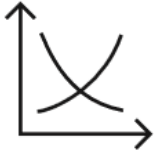


# 2023 Ohio Hepatitis C: Surveillance Summary

## 2018-2023 Fast Facts



Until 2020, Ohio had consistently higher rates of confirmed acute hepatitis C virus (HCV) than the United States overall. Confirmed acute rates across the U.S. decreased 6.3% between 2021 and 2022, whereas Ohio rates for the same time-period decreased by 31.3%.



The largest notable decrease in total\* HCV case rates in Ohio was seen between 2019 and 2020 when rates decreased by 18.4%. Overall, comparing 2018 to 2023, the rate of total HCV in Ohio decreased by 52.6%.



While it is not required for negative HCV laboratory test results to be reported in Ohio, it is helpful in case classification and in determining whether a person is infectious or has cleared the HCV infection. Negative HCV RNA reporting from laboratories who have agreed to submit test results to Ohio increased by 193.3% from 2018 to 2023.



Black males and females ages 50+, followed by White males and females ages 30-49, had the highest rates of total HCV in 2023.



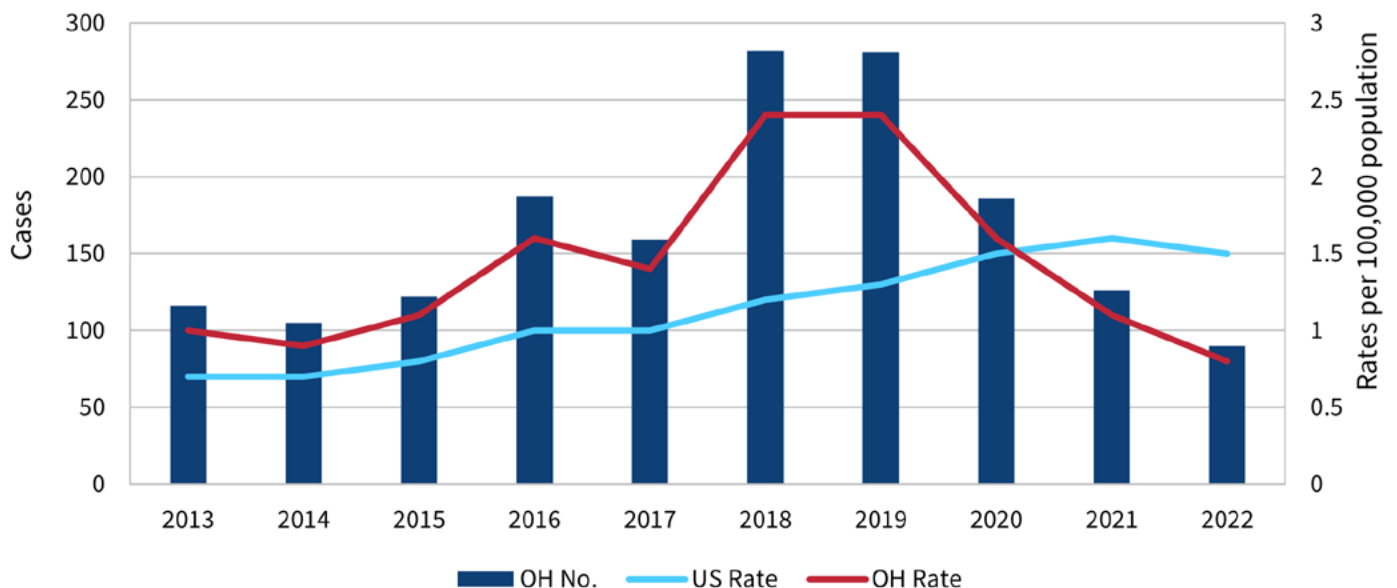
Across all states who reported perinatal HCV infections, Ohio had the highest number of confirmed cases from 2018 to 2022.

## National Hepatitis C Case Trends

National case rates of confirmed acute HCV have continuously risen from 2012 to 2021, from 0.6 to 1.6 cases per 100,000 population respectively. The Center for Disease Control and Prevention (CDC) notes that increases in acute HCV case reports reflect new infections associated with rising rates of injection-drug use, and possibly, improved case detection. This increase in cases mostly occurred among young, White persons who inject drugs and live in non-urban areas (CDC, 2023a). An acute HCV infection is the 12-month period following a recent HCV exposure with or without clinical expression in a person not previously reported with HCV (CDC, 2020). Confirmed HCV infection is one in which the HCV Ribonucleic acid (RNA) test result is determined to be positive, indicating that the HCV is present in the blood.

In 2022, the most recent year that national data is available from CDC, the national rate of reported confirmed acute HCV was 1.5 per 100,000 population. This represents a decrease of 6.3% from the 2021 case rate. For 2022, the CDC estimates that 67,400 acute infections have occurred nationally (CDC, 2024) (**Figure 1**).

