1.8 | 3 | 0.6 | 16 | 3.1 | 10 | 1.9 | 40 | 1.6 | 7.3% |
| Alamosa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Arapahoe | 1 | 0.2 | 5 | 0.8 | 4 | 0.6 | 19 | 2.9 | 10 | 1.5 | 39 | 1.2 | 7.2% |
| Archuleta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Baca | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Bent | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Boulder | 2 | 0.6 | 4 | 1.2 | 2 | 0.6 | 11 | 3.3 | 18 | 5.4 | 37 | 2.2 | 6.8% |
| Broomfield | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.3 | 1 | 0.3 | 0.2% |
| Chaffee | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 10.2 | 2 | 2.0 | 0.4% |
| Cheyenne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Clear Creek | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 10.6 | 0 | 0.0 | 1 | 2.1 | 0.2% |
| Conejos | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Costilla | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Crowley | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Custer | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Delta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.2 | 1 | 0.6 | 0.2% |
| Denver | 0 | 0.0 | 12 | 1.7 | 5 | 0.7 | 92 | 13.0 | 19 | 2.6 | 128 | 3.6 | 23.5% |
| Dolores | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Douglas | 2 | 0.6 | 3 | 0.9 | 0 | 0.0 | 7 | 2.0 | 0 | 0.0 | 12 | 0.7 | 2.2% |
| Eagle | 1 | 1.9 | 1 | 1.9 | 1 | 1.8 | 3 | 5.5 | 0 | 0.0 | 6 | 2.2 | 1.1% |
| El Paso | 2 | 0.3 | 12 | 1.7 | 10 | 1.4 | 127 | 17.5 | 3 | 0.4 | 154 | 4.3 | 28.3% |
| Elbert | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 7.6 | 2 | 1.5 | 0.4% |
| Fremont | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 14 | 28.9 | 0 | 0.0 | 14 | 5.8 | 2.6% |
| Garfield | 0 | 0.0 | 1 | 1.7 | 0 | 0.0 | 0 | 0.0 | 1 | 1.6 | 2 | 0.7 | 0.4% |
| Gilpin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Grand | 1 | 6.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.3 | 0.2% |
| Gunnison | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Hinsdale | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Huerfano | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 14.7 | 1 | 2.9 | 0.2% |
| Jackson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jefferson | 1 | 0.2 | 2 | 0.3 | 2 | 0.3 | 17 | 2.9 | 10 | 1.7 | 32 | 1.1 | 5.9% |
| Kiowa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Kit Carson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| La Plata | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.8 | 0 | 0.0 | 1 | 0.4 | 0.2% |
| Lake | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Larimer | 0 | 0.0 | 3 | 0.9 | 1 | 0.3 | 1 | 0.3 | 1 | 0.3 | 6 | 0.3 | 1.1% |
| Las Animas | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Lincoln | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Logan | 1 | 4.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.9 | 0.2% |
| Mesa | 2 | 1.3 | 1 | 0.7 | 0 | 0.0 | 1 | 0.6 | 0 | 0.0 | 4 | 0.5 | 0.7% |
| Mineral | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Moffat | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Montezuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.9 | 0 | 0.0 | 1 | 0.8 | 0.2% |
| Montrose | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Morgan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.4 | 0 | 0.0 | 1 | 0.7 | 0.2% |
| Otero | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Ouray | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Park | 1 | 6.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.2 | 0.2% |
| Phillips | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Pitkin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prowers | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 8.3 | 1 | 1.7 | 0.2% |
| Pueblo | 2 | 1.2 | 7 | 4.2 | 3 | 1.8 | 9 | 5.4 | 14 | 8.3 | 35 | 4.2 | 6.4% |
| Rio Blanco | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Rio Grande | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Routt | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 20.4 | 0 | 0.0 | 5 | 4.1 | 0.9% |
| Saguache | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Juan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Miguel | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Sedgwick | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Summit | 2 | 6.5 | 1 | 3.2 | 0 | 0.0 | 1 | 3.2 | 0 | 0.0 | 4 | 2.6 | 0.7% |
| Teller | 0 | 0.0 | 1 | 4.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.8 | 0.2% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Washington | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Weld | 3 | 1.0 | 1 | 0.3 | 0 | 0.0 | 2 | 0.6 | 1 | 0.3 | 7 | 0.5 | 1.3% |
| Yuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prison | 0 | --- | 0 | --- | 0 | --- | 3 | --- | 0 | --- | 3 | --- | 0.6% |
| Unknown | 0 | --- | 1 | --- | 0 | --- | 0 | --- | 0 | --- | 1 | --- | 0.2% |

### Table 2.1: Reported acute hepatitis B cases and rate per 100,000, 2011-2020

| Measure | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 23 | 25 | 23 | 29 | 29 | 28 | 32 | 22 | 23 | 12 |
| Rate | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 0.4 | 0.4 | 0.2 |

2011-2020 population estimates from the Colorado State Demography Office

### Table 2.2: Demographics of new acute hepatitis B cases, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Total** | 28 | 100.0% | 32 | 100.0% | 22 | 100.0% | 23 | 100.0% | 12 | 100.0% |
| **Gender*** | | | | | | | | | | |
| Female | 7 | 25.0% | 5 | 15.6% | 7 | 31.8% | 12 | 52.2% | 3 | 25.0% |
| Male | 21 | 75.0% | 27 | 84.4% | 15 | 68.2% | 10 | 43.5% | 9 | 75.0% |
| Transgender Woman | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 4.3% | 0 | 0.0% |
| Transgender Man | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unknown Gender | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| **Age Group** | | | | | | | | | | |
| 0-19 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 20-39 | 0 | 0.0% | 3 | 9.4% | 0 | 0.0% | 3 | 13.0% | 0 | 0.0% |
| 40-59 | 8 | 28.6% | 10 | 31.3% | 5 | 22.7% | 7 | 30.4% | 2 | 16.7% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 60-79 | 13 | 46.4% | 9 | 28.1% | 10 | 45.5% | 7 | 30.4% | 5 | 41.7% |
| 80-99 | 6 | 21.4% | 8 | 25.0% | 5 | 22.7% | 4 | 17.4% | 3 | 25.0% |
| Unknown | 1 | 3.6% | 2 | 6.3% | 2 | 9.1% | 1 | 4.3% | 0 | 0.0% |
| **Race/Ethnicity** | | | | | | | | | | |
| NH, Asian/Pacific Islander | 2 | 7.1% | 1 | 3.1% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| NH, Black/African American | 4 | 14.3% | 3 | 9.4% | 2 | 9.1% | 1 | 4.3% | 1 | 8.3% |
| Hispanic/Latino/a/x , all races | 3 | 10.7% | 6 | 18.8% | 5 | 22.7% | 5 | 21.7% | 3 | 25.0% |
| NH, Indigenous/Native American | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| NH, Multi Race | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| NH White | 18 | 64.3% | 19 | 59.4% | 15 | 68.2% | 17 | 73.9% | 6 | 50.0% |
| Unknown Race | 1 | 3.6% | 3 | 9.4% | 0 | 0.0% | 0 | 0.0% | 2 | 16.7% |
| **County Class**** | | | | | | | | | | |
| TGA | 20 | 71.4% | 21 | 65.6% | 11 | 50.0% | 14 | 60.9% | 9 | 75.0% |
| Homeless | 7 | 25.0% | 3 | 9.4% | 3 | 13.6% | 5 | 21.7% | 3 | 25.0% |
| Urban, non-TGA | 6 | 21.4% | 7 | 21.9% | 8 | 36.4% | 6 | 26.1% | 2 | 16.7% |
| Homeless | 1 | 3.6% | 1 | 3.1% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Rural | 1 | 3.6% | 3 | 9.4% | 3 | 13.6% | 1 | 4.3% | 0 | 0.0% |
| Homeless | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Prison | 1 | 3.6% | 1 | 3.1% | 0 | 0.0% | 2 | 8.7% | 0 | 0.0% |
| Unknown | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 8.3% |

*Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.
**Percentages for county class will not add to 100% as homeless cases are counted in overall county class cases.
TGA counties include: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson.
Urban, non-TGA counties include: El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.

### Table 2.3: New acute hepatitis B cases and rate per 100,000 by county, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| **Total** | 28 | 0.5 | 32 | 0.6 | 22 | 0.4 | 23 | 0.4 | 12 | 0.2 | 117 | 0.4 | 100.0% |
| Adams | 0 | 0.0 | 2 | 0.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 3 | 0.1 | 2.6% |
| Alamosa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Arapahoe | 4 | 0.6 | 5 | 0.8 | 2 | 0.3 | 3 | 0.5 | 0 | 0.0 | 14 | 0.4 | 12.0% |
| Archuleta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Baca | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Bent | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Boulder | 0 | 0.0 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 2 | 0.1 | 1.7% |
| Broomfield | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Chaffee | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Cheyenne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Clear Creek | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Conejos | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Costilla | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Crowley | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Custer | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Delta | 0 | 0.0 | 1 | 3.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.7 | 0.9% |
| Denver | 13 | 1.9 | 12 | 1.7 | 7 | 1.0 | 8 | 1.1 | 7 | 1.0 | 47 | 1.3 | 40.2% |
| Dolores | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Douglas | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 | 1 | 0.3 | 3 | 0.2 | 2.6% |
| Eagle | 0 | 0.0 | 1 | 1.9 | 1 | 1.8 | 0 | 0.0 | 0 | 0.0 | 2 | 0.7 | 1.7% |
| El Paso | 3 | 0.4 | 1 | 0.1 | 4 | 0.6 | 3 | 0.4 | 1 | 0.1 | 12 | 0.3 | 10.3% |
| Elbert | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Fremont | 0 | 0.0 | 0 | 0.0 | 1 | 2.1 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0.9% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Garfield | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.7 | 0 | 0.0 | 1 | 0.3 | 0.9% |
| Gilpin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Grand | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Gunnison | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Hinsdale | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Huerfano | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jackson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jefferson | 2 | 0.3 | 2 | 0.3 | 2 | 0.3 | 2 | 0.3 | 0 | 0.0 | 8 | 0.3 | 6.8% |
| Kiowa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Kit Carson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| La Plata | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Lake | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Larimer | 1 | 0.3 | 0 | 0.0 | 1 | 0.3 | 1 | 0.3 | 1 | 0.3 | 4 | 0.2 | 3.4% |
| Las Animas | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Lincoln | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Logan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Mesa | 0 | 0.0 | 3 | 2.0 | 1 | 0.6 | 1 | 0.6 | 0 | 0.0 | 5 | 0.7 | 4.3% |
| Mineral | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Moffat | 0 | 0.0 | 0 | 0.0 | 1 | 7.5 | 0 | 0.0 | 0 | 0.0 | 1 | 1.5 | 0.9% |
| Montezuma | 0 | 0.0 | 1 | 3.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.8 | 0.9% |
| Montrose | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Morgan | 1 | 3.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.7 | 0.9% |
| Otero | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Ouray | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Park | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Phillips | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Pitkin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Prowers | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Pueblo | 1 | 0.6 | 1 | 0.6 | 0 | 0.0 | 1 | 0.6 | 0 | 0.0 | 3 | 0.4 | 2.6% |
| Rio Blanco | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Rio Grande | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Routt | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Saguache | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Juan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Miguel | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Sedgwick | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Summit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Teller | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Washington | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Weld | 1 | 0.3 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 3 | 0.2 | 2.6% |
| Yuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prison | 1 | --- | 1 | --- | 0 | --- | 2 | --- | 0 | --- | 4 | --- | 3.4% |
| Unknown | 0 | --- | 0 | --- | 0 | --- | 0 | --- | 1 | --- | 1 | --- | 0.9% |

**Table 3.1: Reported chronic hepatitis B cases and rate per 100,000, 2011-2020**

| Measure | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 282 | 256 | 285 | 328 | 331 | 327 | 275 | 293 | 240 | 176 |
| Rate | 5.5 | 4.9 | 5.4 | 6.1 | 6.1 | 5.9 | 4.9 | 5.2 | 4.2 | 3.0 |

