
Section 7. Viral Hepatitis

Hepatitis is defined as inflammation or swelling of the liver. The most common types of viral hepatitis in the United States are hepatitis A, hepatitis B, and hepatitis C. Although all these viruses affect the liver, the symptoms, severity, and primary modes of transmission differ based on the type of hepatitis. This section presents a detailed look at persons that met at least the minimum surveillance diagnostic criteria defined below for viral hepatitis between 2007 and 2011. This report does not describe all persons in the District living with viral hepatitis, i.e. those diagnosed prior to 2007 and still living with the disease.

The purpose of the viral hepatitis surveillance system in DC is to systematically assess the burden of disease, monitor trends, and identify possible outbreaks. Locally, confirmed chronic hepatitis B or C cases include a complete series of labs. A probable case of chronic hepatitis B or C is a combination of reported lab results that are an incomplete series and don't include all results necessary to confirm a diagnosis. A suspect case of chronic hepatitis C includes a single positive lab result indicative of possible chronic hepatitis C. For this report, unless otherwise noted "Chronic Hepatitis B" refers to confirmed or probable cases; "Chronic Hepatitis C" refers to a confirmed, probable, or suspect case; and "Acute Hepatitis A" refers to a laboratory confirmed case.

Chronic Hepatitis B

Hepatitis B virus is transmitted through contact with bodily fluids from an infected person; fluids include blood, semen, and vaginal fluid. Chronic hepatitis B begins as an acute infection, but in some people the immune system fails to clear the infection and it becomes chronic.

According to the CDC, among persons exposed to hepatitis B virus, the risk for chronic infection varies according to age at infection and is greatest among young children. Approximately 90% of infants and 25 to 50% of children less than 5 years of age remain chronically infected with hepatitis B. By contrast, approximately 95% of adults recover completely from acute infection and do not develop chronic disease.

Pediatric cases of hepatitis B are reported to HAHSTA and case investigation falls under the jurisdiction of the DOH Division of Immunizations. However, pediatric cases of chronic hepatitis B reported 2007 to 2011 are incorporated into the data presented here.

Table 9. Reported Chronic Hepatitis B Cases by Sex, Race/Ethnicity, Age at Diagnosis, and Year of Diagnosis
District of Columbia, 2007-2011

Chronic Hepatitis B Cases		
	N	%
Gender		
Male	1,774	60.7
Female	1,127	38.5
Transgender/Unknown	23	0.8
Total	2,924	100.0
Race/Ethnicity		
Black	759	26.0
White	100	3.4
Hispanic	32	1.1
Asian/Pacific Islander	118	4.0
American Indian	3	0.1
Mixed	13	0.4
Unknown	1,899	64.9
Total	2,924	100.0
Age at Diagnosis		
0 - 12	9	0.3
13 - 19	43	1.5
20 - 29	369	12.6
30 - 39	705	24.1
40 - 49	764	26.1
50 - 59	663	22.7
≥60	371	12.7
Unknown	0	0.0
Total	2,924	100.0
Year of Diagnosis		
2007	825	28.2
2008	519	17.7
2009	527	18.0
2010	573	19.6
2011	480	16.4
Total	2,924	100.0
Case Classification		
Confirmed	618	21.1
Probable	2,306	78.9
Total	2,924	100.0

Figure 34. Newly Reported Cases of Chronic Hepatitis B by Age at Diagnosis and Sex

