



Allegheny County Health Department

Bureau of Data, Reporting & Disease Control

Hepatitis C Epidemiologic Profile

For Allegheny County, PA, 2023

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Introduction

Hepatitis C is a liver disease that results from infection with the hepatitis C virus (HCV), which is spread primarily through contact with the blood of an infected person. Hepatitis C infection can be classified as either “acute” or “chronic.” Cases are referred to as “acute” if the infection is newly acquired. See the Appendix for full case definitions. Most acute infection leads to chronic infection, as only 15-25% of persons clear the infection without treatment. According to the Centers for Disease Control and Prevention (CDC), most people become infected with HCV by sharing needles or other equipment to inject drugs.

Acute Hepatitis C

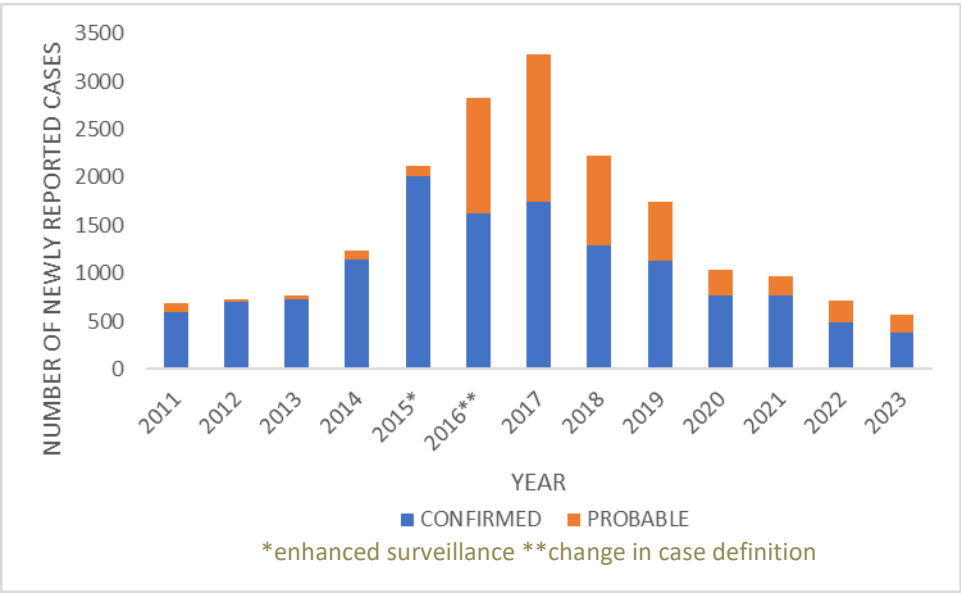
Persons with acute hepatitis C infections often do not have symptoms; 20-30% of individuals have mild to severe gastrointestinal symptoms, including jaundice, within six months of infection.

In 2023, seven confirmed and three probable cases of acute hepatitis C among adults were reported to the Allegheny County Health Department (ACHD). The CDC estimates that the true number of acute cases is up to 14 times higher than what is reported each year.

Chronic Hepatitis C

Chronic hepatitis C is associated with liver damage and sometimes liver failure or liver cancer. In 2023, there were 573 confirmed and probable cases of chronic hepatitis C cases reported among Allegheny County residents (Figure 1). Of that total, 385 (67%) were classified as confirmed chronic cases and 188 (33%) were classified as probable chronic cases.

Figure 1. Chronic hepatitis C cases by year and classification, Allegheny County, PA, 2011-2023