2011-2020 population estimates from the Colorado State Demography Office

### Table 3.2: Demographics of new chronic hepatitis B cases, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Total** | 327 | 100.0% | 275 | 100.0% | 293 | 100.0% | 240 | 100.0% | 176 | 100.0% |
| **Gender*** | | | | | | | | | | |
| Female | 157 | 48.0% | 122 | 44.4% | 119 | 40.6% | 93 | 38.8% | 75 | 42.6% |
| Male | 170 | 52.0% | 151 | 54.9% | 174 | 59.4% | 146 | 60.8% | 101 | 57.4% |
| Transgender Woman | 0 | 0.0% | 2 | 0.7% | 0 | 0.0% | 1 | 0.4% | 0 | 0.0% |
| Transgender Man | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unknown Gender | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| **Age Group** | | | | | | | | | | |
| 0-19 | 17 | 5.2% | 7 | 2.5% | 11 | 3.8% | 7 | 2.9% | 2 | 1.1% |
| 20-39 | 61 | 18.7% | 40 | 14.5% | 44 | 15.0% | 38 | 15.8% | 27 | 15.3% |
| 40-59 | 89 | 27.2% | 91 | 33.1% | 78 | 26.6% | 63 | 26.3% | 57 | 32.4% |
| 60-79 | 67 | 20.5% | 47 | 17.1% | 65 | 22.2% | 49 | 20.4% | 31 | 17.6% |
| 80-99 | 44 | 13.5% | 43 | 15.6% | 49 | 16.7% | 46 | 19.2% | 23 | 13.1% |
| Unknown | 35 | 10.7% | 31 | 11.3% | 32 | 10.9% | 23 | 9.6% | 19 | 10.8% |
| **Race/Ethnicity** | | | | | | | | | | |
| NH, Asian/Pacific Islander | 88 | 26.9% | 82 | 29.8% | 86 | 29.4% | 48 | 20.0% | 34 | 19.3% |
| NH, Black/African American | 53 | 16.2% | 39 | 14.2% | 41 | 14.0% | 37 | 15.4% | 19 | 10.8% |
| Hispanic/Latino/a/x , all races | 8 | 2.4% | 12 | 4.4% | 18 | 6.1% | 17 | 7.1% | 5 | 2.8% |
| NH, Indigenous/Native American | 0 | 0.0% | 1 | 0.4% | 1 | 0.3% | 2 | 0.8% | 0 | 0.0% |
| NH, Multi Race | 4 | 1.2% | 2 | 0.7% | 3 | 1.0% | 3 | 1.3% | 3 | 1.7% |
| NH White | 40 | 12.2% | 47 | 17.1% | 52 | 17.7% | 43 | 17.9% | 29 | 16.5% |
| Unknown Race | 134 | 41.0% | 92 | 33.5% | 92 | 31.4% | 90 | 37.5% | 86 | 48.9% |

| County Class** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TGA | 219 | 67.0% | 166 | 60.4% | 176 | 60.1% | 133 | 55.4% | 114 | 64.8% |
| Homeless | 2 | 0.6% | 3 | 1.1% | 4 | 1.4% | 3 | 1.3% | 1 | 0.6% |
| Urban, non-TGA | 83 | 25.4% | 79 | 28.7% | 82 | 28.0% | 74 | 30.8% | 45 | 25.6% |
| Homeless | 2 | 0.6% | 0 | 0.0% | 0 | 0.0% | 1 | 0.4% | 0 | 0.0% |
| Rural | 18 | 5.5% | 20 | 7.3% | 18 | 6.1% | 15 | 6.3% | 7 | 4.0% |
| Homeless | 1 | 0.3% | 1 | 0.4% | 2 | 0.7% | 0 | 0.0% | 0 | 0.0% |
| Prison | 5 | 1.5% | 4 | 1.5% | 17 | 5.8% | 16 | 6.7% | 3 | 1.7% |
| Unknown | 2 | 0.6% | 6 | 2.2% | 0 | 0.0% | 2 | 0.8% | 7 | 4.0% |

*Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.
** Percentages for county class will not add to 100% as homeless cases are counted in overall county class cases.
TGA counties include: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson.
Urban, non-TGA counties include: El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.