**Figure 1. Confirmed Acute HCV by Year, Ohio vs. United States, 2013-2022**



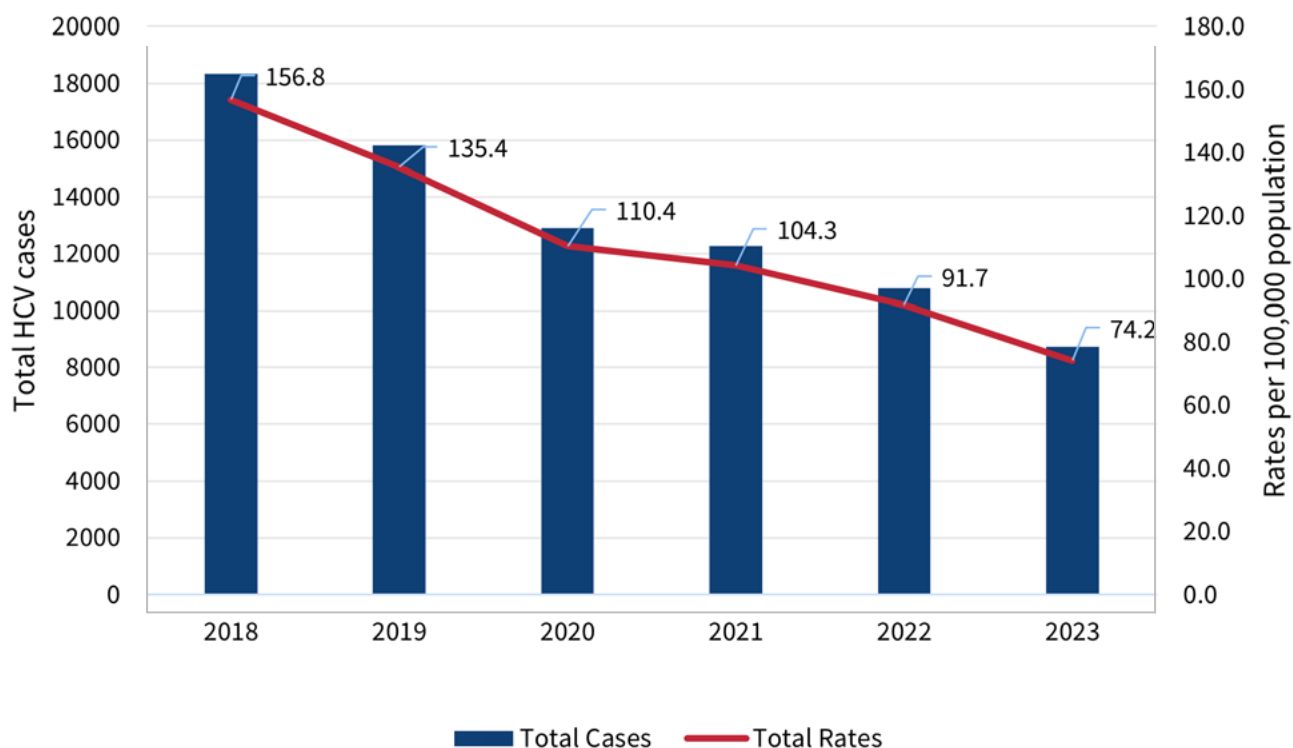
*Note. Data are from Centers for Disease Control and Prevention (2018) and Centers for Disease Control and Prevention (2024a). Rates are shown per 100,000 persons and were calculated using census estimates for that year.*

Ohio acute HCV case reporting trends have largely mirrored the national trend of continuous increases until 2019. During this time, Ohio's rate of confirmed acute HCV, as reported to CDC, trended upward and was above the national rate from the years 2013 to 2020. With the onset of the COVID-19 pandemic in 2020, Ohio began to experience significant decreases in case counts and rates. Using national data from the CDC for 2019 to 2020, confirmed acute HCV case rates in Ohio decreased by 33.3%.

While the COVID-19 pandemic contributed to disruptions in many public health activities in 2020, national case rates for acute HCV continued to rise from 2020-2021 despite CDC indications that national laboratories reported nearly a 60% decline in positive HCV test results in the first few months of 2020 compared to 2019 (CDC, 2022). In addition to this, CDC implemented an updated HCV case definition which allowed for improved sensitivity and a more accurate capture of acute HCV cases by removing discreet onset of symptoms as an acute requirement (CDC, 2021). This case definition change may have contributed to what appears to be an increase of acute HCV cases when considering testing had decreased significantly in 2020. The CDC warns that the increase in acute HCV cases seen in 2020 may be an underestimation, as a result of decreased hepatitis testing, and that the data should be interpreted with caution.

When including all reported HCV case classifications (acute, chronic, perinatal, confirmed, and probable), overall total HCV cases for Ohio decreased by 52.4% from 2018 to 2023 (**Figure 2**).

**Figure 2. Total HCV by Year, Ohio, 2018-2023**



*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b) and Ohio Department of Health, Viral Hepatitis Surveillance program (2024c).*

*Rates are shown per 100,000 persons and were calculated using census estimates for that year.*

## Laboratory Testing

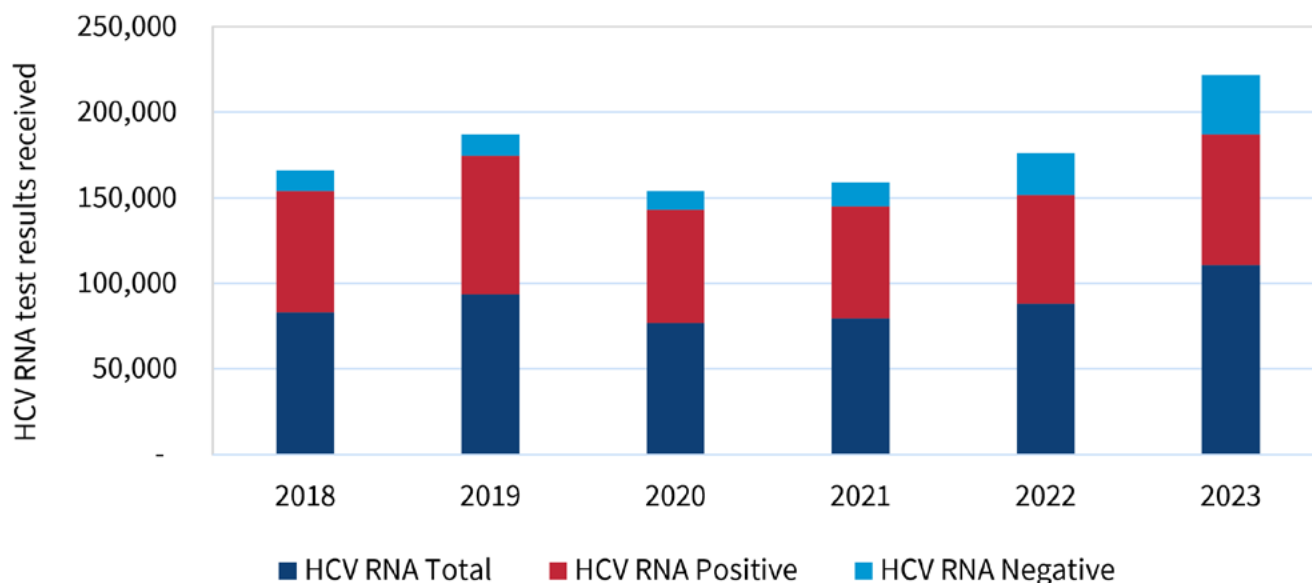
The Ohio Department of Health (ODH) Viral Hepatitis Surveillance program examined total test results received, and total HCV RNA lab tests reported to ODH to investigate factors that may have contributed to decreases in Ohio case counts and rates from 2018 to 2023. Notably during the first year of the COVID-19 pandemic, from 2019 to 2020, Ohio saw a 19.3% decrease in lab test results reported for total HCV cases. However, overall, from 2018 to 2023, lab test results increased by 23.3%, with 56.1% of those labs being for HCV RNA testing.