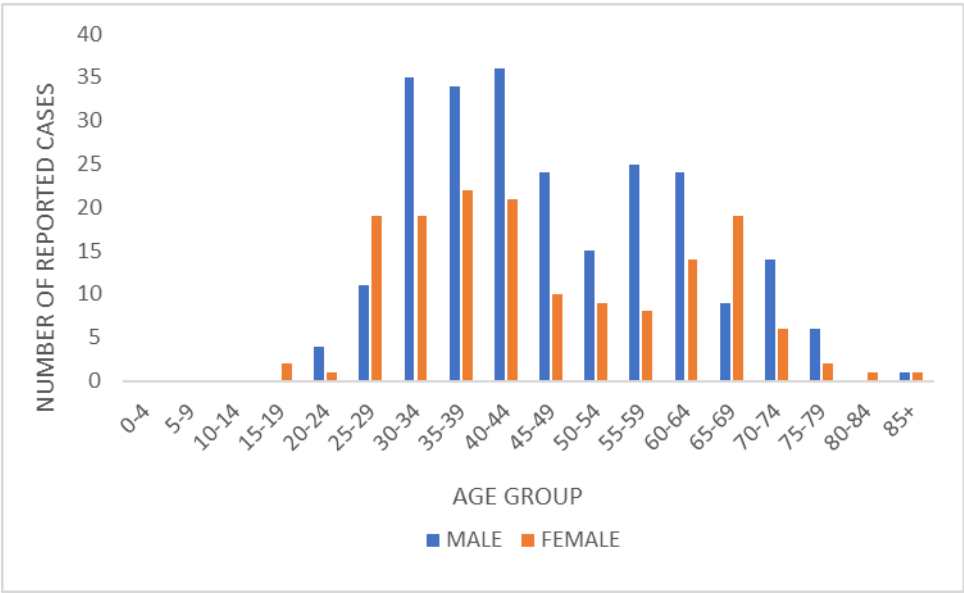


*During 2013-2023, the number of confirmed cases was highest in 2015, most likely due to active investigation by ACHD of all positive lab tests, which was ACHD’s practice for one year only.

**Before 2016, cases were classified as ‘probable’ only if ACHD received reports of a positive antibody test plus elevated liver enzymes; given the latter are rarely reported, very few cases were classified as ‘probable’ before 2016. In 2016, the liver enzyme requirement was dropped, increasing the number of cases classified as ‘probable.’

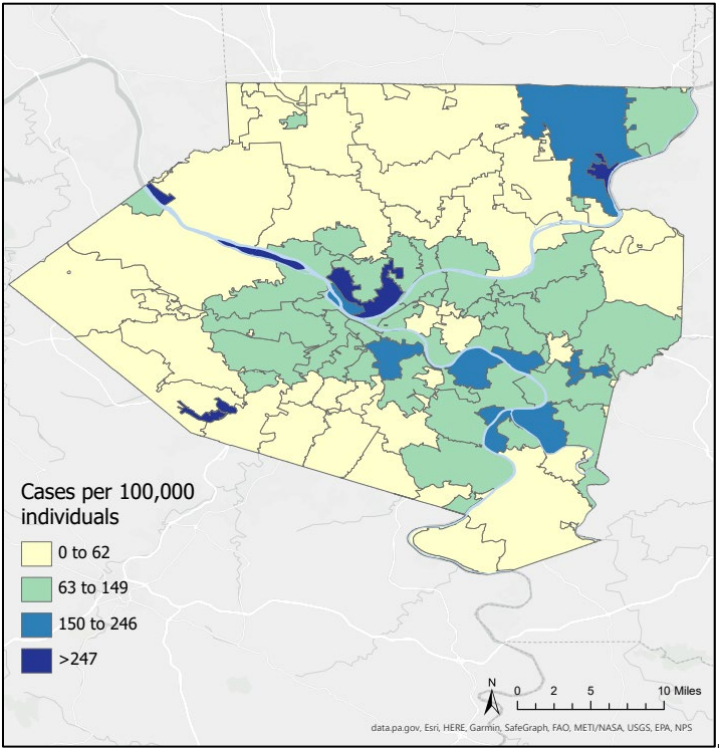
Of the 573 confirmed and probable cases in 2023, 372 (65%) were male and 201 (35%) were female. The age distribution was bimodal with peaks in the 30-44 year and 55-64 year-old age groups (Figure 2).

Figure 2. Chronic hepatitis C cases by age group and sex, Allegheny County, PA, 2023



The following map shows the rate of newly reported chronic hepatitis C cases in 2023 by zip code of residence.

Figure 3. Newly reported chronic hepatitis C cases per 100,000 population by zip code of residence, Allegheny County, PA, 2023