District of Columbia, 2007-2011

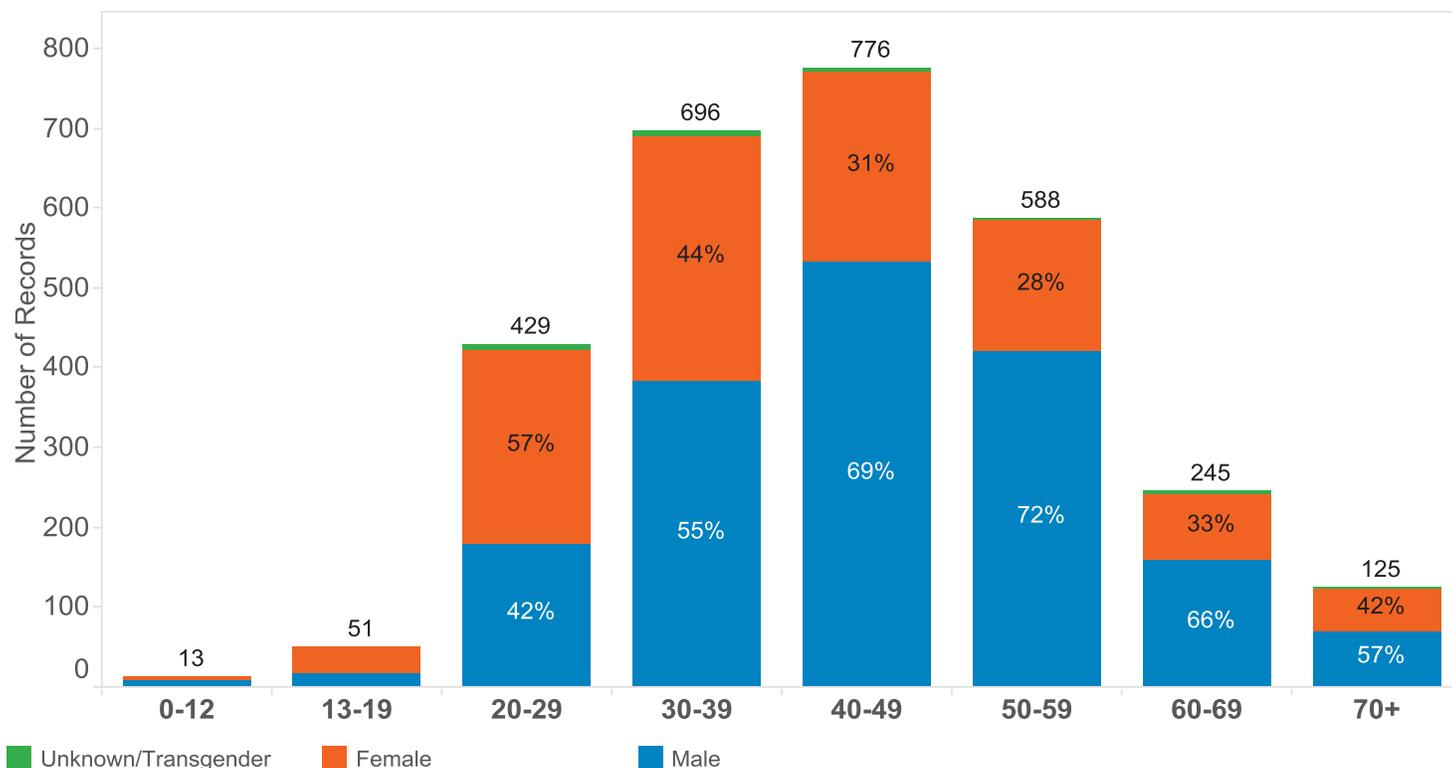


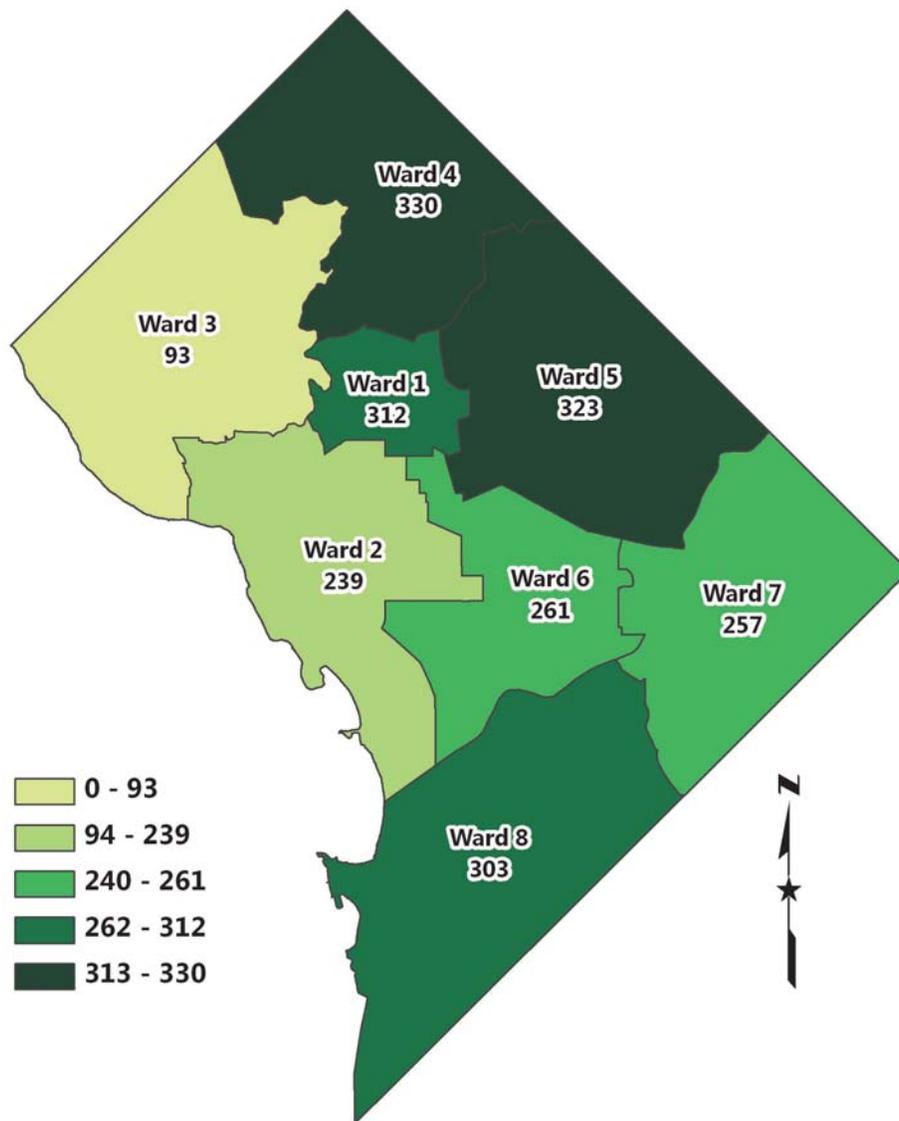
Table 9

- Between 2007 and 2011, 2,924 people were reported to have chronic hepatitis B in the District.
- Race/ethnicity data were missing for the majority of cases (64.9%); among those with available information, 74.0% were black and 11.5% were Asian/Pacific Islander.
- The total number of chronic hepatitis B cases reported to the District decreased 41% between 2007 and 2011—from 825 to 480 cases.
- More than 75% of hepatitis reports are probable cases; only 21% are confirmed at time of report.

Figure 34

- Among persons less than 30 years of age at diagnosis, more than half were women. However among persons 30 years of age or older at diagnosis, more than half were men.
- The majority of the burden of hepatitis B continues to be among the 40 to 49 age group.

Map 6. Number of Newly Diagnosed Chronic Hepatitis B Cases by Ward
District of Columbia, 2007-2011



- Address and ward information was available for 77.0% of chronic hepatitis B cases.
- Ward 4 had the greatest number of chronic hepatitis B cases diagnosed between 2007 and 2011 (n=330).
- Ward 3 had the lowest number of chronic hepatitis B cases diagnosed between 2007 and 2011 (n=93).
- In addition, 81 chronic hepatitis B cases were diagnosed in jail and 53 chronic hepatitis B cases were homeless at diagnosis between 2007 and 2011.

Chronic Hepatitis C

Hepatitis C is transmitted through blood and the most common mode of transmission is sharing contaminated injection drug equipment, needles, or syringes. Hepatitis C is also transmitted through sexual contact with an infected person, needle sticks, and from pregnant women to their children, although these modes occur less frequently than through contaminated injection drug equipment.