Persons who have been exposed to the hepatitis C virus and have mounted an immune response will test positive for the HCV antibody (anti-HCV). Once a person is anti-HCV positive, they will remain positive indefinitely regardless of their infectious status. However, a person who is anti-HCV positive and HCV RNA negative are considered to have once been HCV positive but are not currently infected with the virus, thus, the virus is not circulating in their blood. Case records in the surveillance system that are reported as anti-HCV positive and HCV RNA negative in a certain time period are considered to be ‘not a case’ and are not counted in Ohio’s morbidity. Negative HCV RNA reporting in Ohio is not mandated, however, it is useful for accurate interpretation of HCV case positivity, for determining cases in which the HCV infection has cleared through an immune response or has been cured through treatment, and for the identification of cases in which HCV reinfection may have occurred.

ODH Viral Hepatitis Surveillance program and the Electronic Lab Reporting (ELR) onboarding team have made efforts to request that onboarding laboratories voluntarily submit negative HCV RNA lab results. These efforts have led to increased negative HCV RNA reporting to ODH. Total HCV RNA lab testing includes qualitative, quantitative, and genotype testing, positive and negative test results.

In 2018, negative HCV RNA reporting accounted for 14.2% of total HCV RNA results received by ODH. By 2023, negative HCV RNA reporting had increased to 31.1% of total HCV RNA results amounting to a 193.3% increase in negative HCV RNA reporting from 2018 to 2023 (**Figure 3**).

**Figure 3. HCV RNA Lab Testing by Year, Ohio, 2018-2023**



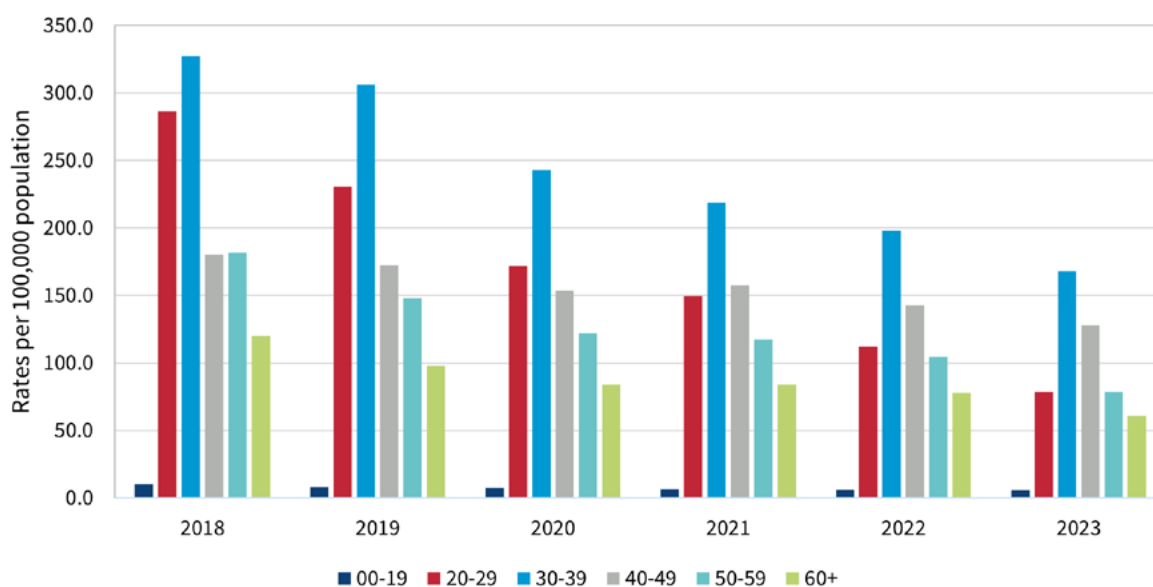
*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024a).*

Total case counts for HCV decreased by 52.4% from 2018 to 2023. While all factors contributing to the decrease in case counts in Ohio during this time period are unknown, it is worthwhile to note that increased negative HCV RNA reporting has allowed surveillance staff to further classify case records as not meeting case definition, further decreasing state cases for individuals who would have been previously classified as positive without the negative RNA data that ODH staff solicited laboratories to provide.

## Ohio HCV Demographic Information

- For Ohio, the rates of positive total HCV cases classified was highest in the 20-39 year-old age groups between 2018 and 2020. The highest case rates by age shifted to the 30-49-year-old age groups beginning in 2021 (**Figure 4**).