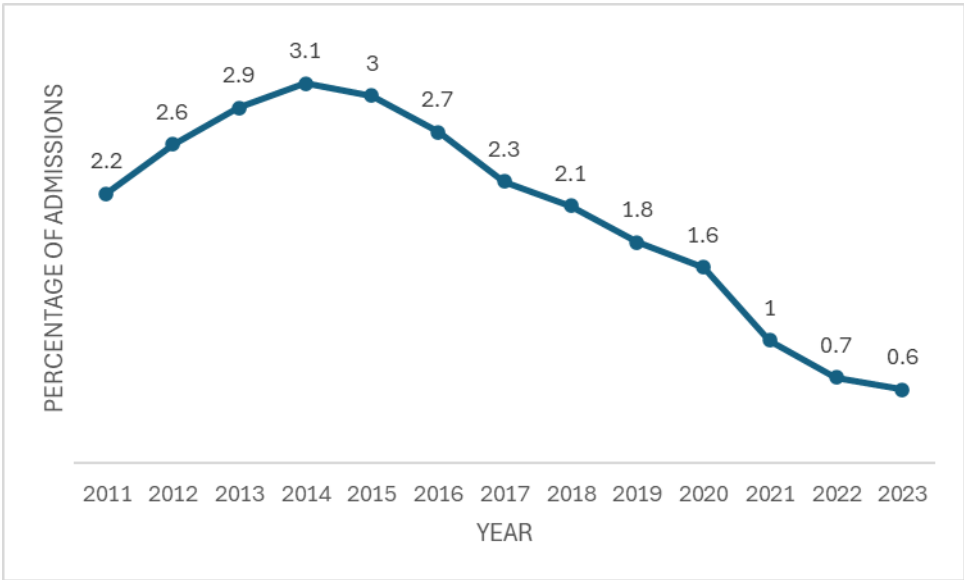


Hospitalizations with HCV Infection

1,704	Number of hospital admissions with HCV diagnosis in 2023	0.6%	Percentage of all hospital admissions with an HCV diagnosis in 2023
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In 2023, there were 1,704 hospitalizations among Allegheny County residents with a diagnosis of hepatitis C (either the primary diagnosis or one of up to 17 secondary diagnoses). Of these, 656 (38%) had a chronic hepatitis diagnosis, 2 (1%) had an acute hepatitis C diagnosis, and 1,046 (61%) had hepatitis C with no classification specified. The percentage of hospital admissions with a hepatitis C diagnosis was 0.6% in 2023. It has been declining since 2014, when the percentage of hospital admissions with a hepatitis C diagnosis peaked at 3.1%.

Figure 4. Percentage of all hospital admissions with a hepatitis C diagnosis* among Allegheny County residents by year, 2011-2023



*Includes primary diagnosis and up to 17 secondary diagnoses

Data Source: Pennsylvania Health Care Cost Containment Council [Disclaimer: The Pennsylvania Health Care Cost Containment Council (PHC4) is an independent state agency responsible for addressing the problem of escalating health costs, ensuring the quality of health care, and increasing access to health care for all citizens. While PHC4 has provided data for this study, PHC4 specifically disclaims responsibility for any analyses, interpretations or conclusions.]

In 2023, there were 138 hospital admissions with an HCV diagnosis per 100,000 population in Allegheny County. The rate of hospitalization with an HCV diagnosis for

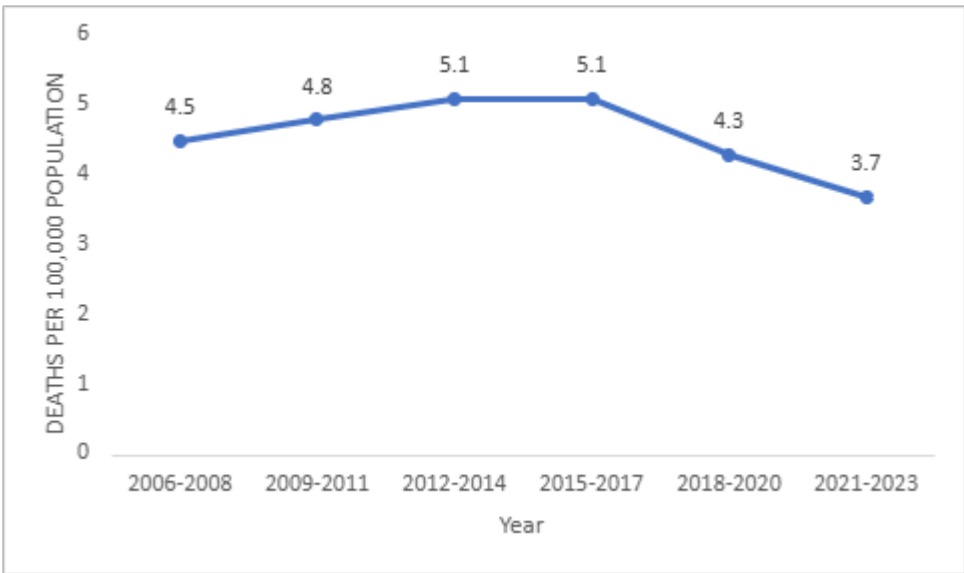
Black residents (312 per 100,000) was more than twice the rate for white residents (126 per 100,000), and higher for males (159 per 100,000) than for females (118 per 100,000).