### Table 3.3: New chronic hepatitis B cases and rate per 100,000 by county, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Total | 327 | 5.9 | 275 | 4.9 | 293 | 5.2 | 240 | 4.2 | 176 | 3.0 | 1,311 | 4.6 | 100.0% |
| Adams | 34 | 6.8 | 29 | 5.8 | 26 | 5.1 | 22 | 4.3 | 14 | 2.7 | 125 | 4.9 | 9.5% |
| Alamosa | 0 | 0.0 | 0 | 0.0 | 2 | 12.4 | 2 | 12.3 | 0 | 0.0 | 4 | 4.9 | 0.3% |
| Arapahoe | 71 | 11.1 | 61 | 9.5 | 62 | 9.5 | 44 | 6.7 | 36 | 5.5 | 274 | 8.5 | 20.9% |
| Archuleta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Baca | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Bent | 0 | 0.0 | 1 | 16.8 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.4 | 0.1% |
| Boulder | 18 | 5.6 | 12 | 3.7 | 20 | 6.1 | 8 | 2.4 | 11 | 3.3 | 69 | 4.2 | 5.3% |
| Broomfield | 1 | 1.5 | 1 | 1.4 | 3 | 4.2 | 4 | 5.5 | 4 | 5.4 | 13 | 3.6 | 1.0% |
| Chaffee | 0 | 0.0 | 1 | 5.3 | 1 | 5.2 | 0 | 0.0 | 0 | 0.0 | 2 | 2.1 | 0.2% |
| Cheyenne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Clear Creek | 0 | 0.0 | 0 | 0.0 | 1 | 10.6 | 0 | 0.0 | 0 | 0.0 | 1 | 2.1 | 0.1% |
| Conejos | 0 | 0.0 | 2 | 25.8 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 5.2 | 0.2% |
| Costilla | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Crowley | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Custer | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 21.5 | 0 | 0.0 | 1 | 4.3 | 0.1% |
| Delta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.2 | 1 | 3.2 | 2 | 1.3 | 0.2% |
| Denver | 68 | 9.9 | 48 | 6.9 | 50 | 7.1 | 29 | 4.1 | 41 | 5.7 | 236 | 6.7 | 18.0% |
| Dolores | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Douglas | 14 | 4.3 | 12 | 3.6 | 16 | 4.7 | 17 | 4.8 | 9 | 2.5 | 68 | 4.0 | 5.2% |
| Eagle | 2 | 3.8 | 3 | 5.6 | 0 | 0.0 | 1 | 1.8 | 0 | 0.0 | 6 | 2.2 | 0.5% |
| El Paso | 30 | 4.3 | 36 | 5.1 | 33 | 4.6 | 35 | 4.8 | 18 | 2.5 | 152 | 4.3 | 11.6% |
| Elbert | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Fremont | 4 | 8.5 | 1 | 2.1 | 0 | 0.0 | 0 | 0.0 | 1 | 2.0 | 6 | 2.5 | 0.5% |
| Garfield | 1 | 1.7 | 2 | 3.4 | 1 | 1.7 | 2 | 3.3 | 1 | 1.6 | 7 | 2.3 | 0.5% |
| Gilpin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Grand | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Gunnison | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Hinsdale | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Huerfano | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jackson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jefferson | 31 | 5.4 | 15 | 2.6 | 19 | 3.3 | 17 | 2.9 | 10 | 1.7 | 92 | 3.2 | 7.0% |
| Kiowa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Kit Carson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| La Plata | 3 | 5.5 | 1 | 1.8 | 2 | 3.6 | 2 | 3.6 | 0 | 0.0 | 8 | 2.9 | 0.6% |
| Lake | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Larimer | 10 | 2.9 | 11 | 3.2 | 13 | 3.7 | 9 | 2.5 | 5 | 1.4 | 48 | 2.8 | 3.7% |
| Las Animas | 0 | 0.0 | 0 | 0.0 | 1 | 6.8 | 0 | 0.0 | 0 | 0.0 | 1 | 1.4 | 0.1% |
| Lincoln | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Logan | 0 | 0.0 | 1 | 4.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.9 | 0.1% |
| Mesa | 1 | 0.7 | 7 | 4.6 | 3 | 1.9 | 3 | 1.9 | 1 | 0.6 | 15 | 2.0 | 1.1% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Mineral | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Moffat | 0 | 0.0 | 0 | 0.0 | 1 | 7.5 | 0 | 0.0 | 0 | 0.0 | 1 | 1.5 | 0.1% |
| Montezuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Montrose | 0 | 0.0 | 0 | 0.0 | 1 | 2.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.5 | 0.1% |
| Morgan | 3 | 10.6 | 6 | 21.1 | 2 | 6.9 | 1 | 3.4 | 1 | 3.4 | 13 | 9.1 | 1.0% |
| Otero | 0 | 0.0 | 0 | 0.0 | 1 | 5.3 | 1 | 5.3 | 0 | 0.0 | 2 | 2.1 | 0.2% |
| Ouray | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Park | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Phillips | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Pitkin | 0 | 0.0 | 0 | 0.0 | 1 | 5.7 | 0 | 0.0 | 0 | 0.0 | 1 | 1.1 | 0.1% |
| Prowers | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 8.3 | 0 | 0.0 | 1 | 1.7 | 0.1% |
| Pueblo | 5 | 3.0 | 3 | 1.8 | 3 | 1.8 | 8 | 4.8 | 1 | 0.6 | 20 | 2.4 | 1.5% |
| Rio Blanco | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 15.3 | 0 | 0.0 | 1 | 3.1 | 0.1% |
| Rio Grande | 0 | 0.0 | 1 | 8.6 | 2 | 17.2 | 0 | 0.0 | 0 | 0.0 | 3 | 5.1 | 0.2% |
| Routt | 1 | 4.2 | 1 | 4.1 | 2 | 8.2 | 1 | 4.1 | 0 | 0.0 | 5 | 4.1 | 0.4% |
| Saguache | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 15.6 | 1 | 3.1 | 0.1% |
| San Juan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Miguel | 1 | 12.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 2.5 | 0.1% |
| Sedgwick | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Summit | 2 | 6.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 6.4 | 4 | 2.6 | 0.3% |
| Teller | 1 | 4.2 | 0 | 0.0 | 0 | 0.0 | 1 | 4.1 | 0 | 0.0 | 2 | 1.7 | 0.2% |
| Washington | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Weld | 19 | 6.5 | 10 | 3.3 | 10 | 3.2 | 11 | 3.4 | 9 | 2.7 | 59 | 3.8 | 4.5% |
| Yuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prison | 5 | --- | 4 | --- | 17 | --- | 16 | --- | 3 | --- | 45 | --- | 3.4% |
| Unknown | 2 | --- | 6 | --- | 0 | --- | 2 | --- | 7 | --- | 17 | --- | 1.3% |

### Table 4.1: Reported acute hepatitis C cases and rate per 100,000, 2011-2020

| Measure | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 32 | 42 | 23 | 32 | 39 | 35 | 44 | 47 | 52 | 10 |
| Rate | 0.6 | 0.8 | 0.4 | 0.6 | 0.7 | 0.6 | 0.8 | 0.8 | 0.9 | 0.2 |

2011-2020 population estimates from the Colorado State Demography Office

### Table 4.2: Demographics of new acute hepatitis C cases, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Total** | 35 | 100.0% | 44 | 100.0% | 47 | 100.0% | 52 | 100.0% | 10 | 100.0% |
| **Gender*** | | | | | | | | | | |
| Female | 16 | 45.7% | 15 | 34.1% | 14 | 29.8% | 16 | 30.8% | 3 | 30.0% |
| Male | 19 | 54.3% | 29 | 65.9% | 33 | 70.2% | 36 | 69.2% | 7 | 70.0% |
| Transgender Woman | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Transgender Man | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unknown Gender | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| **Age Group** | | | | | | | | | | |
| 0-19 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 1.9% | 0 | 0.0% |
| 20-39 | 12 | 34.3% | 29 | 65.9% | 28 | 59.6% | 15 | 28.8% | 6 | 60.0% |
| 40-59 | 10 | 28.6% | 10 | 22.7% | 10 | 21.3% | 17 | 32.7% | 3 | 30.0% |
| 60-79 | 11 | 31.4% | 2 | 4.5% | 6 | 12.8% | 8 | 15.4% | 1 | 10.0% |
| 80-99 | 2 | 5.7% | 2 | 4.5% | 2 | 4.3% | 8 | 15.4% | 0 | 0.0% |
| Unknown | 0 | 0.0% | 1 | 2.3% | 0 | 0.0% | 3 | 5.8% | 0 | 0.0% |
| **Race/Ethnicity** | | | | | | | | | | |
| NH, Asian/Pacific Islander | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 1.9% | 0 | 0.0% |
| NH, Black/African American | 0 | 0.0% | 1 | 2.3% | 0 | 0.0% | 3 | 5.8% | 1 | 10.0% |
| Hispanic/Latino/a/x , all races | 9 | 25.7% | 8 | 18.2% | 13 | 27.7% | 11 | 21.2% | 4 | 40.0% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NH, Indigenous/Native American | 1 | 2.9% | 0 | 0.0% | 1 | 2.1% | 1 | 1.9% | 0 | 0.0% |
| NH, Multi Race | 1 | 2.9% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| NH White | 22 | 62.9% | 34 | 77.3% | 31 | 66.0% | 36 | 69.2% | 5 | 50.0% |
| Unknown Race | 2 | 5.7% | 1 | 2.3% | 2 | 4.3% | 0 | 0.0% | 0 | 0.0% |
| **County Class** | | | | | | | | | | |
| TGA | 13 | 37.1% | 29 | 65.9% | 22 | 46.8% | 28 | 53.8% | 5 | 50.0% |
| Homeless | 4 | 11.4% | 6 | 13.6% | 3 | 6.4% | 10 | 19.2% | 1 | 10.0% |
| Urban, non-TGA | 13 | 37.1% | 8 | 18.2% | 16 | 34.0% | 14 | 26.9% | 2 | 20.0% |
| Homeless | 0 | 0.0% | 1 | 2.3% | 2 | 4.3% | 3 | 5.8% | 0 | 0.0% |
| Rural | 7 | 20.0% | 5 | 11.4% | 5 | 10.6% | 4 | 7.7% | 0 | 0.0% |
| Homeless | 0 | 0.0% | 1 | 2.3% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Prison | 2 | 5.7% | 2 | 4.5% | 4 | 8.5% | 6 | 11.5% | 3 | 30.0% |
| Unknown | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |

*Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.
**Percentages for county class will not add to 100% as homeless cases are counted in overall county class cases.
TGA counties include: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson.
Urban, non-TGA counties include: El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.