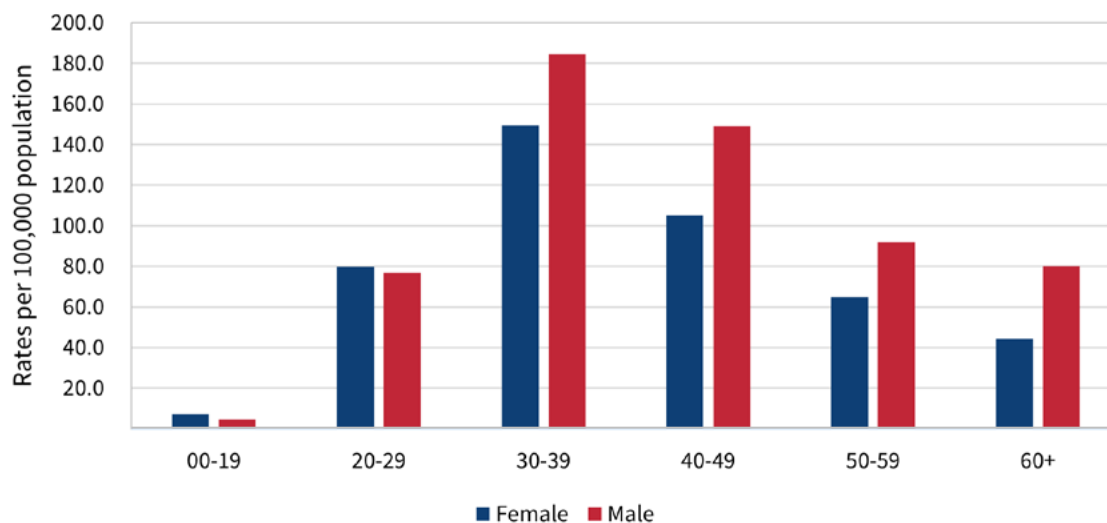
Figure 4. Total HCV Rates by Age, Ohio, 2018-2023



Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).

- Males ages 30 to 60+ have higher case rates than females (**Figure 5**).

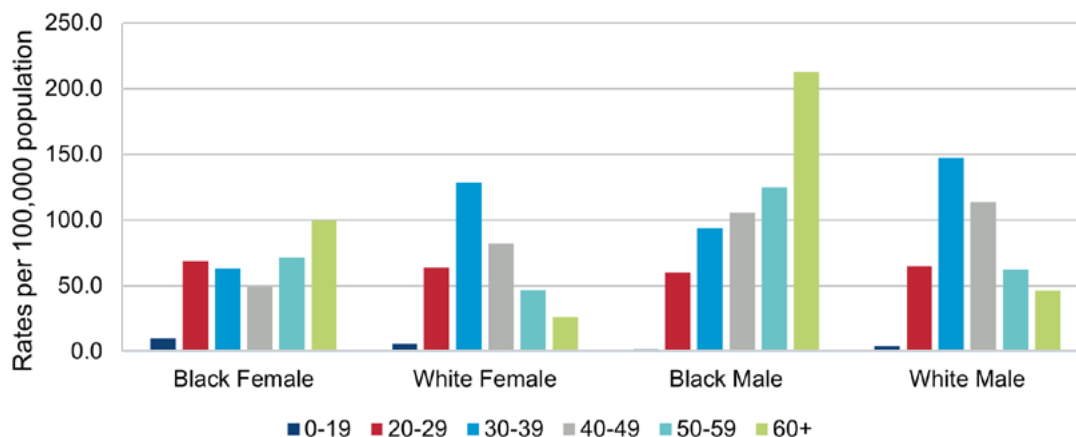
**Figure 5. Total HCV Rates by Age and sex, Ohio, 2023**



*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).*

- Total HCV rates were highest in the zero to 29 age group for Black females.
- Black and White females ages zero to 19 years had higher rates of total HCV over males of the same age.
- White male and females had the highest rates of total HCV for ages 20-39 years.
- Black males and females ages 50+ had higher rates of total HCV over White males and females (**Figure 6**).

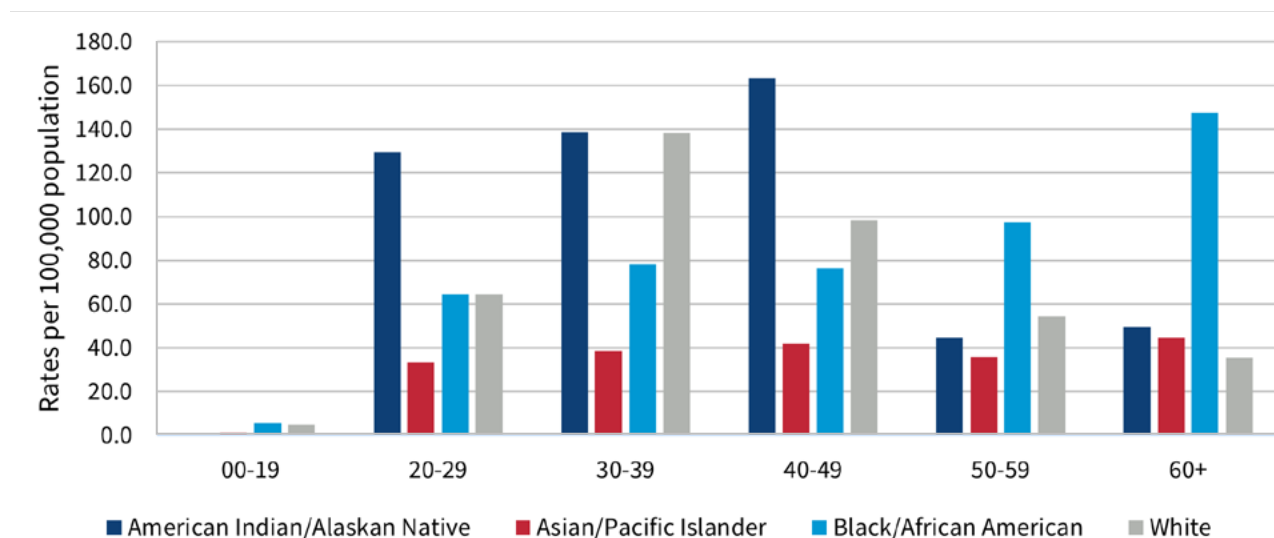
**Figure 6. Total HCV Rates, Race by Age and sex, Ohio, 2023**



*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).*

- Total HCV case rates for American Indian/ Alaskan Natives were highest for ages 20-49 years old.
- American Indian/ Alaskan Natives and White people had nearly the same total HCV case rates for ages 30-39 years, 138.5 vs. 138.1 per 100,000 per population, respectively.
- The highest case rates were found with Black people ages 50 and older (**Figure 7**).