Hepatitis C Deaths

34	Deaths in 2023 with hepatitis C listed as a cause	2.9	The crude mortality rate was 2.9 times higher for Black persons than for White persons from 2021-2023
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HCV-related mortality, defined as deaths with hepatitis C listed as an underlying or contributing cause of death on the death certificate, decreased to an average annual rate of 3.7 per 100,000 in 2021-2023 in Allegheny County after peaking at 5.1 per 100,000 (Figure 5).

Figure 5. Average annual HCV-related mortality rate, Allegheny County, 2006-2023



The HCV-related mortality rate is consistently higher in males compared to females and consistently higher in Black individuals compared to white individuals (Figure 6, 7). In 2021-2023, the HCV related mortality rate was over twice as high in males compared to females and about three times higher in Black individuals compared to White individuals.

Figure 6. Average annual HCV-related mortality rate by sex, Allegheny County, 2006-2023

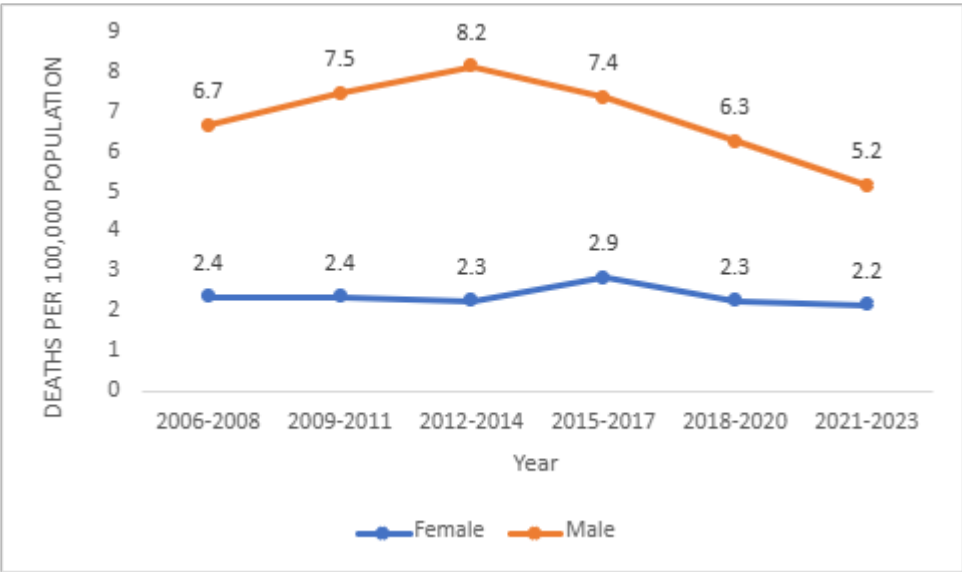
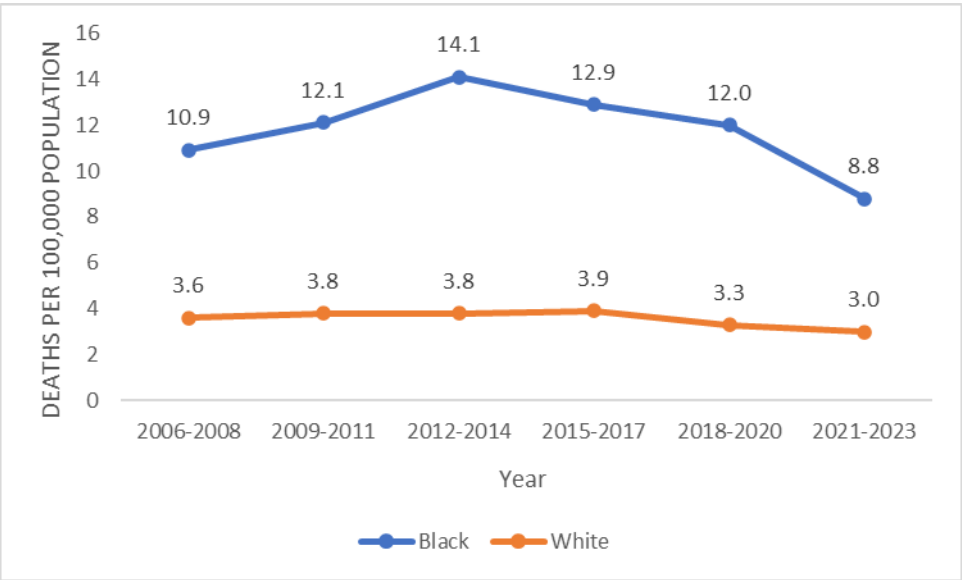
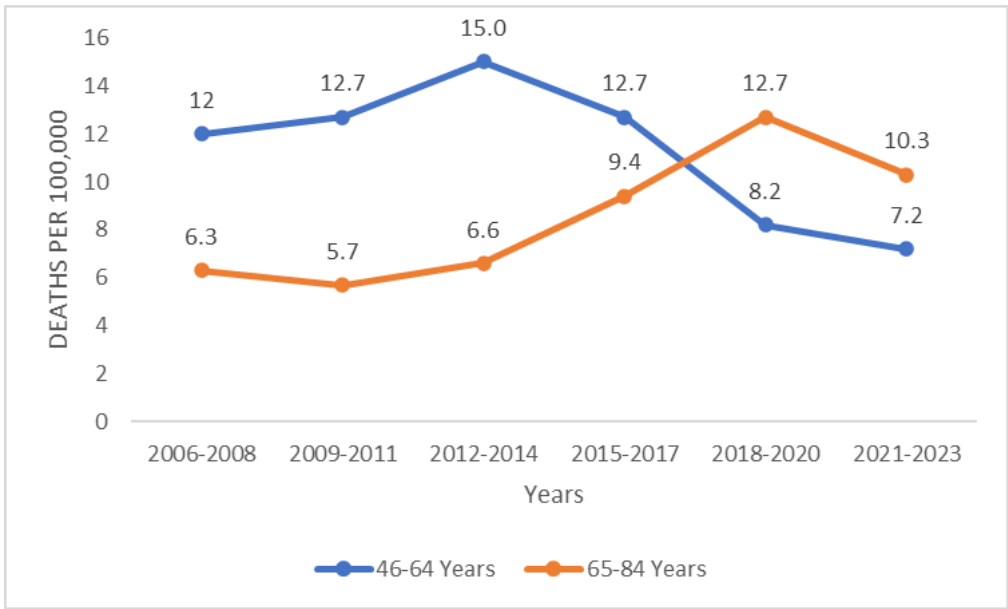


