

Chronic Hepatitis C in California

2018 Executive Summary

BACKGROUND

Hepatitis C virus (HCV) is spread when blood from a person infected with the hepatitis C virus enters the body of a person who is not infected. Hepatitis C virus is highly infectious and easily transmitted, even in microscopic amounts of blood. Before 1992, when widespread screening of the blood supply began in the United States, hepatitis C was commonly spread through blood transfusions and organ transplants. Today, transmission of hepatitis C is primarily through sharing needles, syringes or other drug injection equipment. It can also be transmitted through sexual contact or from a gestational parent (mother) to infant at birth.

Approximately 70 to 85 percent of people who become infected with hepatitis C become chronically infected.¹ Chronic hepatitis C is a serious disease that can result in long-term health problems, including liver cancer and death. There is no vaccine for hepatitis C. In 2013, a new generation of direct acting antivirals became available that cure more than 90 percent of people with chronic hepatitis C infection.² In 2012, the Centers for Disease Control and Prevention (CDC) issued recommendations that all persons born during 1945-1965 receive one-time hepatitis C testing due to the high prevalence of hepatitis C infection in this age group in the United States.³ In 2020, the U.S. Preventive Services Task Force recommended one-time HCV screening for all adults 18-79 years of age, along with periodic screening for persons with continued risk for hepatitis C infection (e.g., persons with past or current injection drug use).⁴

In this summary, the California Department of Public Health (CDPH) describes changes in chronic hepatitis C trends in California over time, including demographic and geographic characteristics of newly reported chronic hepatitis C cases, to inform efforts to reduce viral hepatitis transmission, and limit the progression and implications of viral hepatitis-related liver disease. For more information on methods, see the Technical Notes.

¹ Centers for Disease Control and Prevention, Viral Hepatitis. Available at: [Centers for Disease Control and Prevention \(CDC\) Viral Hepatitis \(https://www.cdc.gov/hepatitis/hcv/index.htm\)](https://www.cdc.gov/hepatitis/hcv/index.htm)

² American Association for the Study of Liver Diseases and the Infectious Diseases Society of America. Guidance on HCV testing and linkage to care available at: [Recommendations for testing, management, and treating hepatitis C \(https://www.hcvguidelines.org/\)](https://www.hcvguidelines.org/)

³ Smith BD, Morgan RL, Beckett GA, et al. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945-1965. *MMWR Recomm Rep.* 2012;61(RR-4):1-32.

⁴ U.S. Preventive Services Task Force. Screening for Hepatitis C Virus Infection in Adolescents and Adults US Preventive Services Task Force Recommendation Statement. *JAMA.* 2020; published online March 2.

SUMMARY

In 2018 there 35,448 newly reported cases of chronic hepatitis C in California and the rate of newly reported cases per 100,000 persons was 89.0. The rate of newly reported chronic hepatitis C infection in California increased 15 percent between 2014 and 2017, from 86 to 99 per 100,000 population, and then decreased ten percent between 2017 and 2018. Important disparities in the gender, age, racial, and geographic distribution of chronic hepatitis C infections persisted. From 1994 to 2018, the cumulative number of chronic hepatitis C cases reported to the California Department of Public Health (CDPH) was 714,737.

Although people born during 1945-1965 ("baby boomers") had the highest rates of newly reported chronic hepatitis C infection in 2018 and made up 41 percent of newly reported cases, there has been an increasing proportion of newly reported chronic hepatitis C cases among adolescents and young adults over the last ten years. In 2018, a total of 12,373 new hepatitis C reports were among people 15-39 years of age. The rate of newly reported cases in this age group increased 43 percent from 2014 to 2016 but has remained stable since 2016. While race and ethnicity data were missing from most case reports, based on cases with known race/ethnicity White, African American/Black, and American Indian/Alaska Native persons remained disproportionately affected by chronic hepatitis C in 2018. Geographically, the rate of newly reported chronic hepatitis C infections was highest in the northwestern region of California.

In 2018, eleven percent of all newly reported chronic hepatitis C cases in California were reported from state prisons. There were 3,043 reported cases among adolescents and young adults ages 15-39 incarcerated in state prisons in 2018. In contrast to the whole state population, rates of reported hepatitis C in persons age 15-39 were higher than rates among older adults and increased 22 percent from 2016 to 2018. Hispanic/Latino and White persons in state prisons remained disproportionately affected by chronic hepatitis C compared with African Americans.