**Figure 7. Total HCV Case Rates by Age, Race, Ohio, 2023**

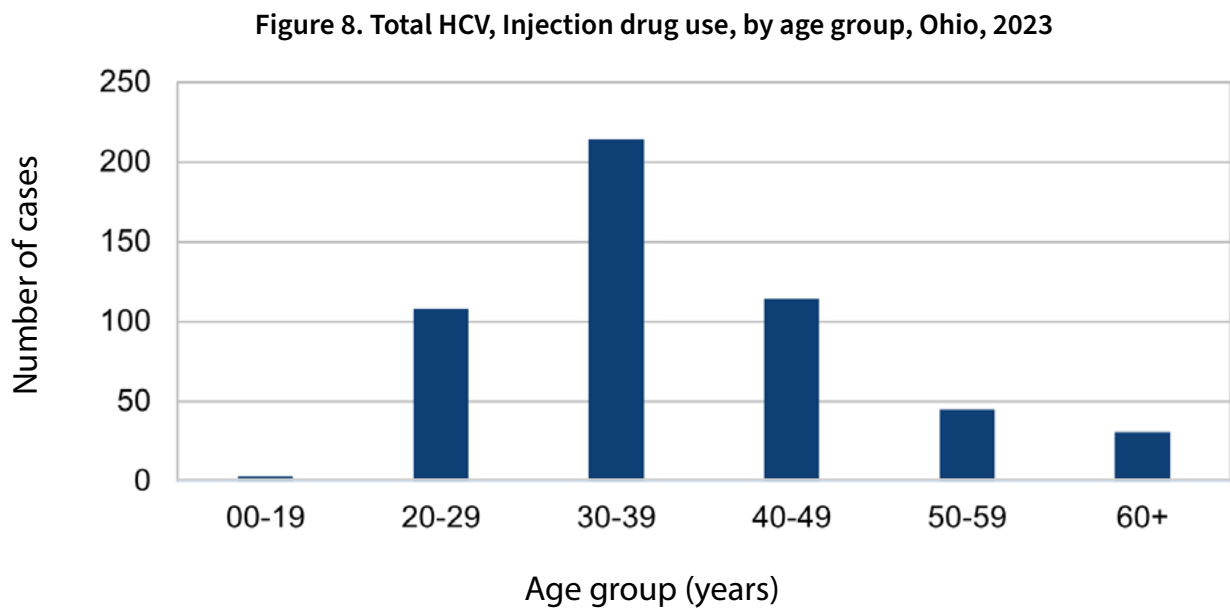


*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).*

## HCV Risk Factor Information

Determining risk factors or behaviors that contribute to disease transmission is paramount in the prevention of an infectious disease. While information about risk factors associated with HCV cases in Ohio is largely lacking, and no universal method to determine behavioral risk exists nationally, CDC has used persons aged 18-40 years as a proxy for persons who inject drugs (CDC, 2024b).

For Ohio HCV cases in 2023, the same 18-40-year-old age groups determined by CDC to be a proxy for injection drug use also appear to have answered affirmatively for injection drug usage in case interviews as reported in the Ohio Disease Reporting System (ODRS) (**Figure 8**).



*Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024c).*

Of the 93 acute HCV cases reported in 2023, 48.4% (n=45) had at least one affirmative risk factor reported, while only 12.1% of chronic cases noted an affirmative risk factor. Some key risk factors for acute HCV and chronic HCV are shown in **Table 1**.



Table 1.

<b>Acute Risk Behavior (n=93)</b>	<b>Risk Positively Identified n (%)</b>	<b>No Risk Identified n (%)</b>	<b>Risk Information Missing n (%)</b>
<b>Injection drug use</b>	8 (8.7%)	10 (10.9%)	74 (80.4%)
<b>Street drugs (non-injection)</b>	3 (3.2%)	8 (8.6%)	82 (88.2%)
<b>Contact with HCV positive person</b>	36 (38.7%)	4 (4.3%)	53 (57.0%)
<b>Household contact (non-sexual)</b>	1 (1.1%)	5 (5.3%)	87 (93.5%)
<b>Ever had Sexually Transmitted Disease</b>	8 (8.6%)	8 (8.6%)	77 (82.8%)

\*Organ transplants with HCV positive organ into HCV negative recipient indicated in 45 acute cases.