Figure 7. Average annual HCV-related mortality rate by race, Allegheny County, 2006-2023



The HCV-related mortality rate is now higher in those aged 65-84 years compared to those aged 45-64 years. The HCV-related mortality rate decreased among those aged 45-64 years from 2012-2014 to 2021-2023 while increasing among those aged 65-84 years from 2009-2011 to 2018-2020 (Figure 8).

Figure 8. Average annual HCV-related mortality rate by age group, Allegheny County, 2006-2023

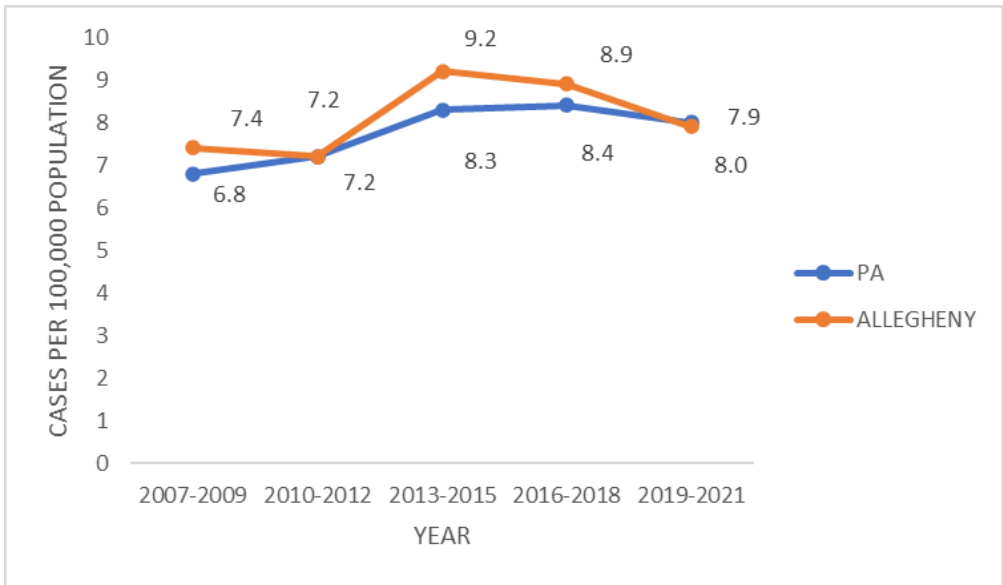


Liver Cancer

143	Average number of liver cancer cases per year, 2019-2021	16.2%	Percent increase in the liver cancer incidence rate from 2007-2009 to 2019-2021.
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HCV infection increases the likelihood of developing cirrhosis of the liver; those who have cirrhosis are at higher risk of developing hepatocellular cancer (4). Incidence rates of liver and intrahepatic bile duct cancer in Allegheny County and in PA have increased since the 2007-2009 period (Figure 9).