### Table 4.3: New acute hepatitis C cases and rate per 100,000 by county, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| **Total** | 35 | 0.6 | 44 | 0.8 | 47 | 0.8 | 52 | 0.9 | 10 | 0.2 | 188 | 0.7 | 100.0% |
| Adams | 2 | 0.4 | 3 | 0.6 | 7 | 1.4 | 1 | 0.2 | 1 | 0.2 | 14 | 0.6 | 7.4% |
| Alamosa | 1 | 6.3 | 0 | 0.0 | 0 | 0.0 | 1 | 6.2 | 0 | 0.0 | 2 | 2.5 | 1.1% |
| Arapahoe | 1 | 0.2 | 5 | 0.8 | 2 | 0.3 | 3 | 0.5 | 0 | 0.0 | 11 | 0.3 | 5.9% |
| Archuleta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Baca | 0 | 0.0 | 1 | 28.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 5.7 | 0.5% |
| Bent | 1 | 17.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.5 | 0.5% |
| Boulder | 0 | 0.0 | 1 | 0.3 | 3 | 0.9 | 0 | 0.0 | 0 | 0.0 | 4 | 0.2 | 2.1% |
| Broomfield | 0 | 0.0 | 1 | 1.4 | 0 | 0.0 | 1 | 1.4 | 0 | 0.0 | 2 | 0.6 | 1.1% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Chaffee | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 5.2 | 0 | 0.0 | 1 | 1.0 | 0.5% |
| Cheyenne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Clear Creek | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Conejos | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Costilla | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Crowley | 1 | 17.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 3.4 | 0.5% |
| Custer | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Delta | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Denver | 8 | 1.2 | 17 | 2.5 | 9 | 1.3 | 20 | 2.8 | 4 | 0.6 | 58 | 1.7 | 30.9% |
| Dolores | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Douglas | 1 | 0.3 | 1 | 0.3 | 2 | 0.6 | 2 | 0.6 | 0 | 0.0 | 6 | 0.4 | 3.2% |
| Eagle | 0 | 0.0 | 1 | 1.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0.5% |
| El Paso | 2 | 0.3 | 4 | 0.6 | 5 | 0.7 | 9 | 1.2 | 0 | 0.0 | 20 | 0.6 | 10.6% |
| Elbert | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Fremont | 0 | 0.0 | 0 | 0.0 | 1 | 2.1 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0.5% |
| Garfield | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Gilpin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Grand | 0 | 0.0 | 1 | 6.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.3 | 0.5% |
| Gunnison | 1 | 6.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.2 | 0.5% |
| Hinsdale | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Huerfano | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jackson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Jefferson | 1 | 0.2 | 2 | 0.3 | 2 | 0.3 | 1 | 0.2 | 0 | 0.0 | 6 | 0.2 | 3.2% |
| Kiowa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Kit Carson | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| La Plata | 0 | 0.0 | 0 | 0.0 | 2 | 3.6 | 0 | 0.0 | 0 | 0.0 | 2 | 0.7 | 1.1% |
| Lake | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Larimer | 4 | 1.2 | 0 | 0.0 | 3 | 0.9 | 1 | 0.3 | 0 | 0.0 | 8 | 0.5 | 4.3% |
| Las Animas | 0 | 0.0 | 0 | 0.0 | 1 | 6.8 | 0 | 0.0 | 0 | 0.0 | 1 | 1.4 | 0.5% |
| Lincoln | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Logan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Mesa | 0 | 0.0 | 2 | 1.3 | 3 | 1.9 | 1 | 0.6 | 1 | 0.6 | 7 | 0.9 | 3.7% |
| Mineral | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Moffat | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 7.5 | 0 | 0.0 | 1 | 1.5 | 0.5% |
| Montezuma | 0 | 0.0 | 0 | 0.0 | 1 | 3.9 | 0 | 0.0 | 0 | 0.0 | 1 | 0.8 | 0.5% |
| Montrose | 1 | 2.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.5 | 0.5% |
| Morgan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Otero | 0 | 0.0 | 1 | 5.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.1 | 0.5% |
| Ouray | 1 | 21.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 4.2 | 0.5% |
| Park | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Phillips | 1 | 22.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 4.4 | 0.5% |
| Pitkin | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prowers | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 8.3 | 0 | 0.0 | 1 | 1.7 | 0.5% |
| Pueblo | 6 | 3.7 | 1 | 0.6 | 1 | 0.6 | 3 | 1.8 | 0 | 0.0 | 11 | 1.3 | 5.9% |
| Rio Blanco | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Rio Grande | 0 | 0.0 | 1 | 8.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.7 | 0.5% |
| Routt | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Saguache | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Juan | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| San Miguel | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Sedgwick | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Summit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Teller | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Washington | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Weld | 1 | 0.3 | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 1 | 0.3 | 3 | 0.2 | 1.6% |
| Yuma | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0% |
| Prison | 2 | --- | 2 | --- | 4 | --- | 6 | --- | 3 | --- | 17 | --- | 9.0% |
| Unknown | 0 | --- | 0 | --- | 0 | --- | 0 | --- | 0 | --- | 0 | --- | 0.0% |

### Table 5.1: Reported chronic hepatitis C cases and rate per 100,000, 2011-2020

| Measure | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 2,903 | 2,977 | 2,995 | 3,677 | 3,623 | 2,974 | 2,925 | 3,070 | 2,675 | 1,852 |
| Rate | 56.7 | 57.3 | 56.8 | 68.8 | 66.5 | 53.8 | 52.2 | 54.1 | 46.6 | 32.0 |