DISCUSSION

Surveillance data for 2018 suggest a growing percentage of newly reported chronic hepatitis C cases in California are due to recent transmission. These findings are consistent with national surveillance data suggesting the majority of infections among young people during this time

period were associated with injection drug use.^{5,6,7} Newly reported chronic hepatitis C cases among adolescents and young adults indicate a need for hepatitis C prevention among people who inject drugs, including access to syringe service programs, opportunities for medication-assisted treatment programs, and comprehensive health services that include HCV testing and linkage to care.⁸

During 2014–2018, more than 3,000 cases of chronic hepatitis C were newly reported from California state prisons, annually. These reports highlight the important role of prison-based testing and treatment for chronic hepatitis C management. In 2016, California state prisons began screening all newly incarcerated people for HCV infection at intake. This policy likely contributed to an increase in hepatitis C detection compared to previous years.

National prevalence data for the years 1999–2010 showed people born during 1945–1965 accounted for the majority of the population living with chronic hepatitis C infection in the United States.^{9,10} For this reason, in 2012, CDC recommended all adults born during 1945–1965 receive one-time testing for HCV, regardless of risk history. Recent increases in rates of newly reported hepatitis C among people 50–59 and 60 years of age and older likely represents increased efforts in California to identify and treat chronic hepatitis C infection.¹¹

From 2014 to 2018, race/ethnicity data were not specified for 71 percent of case reports. This limits the conclusions about trends in chronic hepatitis C infection by race/ethnicity.

⁵ Zibbell JE, Asher AK, Patel RC, et al. Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, 2004 to 2014. *Amer J Public Health*. 2018 Feb;108(2):175–81.

⁶ Increases in Hepatitis C Virus Infection Related to Injection Drug Use among Persons Aged ≤30 Years — Kentucky, Tennessee, Virginia, and West Virginia, 2006–2012. *MMWR*. May 8, 2015 / 64(17);453–458

⁷ [Infographic: Hepatitis C and Opioid Use Rates Among Young Adults in California \(PDF\)](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/HepCYoungAdults_infographic.pdf). Available at: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/HepCYoungAdults_infographic.pdf

⁸ [National Viral Hepatitis Action Plan 2017–2020](https://www.hhs.gov/hepatitis/viral-hepatitis-action-plan/index.html). Available at: <https://www.hhs.gov/hepatitis/viral-hepatitis-action-plan/index.html>.

⁹ Armstrong GL, Wasley A, Simard EP, et al. The Prevalence of Hepatitis C Virus Infection in the United States, 1999 through 2002. *Ann Intern Med*. 2006;144:705–714. doi: <https://doi.org/10.7326/0003-4819-144-10-200605160-00004>

¹⁰ Ditah, F. Ditah, P. Devaki, et al. The changing epidemiology of hepatitis C virus infection in the United States: National Health and Nutrition Examination Survey 2001 through 2010. *J Hepatol*, 60 (2014), pp. 691–698

¹¹ Unpublished data shared with CDPH by CDC from one large commercial laboratory shows HCV antibody screening rates in California among persons born during 1945–1965 increased 48 percent from 708.9 per 10,000 patients served in 2015 to 1053.4 per 10,000 patients served in 2018.

KEY FINDINGS: CHRONIC HEPATITIS C IN CALIFORNIA (INCLUDING STATE PRISONS)

Overall

- In 2018, CDPH received 35,488 new reports of chronic hepatitis C infections. The rate of newly reported chronic hepatitis C infection decreased ten percent from 2017 to 2018, from 98.7 to 89.0 per 100,000 population.
- From 1994 to 2018, 714,737 confirmed and probable chronic hepatitis C cases were newly reported to CDPH.

By Gender

- In 2018, 62 percent of newly reported chronic hepatitis C cases in California were among males, and males had almost twice the rate of newly reported chronic hepatitis C infection of females.

By Age

- Forty-one percent of newly reported chronic hepatitis C cases in California in 2018 were among persons born during the years 1945-1965.
- In 2018, persons ages 50-59 years and 60 years of age and older—age groups including the baby boomer cohort—had the highest rate of newly reported chronic hepatitis C infections among all age groups.
- In 2018, there were 12,373 new reports of chronic hepatitis C infection among adolescents and young adults (age 15-39 years). This age group accounted for 35 percent of all newly reported cases in 2018. Reports in this age group, considered to be mainly due to sharing of injection drug use equipment, has been stable for the last three years.
- In 2018, the age distribution of newly reported chronic hepatitis C cases continued to show an increasingly bimodal distribution since 2008, with young persons—particularly males 20-29 years of age—composing a higher proportion of newly reported chronic hepatitis C infections.
- After increasing 16 percent from 2007 to 2016, the rate of chronic hepatitis C among women of childbearing age fell slightly in 2017 and 2018.