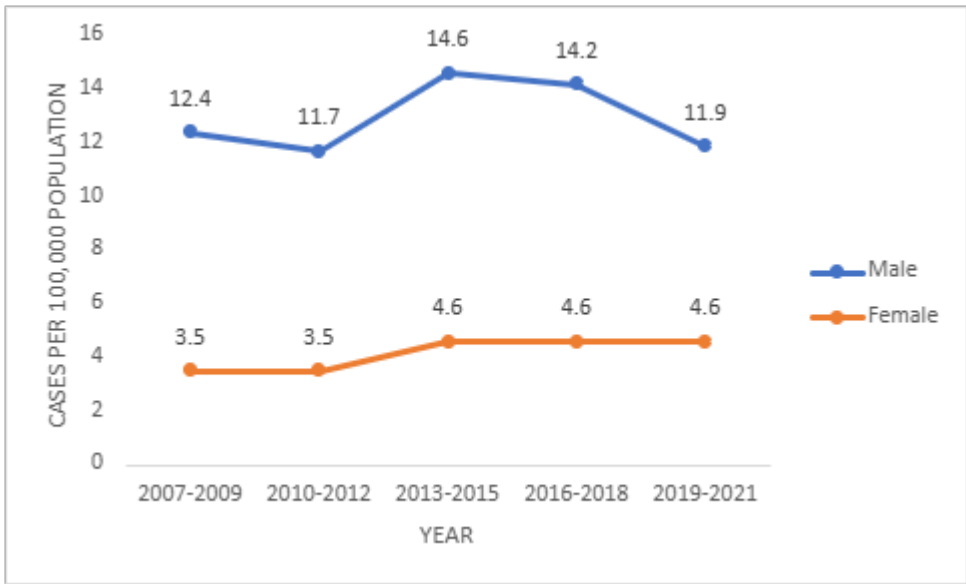
Figure 9. Age-adjusted liver and intrahepatic bile duct cancer incidence rate, Allegheny County and PA, 2007-2021



Date Source: Enterprise Data Dissemination Informatics Exchange (EDDIE)

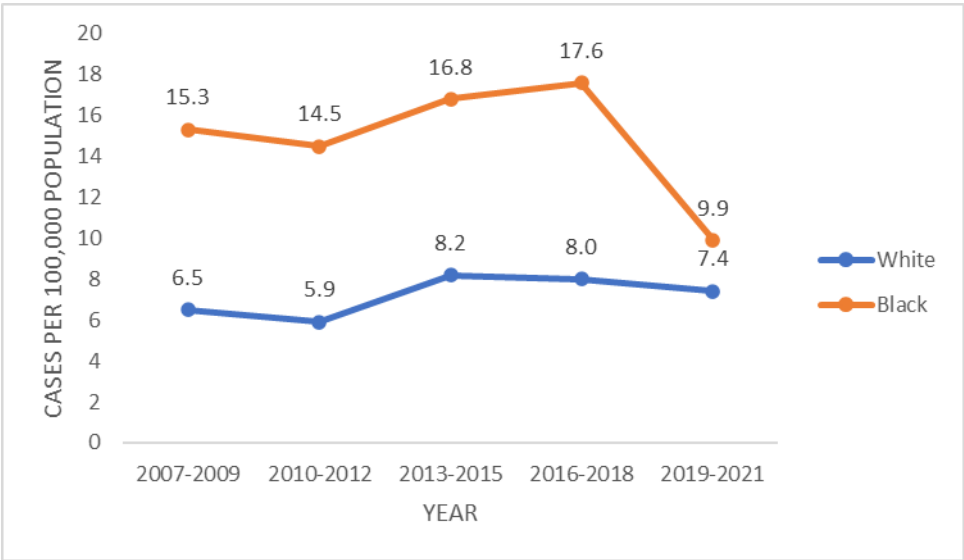
Rates are greater in males than in females, greater in Black individuals than in white individuals, and greater older persons (50+) than in younger persons (<50 years) (Figures 10-12).