2011-2020 population estimates from the Colorado State Demography Office

### Table 5.2: Demographics of new chronic hepatitis C cases, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Total** | 2,974 | 100.0% | 2,925 | 100.0% | 3,070 | 100.0% | 2,675 | 100.0% | 1,852 | 100.0% |
| **Gender*** | | | | | | | | | | |
| Female | 911 | 30.6% | 935 | 32.0% | 935 | 30.5% | 780 | 29.2% | 540 | 29.2% |
| Male | 2,062 | 69.3% | 1,985 | 67.9% | 2,129 | 69.3% | 1,891 | 70.7% | 1,306 | 70.5% |
| Transgender Woman | 0 | 0.0% | 3 | 0.1% | 4 | 0.1% | 1 | 0.0% | 0 | 0.0% |
| Transgender Man | 0 | 0.0% | 0 | 0.0% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unknown Gender | 1 | 0.0% | 2 | 0.1% | 1 | 0.0% | 3 | 0.1% | 6 | 0.3% |
| **Age Group** | | | | | | | | | | |
| 0-19 | 28 | 0.9% | 7 | 0.2% | 19 | 0.6% | 13 | 0.5% | 11 | 0.6% |
| 20-39 | 504 | 16.9% | 513 | 17.5% | 587 | 19.1% | 497 | 18.6% | 333 | 18.0% |
| 40-59 | 571 | 19.2% | 637 | 21.8% | 778 | 25.3% | 707 | 26.4% | 514 | 27.8% |
| 60-79 | 518 | 17.4% | 442 | 15.1% | 486 | 15.8% | 425 | 15.9% | 307 | 16.6% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 80-99 | 730 | 24.5% | 663 | 22.7% | 591 | 19.3% | 497 | 18.6% | 307 | 16.6% |
| Unknown | 534 | 18.0% | 576 | 19.7% | 511 | 16.6% | 447 | 16.7% | 309 | 16.7% |
| **County Class**** | | | | | | | | | | |
| TGA | 1,075 | 36.1% | 1,061 | 36.3% | 1,056 | 34.4% | 885 | 33.1% | 676 | 36.5% |
| Homeless | 156 | 5.2% | 154 | 5.3% | 177 | 5.8% | 159 | 5.9% | 116 | 6.3% |
| Urban, non-TGA | 863 | 29.0% | 858 | 29.3% | 846 | 27.6% | 716 | 26.8% | 488 | 26.3% |
| Homeless | 55 | 1.8% | 58 | 2.0% | 53 | 1.7% | 44 | 1.6% | 16 | 0.9% |
| Rural | 390 | 13.1% | 365 | 12.5% | 353 | 11.5% | 349 | 13.0% | 234 | 12.6% |
| Homeless | 11 | 0.4% | 6 | 0.2% | 12 | 0.4% | 10 | 0.4% | 6 | 0.3% |
| Prison | 470 | 15.8% | 508 | 17.4% | 747 | 24.3% | 666 | 24.9% | 335 | 18.1% |
| Unknown | 176 | 5.9% | 133 | 4.5% | 68 | 2.2% | 59 | 2.2% | 119 | 6.4% |

*Gender identity is not known for all diagnoses. The gender reported could be sex at birth or an individual's gender identity.
**Percentages for county class will not add to 100% as homeless cases are counted in overall county class cases.
Data on race and ethnicity are excluded for chronic hepatitis C cases due to large proportions of missing/unknown data.
TGA counties include: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson.
Urban, non-TGA counties include: El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.