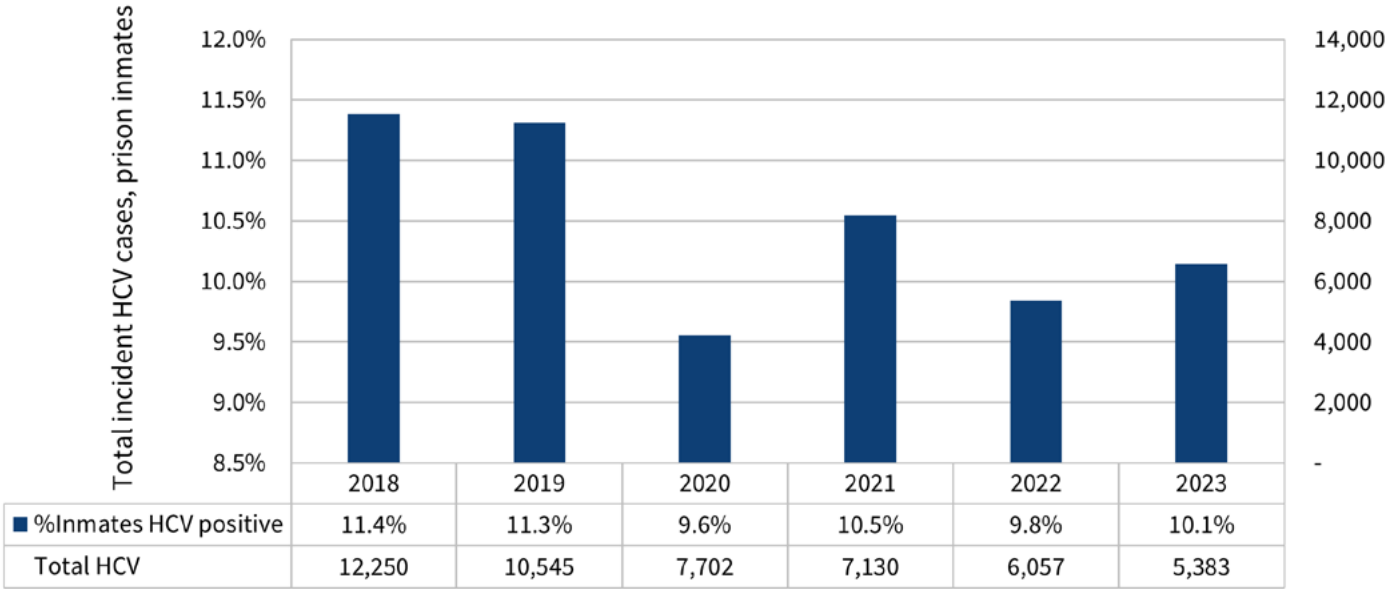
<b>Chronic Risk Behavior (n=8,592)</b>	<b>Risk positively Identified n (%)</b>	<b>No Risk Identified n (%)</b>	<b>Risk Information Missing n(%)</b>
<b>Injection drug use</b>	517 (6.0%)	168 (2.0%)	7,907 (92.0%)
<b>Contact with HCV positive person</b>	177 (2.1%)	147 (1.7%).	8,268 (96.2%)
<b>Household contact (non-sexual)</b>	84 (1.0%)	31 (0.4%)	8,477 (98.7%)
<b>Ever incarcerated</b>	705 (8.2%)	173 (2.0%)	7,714 (89.8%)
<b>Ever had Sexually Transmitted Disease</b>	650 (7.6%)	267 (3.1%)	7,675 (89.3)

\*Injection drug use - needle sharing indicated in 40 chronic cases.

## State Correctional Inmates

Between February 2020 and February 2021, state correctional facilities across the United States held 17% fewer inmates than the previous year, largely due to efforts to mitigate the spread of COVID-19. For Ohio, an 11.3% decrease in prison inmates was seen in this time period (Carson, 2022). Comparing the number of new, positive HCV cases in the Ohio prison population (state and federal) during the years of 2019 and 2020, there was a 38.3% decrease in HCV cases reported to ODH and classified as positive. Between 2020 and 2021, newly reported Ohio HCV inmate cases increased by 2.2% and further decreased by 20.7% from 2021 to 2022. HCV positive diagnoses among state and federal correctional inmates accounted for 10.1% (n=546) of the total HCV Ohio cases reported to ODH in 2023. (**Figure 9**).

Figure 9. Total HCV Correctional cases, Ohio, 2018-2023

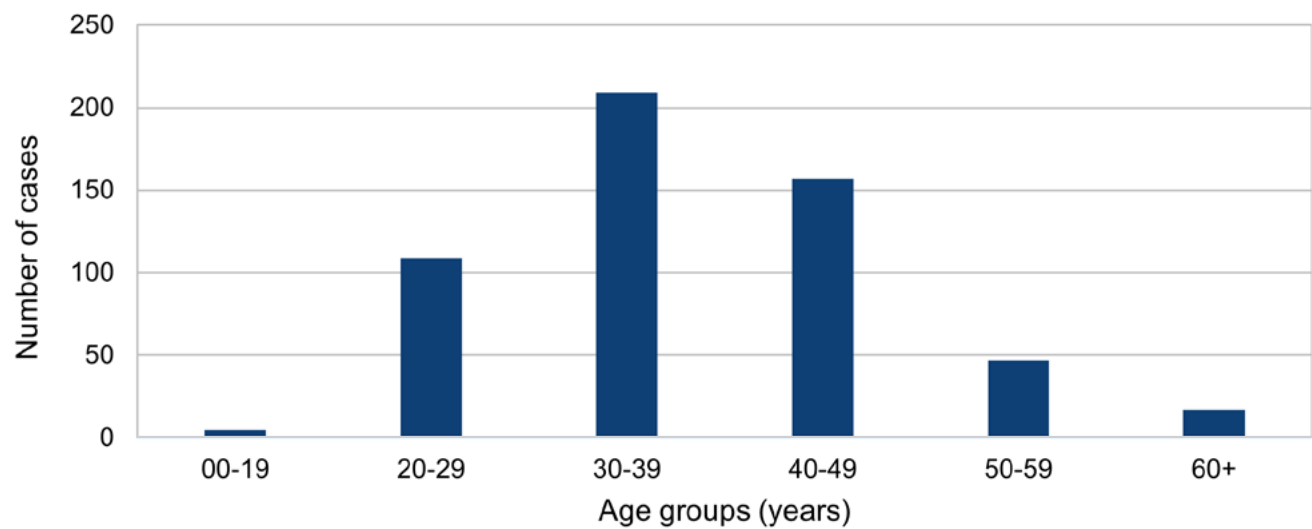


Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).

## State Correctional Inmates Deomographics

- In 2023, the highest number of total HCV positive inmates reported to ODH was in the 30-39 age group, followed by the 40-49 age group (**Figure 10**).