By Race/Ethnicity

- Race/ethnicity data were not specified for 71 percent of newly reported chronic hepatitis C cases in 2018. Of cases with race/ethnicity reported, White, African American/Black, and American Indian/Alaska Native persons in California continued to be disproportionately affected by chronic hepatitis C in 2018.

- In 2018, Whites were 39 percent of the population in California, but 56 percent of newly reported chronic hepatitis C cases with non-missing race/ethnicity; African Americans/Blacks were 6 percent of the general population in California, but 11 percent of newly reported chronic hepatitis C cases; and American Indian/Alaska Natives were less than half a percent of the general population but one percent of newly reported chronic hepatitis C cases.
- In 2018, Hispanics/Latinos and Asian Pacific Islanders (APIs) were underrepresented among chronic hepatitis C cases in California with known race/ethnicity. Hispanics/Latinos were 41 percent of the general population, but only 25 percent of reported chronic hepatitis C cases, and APIs were 14 percent of the state population, but only 8 percent of reported chronic hepatitis C cases.

By Geography

- Del Norte County had the highest rate of newly reported chronic hepatitis C cases among persons not incarcerated in state prisons in 2018, followed by Humboldt, Lake, Trinity, and Shasta counties.
- Los Angeles county had the highest number of cases of newly reported chronic hepatitis C among persons not incarcerated in state prisons, followed by Orange, San Diego, Riverside, and San Bernardino counties. These five counties had 40 percent of all cases, but all five had lower rates than the state of California as a whole.

KEY FINDINGS: CHRONIC HEPATITIS C IN CALIFORNIA STATE PRISONS

Overall

- In 2018, CDPH received 3,892 new reports of chronic hepatitis C infections in state prison facilities, for a case rate of 3,268 per 100,000 persons. The rate of newly reported chronic hepatitis C infection in state prisons increased 11 percent from 2017 to 2018.
- From 1994 to 2018, 81,243 chronic hepatitis C cases in California prisons were newly reported to CDPH.

By Gender

- From 2014 to 2018, the vast majority (96 percent) of newly reported chronic hepatitis C cases in California state prisons were among males, which roughly corresponded to the gender distribution of people incarcerated in California state prisons.

- Rates of newly reported chronic hepatitis C cases among females incarcerated in California state prisons increased 41 percent from 2014 to 2018, while rates for males increased 13 percent during the same time frame.
- In 2018, rates of newly reported chronic hepatitis C cases per 100,000 population among persons incarcerated in California state prisons were 2,695 for females and 3,293 for males.

By Age

- Persons 15-39 years of age incarcerated in state prisons were 78 percent of all cases reported from California state prisons in 2018 and one-quarter of all cases reported in their age group statewide.
- While rates in persons 15-39 years of age have remained stable statewide since 2016, rates in this age group in state prisons increased 22 percent from 2016 to 2018.
- During 2014-2018, males 20-29 years of age had the highest rate of newly reported chronic hepatitis C of any ten-year age group among persons incarcerated in state prisons.
- Rates among persons 40-59 years of age decreased from 2014 to 2018 both statewide and in state prisons. Among persons ages 50-59 incarcerated in state prisons, rates of newly reported chronic hepatitis C cases decreased 42 percent between 2014 and 2018, from 2,283 to 1,328 per 100,000 population.

By Race/Ethnicity

- Among persons in state prisons in 2018, Hispanic/Latino persons were disproportionately affected by chronic hepatitis C. Hispanics/Latinos were 45 percent of the population in state prisons, but 66 percent of reported chronic hepatitis C cases with race/ethnicity specified. In contrast, African Americans/Blacks were underrepresented among chronic hepatitis C cases in state prisons, making up 30 percent of the state prison population, but only 6 percent of reported chronic hepatitis C cases.
- Among persons in state prisons, the number of newly reported chronic hepatitis C cases in Hispanic/Latino persons increased 38 percent, while the number of reported cases among White persons decreased by 17 percent and the number of cases in African American/Black persons decreased by 21 percent between 2014 and 2018.