Figure 10. Age-adjusted liver and intrahepatic bile duct cancer incidence rate by sex, Allegheny County, 2007-2021



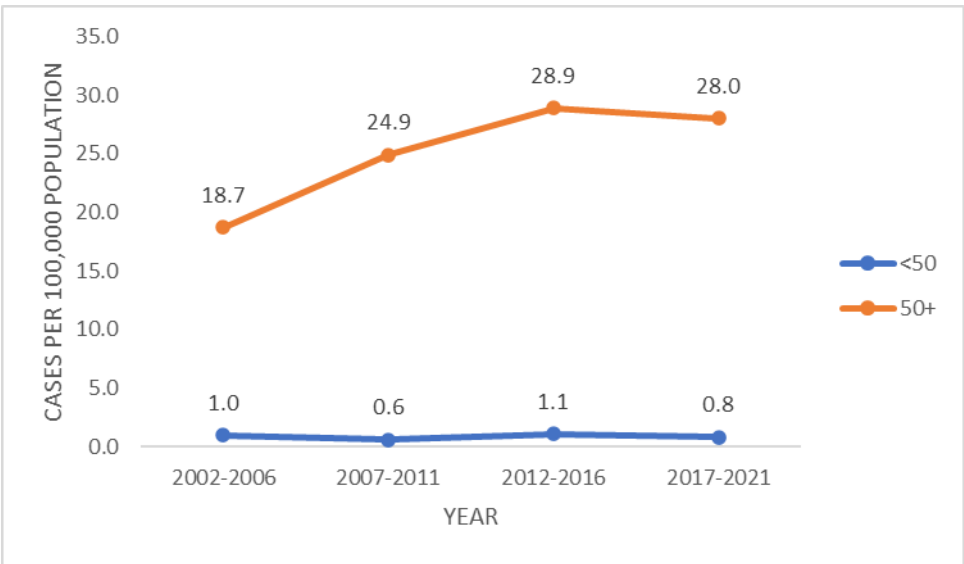
Date Source: Enterprise Data Dissemination Informatics Exchange (EDDIE)

Figure 11. Age-adjusted liver and intrahepatic bile duct cancer incidence rate by race, Allegheny County, 2007-2021



Date Source: Enterprise Data Dissemination Informatics Exchange (EDDIE)

Figure 12. Age-adjusted liver and intrahepatic bile duct cancer incidence rate by age group, Allegheny County, 2002-2021



Date Source: Enterprise Data Dissemination Informatics Exchange (EDDIE)

Disclaimer: These data were provided by the Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions.

Liver Transplants

825

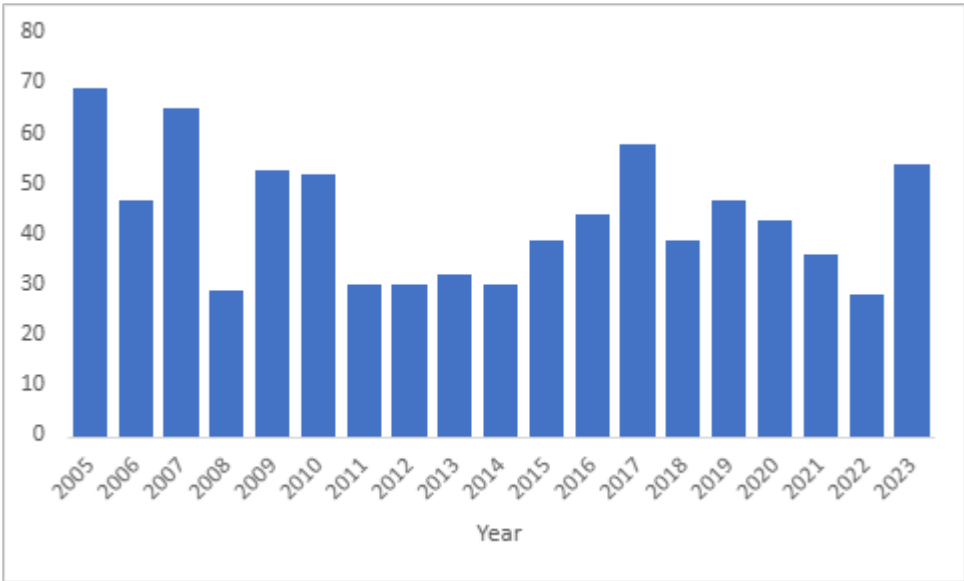
Number of liver transplants received by Allegheny County residents in 2005-2023

28%

HCV positivity among liver transplant recipients tested for HCV in 2005-2023

Chronic hepatitis C is the leading indication for a liver transplant in the US. Data from United Network for Organ Sharing (UNOS) indicate that from 2005-2023, 825 Allegheny County residents received a liver transplant (Figure 13). Hepatitis C serology results were known for 628 individuals who received a liver transplant and of these, 174 (28%) were HCV antibody positive.

Figure 13. Number of liver transplants for Allegheny County residents, 2005-2023



Date Source: OPTN data as of November 2024

The data reported here have been supplied by the United Network for Organ Sharing as the contractor for the Organ Procurement and Transplantation Network. The interpretation and reporting of these data are the responsibility of the author(s) and in no way should be seen as an official policy of or interpretation by the OPTN or the U.S. Government.