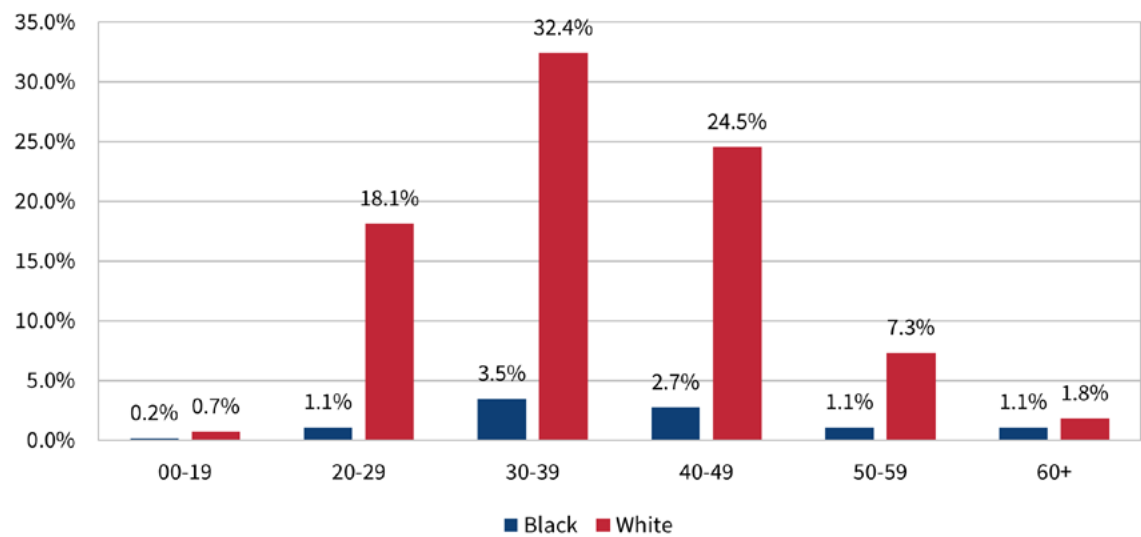
Figure 10. Total HCV, Correctional Cases, by age group, Ohio, 2023



Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b).

- Classified by race, 85% of newly positive inmates were classified as White, 9.7% Black, and 2.4% classified as Other.
- White males accounted for 71.1% of inmates in 2023, followed by 13.9% White females, and 9.2% Black males.
- When examined by race and age, 75.1% of the state correctional cases in 2023 identified their race as White and were between the ages of 20 and 49 years old (**Figure 11**).

Figure 11. Percent of State Correctional Cases, Total HCV, Race by Age, Ohio, 2023



## Ohio HCV Demographic Information

- Table 2 shows the breakdown of Ohioans diagnosed with total HCV between 2019 and 2023, by age group, race, ethnicity, and sex.

Table 2. Demographic Summary, Total HCV Cases in Ohio, 2019-2023

	2019 No.	2020 No.	2021 No.	2022 No.	2023 No.	
<b>Age</b>						
0-19	240	211	193	179	168	5.9
20-29	3,582	2,645	2,283	1,728	1,212	78.8
30-39	4,522	3,629	3,368	3,028	2,574	168.1
40-49	2,396	2,117	2,194	1,982	1,776	128.0
50-59	2,283	1,854	1,793	1,558	1,175	78.8
60+	2,787	2,435	2,439	2,297	1,805	61.1
Not Specified	10	20	15	9	14	-
<b>Race</b>						
American Indian/Alaskan Native	47	39	22	19	26	72.5
Asian/Pacific Islander	125	98	154	107	96	29.0
Black/African American	1,855	1,540	1,509	1,357	1,089	69.5
White	10,629	8,077	7,554	6,432	5,258	55.3
Other3	444	384	382	366	290	-
Not Specified	2,720	2,773	2,664	2,500	1,965	-
<b>Ethnicity</b>						
Hispanic/Latino	332	270	285	244	152	29.0
Non-Hispanic/Non-Latino	9,627	7,481	7,434	6,302	5,175	46.1
Not Specified	5,861	5,160	4,566	4,235	3,397	-
<b>Sex</b>						
Female	6,702	5,479	5,324	4,609	3,772	63.4
Male	9,101	7,387	6,902	6,008	4,896	84.3
Not Specified	17	45	59	164	56	-
<b>Total</b>	<b>15,820</b>	<b>12,911</b>	<b>12,285</b>	<b>10,781</b>	<b>8,724</b>	<b>74.2</b>