### Table 5.3: New chronic hepatitis C cases and rate per 100,000 by county, 2016-2020

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| **Total** | 2,974 | 53.8 | 2,925 | 52.2 | 3,070 | 54.1 | 2,675 | 46.6 | 1,852 | 32.0 | 13,496 | 47.8 | 100.0% |
| Adams | 171 | 34.3 | 162 | 32.2 | 151 | 29.5 | 159 | 30.8 | 105 | 20.2 | 748 | 29.4 | 5.5% |
| Alamosa | 16 | 100.4 | 16 | 99.7 | 23 | 142.1 | 13 | 80.0 | 12 | 73.5 | 80 | 99.1 | 0.6% |
| Arapahoe | 211 | 33.1 | 202 | 31.4 | 190 | 29.2 | 156 | 23.9 | 127 | 19.4 | 886 | 27.4 | 6.6% |
| Archuleta | 9 | 72.8 | 7 | 54.9 | 10 | 76.7 | 9 | 68.2 | 10 | 74.8 | 45 | 69.5 | 0.3% |
| Baca | 3 | 85.5 | 3 | 85.1 | 2 | 56.4 | 0 | 0.0 | 1 | 28.8 | 9 | 51.2 | 0.1% |
| Bent | 11 | 191.2 | 7 | 117.3 | 13 | 217.4 | 9 | 150.5 | 5 | 89.5 | 45 | 153.2 | 0.3% |
| Boulder | 81 | 25.0 | 95 | 29.2 | 84 | 25.6 | 67 | 20.4 | 46 | 13.9 | 373 | 22.8 | 2.8% |
| Broomfield | 8 | 11.8 | 17 | 24.4 | 15 | 21.0 | 15 | 20.6 | 4 | 5.4 | 59 | 16.7 | 0.4% |
| Chaffee | 10 | 54.0 | 4 | 21.1 | 17 | 88.3 | 11 | 56.7 | 3 | 15.4 | 45 | 47.1 | 0.3% |
| Cheyenne | 0 | 0.0 | 1 | 56.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 11.2 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Clear Creek | 5 | 54.1 | 8 | 84.9 | 4 | 42.6 | 3 | 31.9 | 4 | 42.6 | 24 | 51.2 | 0.2% |
| Conejos | 2 | 25.5 | 1 | 12.9 | 3 | 39.2 | 7 | 92.7 | 5 | 67.2 | 18 | 47.5 | 0.1% |
| Costilla | 7 | 199.1 | 6 | 170.6 | 3 | 85.4 | 5 | 142.8 | 1 | 28.7 | 22 | 125.3 | 0.2% |
| Crowley | 3 | 51.4 | 5 | 85.7 | 0 | 0.0 | 1 | 17.1 | 4 | 68.5 | 13 | 44.5 | 0.1% |
| Custer | 6 | 133.4 | 3 | 66.1 | 1 | 21.8 | 3 | 64.6 | 0 | 0.0 | 13 | 57.2 | 0.1% |
| Delta | 17 | 55.8 | 25 | 81.4 | 20 | 64.4 | 18 | 57.6 | 16 | 51.3 | 96 | 62.1 | 0.7% |
| Denver | 469 | 68.3 | 451 | 65.1 | 452 | 64.3 | 397 | 55.9 | 313 | 43.6 | 2,082 | 59.4 | 15.4% |
| Dolores | 2 | 95.7 | 1 | 48.0 | 1 | 47.8 | 2 | 95.9 | 1 | 48.0 | 7 | 67.1 | 0.1% |
| Douglas | 38 | 11.6 | 58 | 17.3 | 56 | 16.3 | 49 | 14.0 | 29 | 8.1 | 230 | 13.4 | 1.7% |
| Eagle | 15 | 28.3 | 14 | 26.1 | 8 | 14.8 | 13 | 23.7 | 5 | 9.0 | 55 | 20.4 | 0.4% |
| El Paso | 321 | 46.4 | 305 | 43.3 | 344 | 47.9 | 257 | 35.4 | 172 | 23.5 | 1,399 | 39.3 | 10.4% |
| Elbert | 2 | 8.2 | 7 | 28.1 | 2 | 7.9 | 8 | 31.2 | 5 | 19.1 | 24 | 18.9 | 0.2% |
| Fremont | 32 | 67.7 | 21 | 44.1 | 20 | 41.7 | 33 | 68.2 | 18 | 36.8 | 124 | 51.7 | 0.9% |
| Garfield | 28 | 48.1 | 33 | 56.1 | 35 | 58.6 | 26 | 42.9 | 14 | 22.7 | 136 | 45.7 | 1.0% |
| Gilpin | 6 | 107.6 | 1 | 17.7 | 1 | 17.5 | 1 | 17.4 | 4 | 69.0 | 13 | 45.8 | 0.1% |
| Grand | 2 | 13.3 | 3 | 19.8 | 4 | 26.2 | 4 | 26.0 | 3 | 19.1 | 16 | 20.9 | 0.1% |
| Gunnison | 9 | 56.0 | 7 | 42.5 | 6 | 36.0 | 4 | 23.6 | 4 | 23.6 | 30 | 36.3 | 0.2% |
| Hinsdale | 1 | 123.8 | 0 | 0.0 | 1 | 125.2 | 0 | 0.0 | 0 | 0.0 | 2 | 49.8 | 0.0% |
| Huerfano | 3 | 44.6 | 0 | 0.0 | 4 | 59.2 | 9 | 132.8 | 0 | 0.0 | 16 | 47.3 | 0.1% |
| Jackson | 0 | 0.0 | 1 | 72.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 14.5 | 0.0% |
| Jefferson | 178 | 31.1 | 171 | 29.7 | 192 | 33.1 | 109 | 18.7 | 98 | 16.8 | 748 | 25.9 | 5.5% |
| Kiowa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 68.6 | 1 | 68.6 | 2 | 27.4 | 0.0% |
| Kit Carson | 2 | 26.7 | 0 | 0.0 | 1 | 13.7 | 2 | 27.8 | 0 | 0.0 | 5 | 13.7 | 0.0% |
| La Plata | 29 | 52.8 | 27 | 49.1 | 17 | 30.5 | 30 | 54.0 | 13 | 23.4 | 116 | 42.0 | 0.9% |
| Lake | 5 | 69.1 | 3 | 40.8 | 2 | 27.3 | 2 | 26.5 | 4 | 53.9 | 16 | 43.5 | 0.1% |
| Larimer | 125 | 36.9 | 108 | 31.4 | 127 | 36.2 | 106 | 29.7 | 73 | 20.3 | 539 | 30.9 | 4.0% |
| Las Animas | 12 | 80.5 | 5 | 33.8 | 7 | 47.5 | 17 | 116.1 | 8 | 54.9 | 49 | 66.6 | 0.4% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Lincoln | 1 | 17.9 | 2 | 35.7 | 2 | 35.6 | 4 | 70.9 | 2 | 35.3 | 11 | 39.1 | 0.1% |
| Logan | 3 | 13.8 | 5 | 23.0 | 9 | 41.6 | 3 | 13.9 | 6 | 28.0 | 26 | 24.1 | 0.2% |
| Mesa | 86 | 57.2 | 105 | 69.0 | 83 | 53.9 | 69 | 44.5 | 66 | 42.3 | 409 | 53.4 | 3.0% |
| Mineral | 1 | 129.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 25.9 | 0.0% |
| Moffat | 18 | 135.7 | 8 | 60.5 | 6 | 45.1 | 4 | 29.9 | 5 | 37.6 | 41 | 61.8 | 0.3% |
| Montezuma | 19 | 74.4 | 13 | 50.9 | 21 | 82.0 | 17 | 66.1 | 14 | 54.1 | 84 | 65.5 | 0.6% |
| Montrose | 19 | 45.7 | 27 | 64.6 | 21 | 49.9 | 21 | 49.4 | 15 | 35.0 | 103 | 48.9 | 0.8% |
| Morgan | 5 | 17.7 | 13 | 45.7 | 9 | 31.1 | 6 | 20.6 | 0 | 0.0 | 33 | 23.0 | 0.2% |
| Otero | 14 | 74.5 | 20 | 106.6 | 14 | 74.6 | 10 | 53.4 | 6 | 32.1 | 64 | 68.2 | 0.5% |
| Ouray | 3 | 63.6 | 0 | 0.0 | 0 | 0.0 | 1 | 20.4 | 4 | 82.0 | 8 | 33.2 | 0.1% |
| Park | 9 | 54.7 | 5 | 29.7 | 9 | 51.8 | 6 | 34.3 | 6 | 34.4 | 35 | 41.0 | 0.3% |
| Phillips | 2 | 44.4 | 1 | 22.2 | 2 | 44.3 | 2 | 44.2 | 2 | 44.2 | 9 | 39.8 | 0.1% |
| Pitkin | 3 | 17.0 | 8 | 45.3 | 2 | 11.3 | 4 | 23.0 | 0 | 0.0 | 17 | 19.3 | 0.1% |
| Prowers | 5 | 42.1 | 1 | 8.4 | 4 | 33.4 | 5 | 41.6 | 8 | 66.6 | 23 | 38.4 | 0.2% |
| Pueblo | 147 | 89.6 | 148 | 89.4 | 120 | 72.0 | 124 | 74.0 | 75 | 44.5 | 614 | 73.9 | 4.5% |
| Rio Blanco | 1 | 15.1 | 0 | 0.0 | 0 | 0.0 | 2 | 30.6 | 4 | 61.2 | 7 | 21.4 | 0.1% |
| Rio Grande | 11 | 93.8 | 12 | 102.7 | 15 | 128.8 | 6 | 51.7 | 1 | 8.7 | 45 | 77.1 | 0.3% |
| Routt | 8 | 33.4 | 8 | 33.1 | 10 | 41.1 | 9 | 36.7 | 8 | 32.2 | 43 | 35.3 | 0.3% |
| Saguache | 2 | 32.3 | 2 | 32.2 | 2 | 31.9 | 3 | 47.1 | 2 | 31.2 | 11 | 35.0 | 0.1% |
| San Juan | 1 | 143.5 | 1 | 143.7 | 0 | 0.0 | 1 | 141.0 | 1 | 141.6 | 4 | 114.0 | 0.0% |
| San Miguel | 3 | 37.5 | 1 | 12.5 | 2 | 24.5 | 2 | 24.6 | 1 | 12.4 | 9 | 22.3 | 0.1% |
| Sedgwick | 0 | 0.0 | 4 | 166.8 | 2 | 83.3 | 0 | 0.0 | 0 | 0.0 | 6 | 50.0 | 0.0% |
| Summit | 9 | 29.2 | 7 | 22.5 | 7 | 22.5 | 3 | 9.6 | 2 | 6.4 | 28 | 18.1 | 0.2% |
| Teller | 13 | 55.1 | 15 | 62.1 | 10 | 40.8 | 7 | 28.4 | 6 | 24.2 | 51 | 42.1 | 0.4% |
| Washington | 1 | 21.1 | 2 | 41.3 | 0 | 0.0 | 2 | 41.5 | 0 | 0.0 | 5 | 20.8 | 0.0% |
| Weld | 103 | 35.0 | 97 | 31.8 | 88 | 28.1 | 93 | 28.9 | 56 | 16.9 | 437 | 28.1 | 3.2% |
| Yuma | 2 | 19.9 | 1 | 10.0 | 1 | 10.0 | 0 | 0.0 | 0 | 0.0 | 4 | 8.0 | 0.0% |