Hepatitis C and HIV Coinfections

The total number of newly reported chronic hepatitis C cases in 2022-2023 who were co-infected with HIV was 18. This represents 1.4% of newly reported chronic hepatitis C cases during those 2 years.

Hepatitis C Testing

2023 Facility Survey

ACHD conducts annual sentinel surveillance of hepatitis C testing at facilities serving high risk populations in the county. In 2023, a total of 73 agencies serving clients at high risk of viral hepatitis and HIV infection were identified and contacted. Of these, 48 (66%) responded. Of the 48 survey respondents providing information about hepatitis C antibody testing, 38 (79%) reported providing clients access to HCV antibody testing, either onsite or via linkage to a partner agency in 2023 (Table 1). Of 42 facilities providing information on hepatitis C treatment, 34 (81%) reported that their clients had access to treatment, either on site or by referral (Table 2).

Table 1. Percentage of facilities providing hepatitis C testing in Allegheny County, by facility type, 2023

	Total submitted HCV Ab information N (%)	Client access to HCV Ab testing n (%)	HCV Ab testing onsite, agency staff n (%)	HCV Ab testing onsite, partner agency n (%)	Referral to other agency for HCV ab test n (%)
Substance use treatment clinics	30 (70%)	23 (77%)	4 (17%)	13 (57%)	6 (26%)
HIV clinics	9 (64%)	7 (78%)	6 (86%)	0	1 (14%)
Homeless provider/ other behavioral	4 (50%)	3 (75%)	1 (33%)	2 (67%)	0
FQHC	3 (50%)	3 (100%)	3 (100%)	0	0
Other	2 (100%)	2 (100%)	1 (50%)	1 (50%)	0
Total	48	38 (79%)	15 (39%)	16 (42%)	7 (18%)

Table 2. Percentage of facilities providing hepatitis C treatment in Allegheny County, by facility type, 2023

	Total submitted HCV treatment information N (%)	Client access to HCV treatment n (%)	HCV treatment onsite, agency staff n (%)	HCV treatment onsite, partner agency n (%)	Referral to other agency for HCV treatment n (%)
Substance use treatment clinics	27 (63%)	23 (85%)	0	11 (48%)	12 (52%)
HIV clinics	8 (57%)	5 (63%)	5 (100%)	0	0
Homeless provider/ other behavioral	3 (38%)	2 (67%)	1 (50%)	1 (50%)	0
FQHC	2 (33%)	2 (100%)	1 (50%)	0	1 (50%)
Other	2 (100%)	2 (100%)	0	1 (50%)	1 (50%)
Total	42	34 (81%)	7 (21%)	13 (38%)	14 (41%)

ACHD Response

ACHD is a key leader in the Hep C Free Allegheny (HCFA) initiative. Launched in March 2018, HCFA unites public health agencies, private healthcare organizations, community-based organizations, drug and alcohol treatment facilities, and other partners to identify methods to increase testing for HCV and improve access to care and treatment within Allegheny County. HCFA envisions a county where new hepatitis C infections are rare and quickly identified, and people with hepatitis C are rapidly linked to care and treated, reducing hepatitis C related inequities. HCFA seeks to maximize the health and wellness of all Allegheny County residents living with and at risk for hepatitis C by expanding prevention, harm reduction, education, testing and timely access to care and treatment. ACHD's Bureau of Data, Reporting and Disease Control leads the HCFA surveillance workgroup and will continue to monitor cases and sequelae of HCV infection in Allegheny County to inform the work of HCFA.

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Appendix

Case definitions are provided by the CDC and CSTE to ensure consistent reporting across the states. Below is the current case definition for hepatitis C.

Classification	Description
<u>Acute</u>	
<i>Confirmed</i>	Clinical criteria present and positive HCV nucleic acid test (NAT) for RNA or HCV antigen test OR Negative HCV antibody test followed within 12 months by a positive HCV antibody test OR Negative HCV antibody test OR negative HCV detection test (in person without prior diagnosis of HCV infection) followed within 12 months by a positive HCV NAT
<i>Probable</i>	Clinical criteria present, no HCV detection test reported, and no HCV antibody or HCV NAT test within 12 months
<u>Chronic</u>	
<i>Confirmed</i>	Positive HCV NAT, HCV antigen test, or genotype results without clinical information consistent with acute infection (i.e. no present symptoms)
<i>Probable</i>	Positive HCV antibody test but no confirmatory HCV NAT test and no clinical information consistent with acute infection