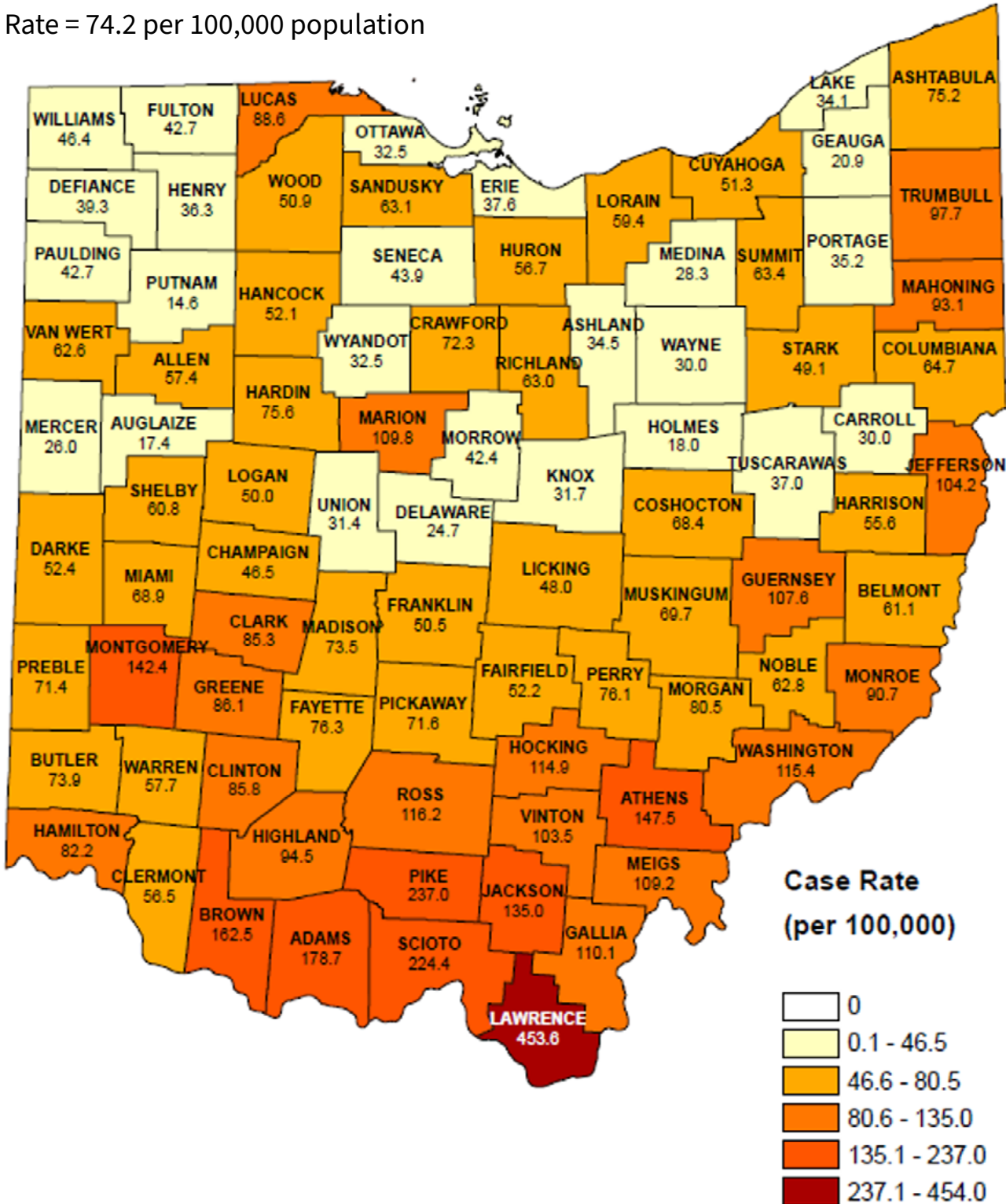
Note. Data from Ohio Department of Health, Viral Hepatitis Surveillance program (2024b) and Ohio Department of Health, Viral Hepatitis Surveillance program (2024c).

Rates are shown per 100,000 persons and were calculated using census estimates for that year.

2023 data reflects updated national standards used in the creation of race categories. Caution should be used when comparing data to that of previous reports using a different methodology to categorize race. Other race may consist of multiple races chosen or those that don't fit into the designated categories.

## Ohio Total Hepatitis C Case Rates By County, 2023

Ohio Rate = 74.2 per 100,000 population



1) 113 cases were reported without a county of residence at diagnosis and are not included in the map.

2) 546 cases in state correctional facilities at time of diagnosis are not included in the calculation of county cases totals.

*Provisional data. Numbers subject to change when additional information is gained.*

Source: Ohio Department of Health, Viral Hepatitis Surveillance Program. Data reported as 6/12/2024.



## Viral Hepatitis Reporting

Hepatitis C virus (HCV) is a nationally notifiable disease and is classified as a Class B reportable disease in Ohio.

All healthcare providers are required to report cases or suspect cases of Hepatitis C by end of the next business day. Medical laboratories are also required to report positive Hepatitis C test results by the end of the next business day.

Provider and laboratory reports should be sent to the health jurisdiction in which a patient resides. It is the responsibility of the health departments to report the information to the Ohio Department of Health (ODH) via the Ohio Disease Reporting System (ODRS).

**Contact us:**

Ohio Dept of Health  
Viral Hepatitis Surveillance

Email: [Hepatitis@odh.ohio.gov](mailto:Hepatitis@odh.ohio.gov)  
Fax: (614) 564-2439

## CITATIONS

Carson, E., Statistician, B., Nadel, M., & Gaes, G. (2022). Special Report.

<https://bjs.ojp.gov/content/pub/pdf/icsfp2021.pdf>

Centers for Disease Control and Prevention. (2018, April). Viral Hepatitis Surveillance Report – United States, 2016.

<https://archive.cdc.gov/#/details?url=https://www.cdc.gov/hepatitis/statistics/2016surveillance/index.htm>

Centers for Disease Control and Prevention. (2021, April 16). Hepatitis C, Acute 2020 Case Definition.

<https://ndc.services.cdc.gov/case-definitions/hepatitis-c-acute-2020/>

Centers for Disease Control and Prevention. (2022, August 19). 2020 viral hepatitis surveillance national profile of viral hepatitis. Centers for Disease Control and Prevention.

<https://www.cdc.gov/hepatitis/statistics/2020surveillance/introduction/national-profile.htm>

Centers for Disease Control and Prevention. (2023, July 27). 2014–2021 Reported Hepatitis C Cases & Estimated Infections.

<https://www.cdc.gov/hepatitis/statistics/2021surveillance/hepatitis-c/figure-3.1.htm>

Centers for Disease Control and Prevention. (2023, August). Viral Hepatitis Surveillance Report – United States, 2021.

<https://www.cdc.gov/hepatitis/statistics/2021surveillance/index.htm>

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2022. (2024, April).

[https://www.cdc.gov/hepatitis-surveillance-2022/about/?CDC\\_AAref\\_Val=https://www.cdc.gov/hepatitis/statistics/2022surveillance/index.htm](https://www.cdc.gov/hepatitis-surveillance-2022/about/?CDC_AAref_Val=https://www.cdc.gov/hepatitis/statistics/2022surveillance/index.htm)

Centers for Disease Control and Prevention. (2024, October 9). 2024 National Viral Hepatitis Progress Report.

<https://www.cdc.gov/hepatitis/php/npr-2024/index.html#toc>

Ohio Department of Health, Viral Hepatitis Surveillance program, reported as of April 14, 2024. Ohio HCV RNA testing data 2018-2022.

Ohio Department of Health, Viral Hepatitis Surveillance program, reported as of August 6, 2024. Ohio data 2018-2022.

Ohio Department of Health, Viral Hepatitis Surveillance program, reported as of December 19, 2024. Ohio data 2023.