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2016-2020 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | N | Rate | % |
| Prison | 470 | --- | 508 | --- | 747 | --- | 666 | --- | 335 | --- | 2,726 | --- | 20.2% |
| Unknown | 176 | --- | 133 | --- | 68 | --- | 59 | --- | 119 | --- | 555 | --- | 4.1% |

### Table 6.1: Coinfections with Hepatitis Diagnoses from 2016-2020*

| Coinfections | Number of Cases, 2016-2020 |
|---|---|
| HAV and Chronic HCV | 25 |
| HAV and Chronic HBV | 6 |
| HAV and HIV | 3 |
| Chronic HBV and Chronic HCV | 39 |
| Chronic HBV and HIV | 44 |
| Chronic HCV and HIV | 205 |

*HIV diagnosis before 12/31/2020. HIV diagnoses include those previously diagnosed with HIV, concurrently diagnosed, or subsequently diagnosed with HIV as of 12/31/2020. All hepatitis diagnoses represented occurred 2016-2020.

# Definitions

**BRFSS** is the Behavioral Risk Factor Surveillance System. The Behavioral Risk Factor Surveillance System is a federally funded random telephone survey of Colorado residents aged 18 and older. Information is gathered on a variety of health-related behaviors, conditions, and preventive health practices.

**CDPHE** is the Colorado Department of Public Health and Environment. The Colorado Department of Public Health and Environment is the principal department of the Colorado state government responsible for public health and environmental regulation.

**CEDRS** refers to the Colorado Electronic Disease Reporting System. This database is used to capture reportable conditions across Colorado.

**Cirrhosis** is a chronic disease of the liver marked by degeneration of cells, inflammation, and fibrous thickening of tissue.

**Cisgender** refers to persons whose gender identity aligns with the sex they were assigned at birth.

**ELR** refers to electronic lab reports that are sent by certain hospitals and labs directly to CDPHE.

**Front Range** refers to the following counties in Colorado: Larimer, Weld, Boulder, Denver, Arapahoe, Adams, Jefferson, Douglas, Broomfield, Elbert, Park, Clear Creek, Gilpin, El Paso, Teller, Fremont, and Pueblo.

**Gender non-binary/non-conforming** is an umbrella term for individuals who do not identify as strictly a woman or a man.

**HBsAg** is the hepatitis B surface antigen. HBsAg is a marker of infectivity. Its presence indicates either acute or chronic HBV.

**HCV antibody testing**, also referred to as anti-HCV, indicates past or present infection with HCV. If a person has spontaneously cleared the virus or has been cured, they will still test positive for HCV antibodies.

**HCPF** stands for Health Care Policy and Financing which administers Health First Colorado (Colorado's Medicaid program)

**Incidence** represents the number of new cases of a disease or condition that occur in a population during a specified time, usually a year. This report only covers diagnoses reported to CDPHE. Incidence is likely underestimated.

**Prevalence** refers to the total number of people with a specific disease or condition at a given time. This report only covers diagnoses reported to CDPHE. Prevalence is likely underestimated.

**Rates per 100,000 persons** are calculated by dividing the number of cases by the population for a given time period and multiplying by 100,000.

**RNA (ribonucleic acid)** refers to the level of virus existing in a person. As opposed to a positive test for HCV antibodies, which may indicate past or present HCV infection, HCV RNA signifies current infection with HCV. HCV RNA is measured through a nucleic acid amplification test (NAAT).

**Rural counties in Colorado**, according to the Office of Rural Health Policy, are Alamosa, Archuleta, Baca, Bent, Chaffee, Cheyenne, Clear Creek, Conejos, Costilla, Crowley, Custer, Delta, Dolores, Eagle, Elbert, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Kiowa, Kit Carson, La Plata, Lake, Las Animas, Lincoln, Logan, Mineral, Moffat, Montezuma, Montrose, Morgan, Otero, Ouray, Park, Phillips, Pitkin, Prowers, Rio Grande, Rio Blanco, Routt, Saguache, San Juan, Sedgwick, San Miguel, Summit, Teller, Washington, and Yuma counties.

**Sex assigned at birth** is the assignment of people as male, female, intersex, or another sex assigned at birth often based on physical anatomy at birth.

**Signal-to-cutoff ratio** is a calculation that can be done for specific HCV antibody tests that is predictive of a true antibody-positive result.

**Sustained virologic response** is defined as aviremia 24 weeks after completion of antiviral therapy for chronic HCV.

**The Denver transitional grant area (TGA)** includes counties that are most severely impacted by the HIV epidemic. The Denver TGA covers 3,756 square miles and consists of six counties as follows: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson and became eligible for federal funding in March of 1994 when it reported 2,000 cumulative AIDS cases. Since there is no corresponding distinction for viral hepatitis, this definition of TGA was used to provide a distinction between counties surrounding Denver and counties further from Denver.

**Urban non-TGA counties** are El Paso, Larimer, Mesa, Pueblo, Weld, and Boulder.