Table 10. Reported Chronic Hepatitis C Cases by Sex, Race/Ethnicity, Age at Diagnosis, and Year of Diagnosis
District of Columbia, 2007-2011

Chronic Hepatitis C Cases		
	N	%
Gender		
Male	8,969	66.3
Female	4,463	33.0
Transgender/Unknown	88	0.7
Total	13,520	100.0
Race/Ethnicity		
Black	3,993	29.5
White	254	1.9
Hispanic	57	0.4
Asian/Pacific Islander	88	0.7
American Indian	1	0.0
Mixed	16	0.1
Unknown	9,111	67.4
Total	13,520	100.0
Age at Diagnosis		
0 - 12	46	0.3
13 - 19	37	0.3
20 - 29	361	2.7
30 - 39	621	4.6
40 - 49	2,669	19.7
50 - 59	7,248	53.6
≥60	2,538	18.8
Unknown	0	0.0
Total	13,520	100.0
Year of Diagnosis		
2007	3,357	24.8
2008	2,742	20.3
2009	2,722	20.1
2010	2,448	18.1
2011	2,251	16.6
Total	13,520	100.0
Case Classification		
Confirmed	10,338	76.5
Probable	172	1.3
Suspect	3,010	22.3
Total	13,520	100.0

According to the CDC, out of every 100 persons infected with hepatitis C approximately:

- 75 to 85 will develop chronic infection
- 60 to 70 will develop chronic liver disease
- 5 to 20 will develop cirrhosis, or scarring of the liver, 20 to 30 years post infection
- 1 to 5 will die from the consequences of chronic infection (liver cancer or cirrhosis)

Chronic hepatitis C is the leading cause of liver transplantation in the US. However, infected persons can take measures to prolong the health of their liver. These precautions include reducing or stopping alcohol use, following a healthy diet, and checking with health professionals before taking any medications.

Figure 35. Newly Reported Cases of Chronic Hepatitis C by Age at Diagnosis and Sex
District of Columbia, 2007-2011

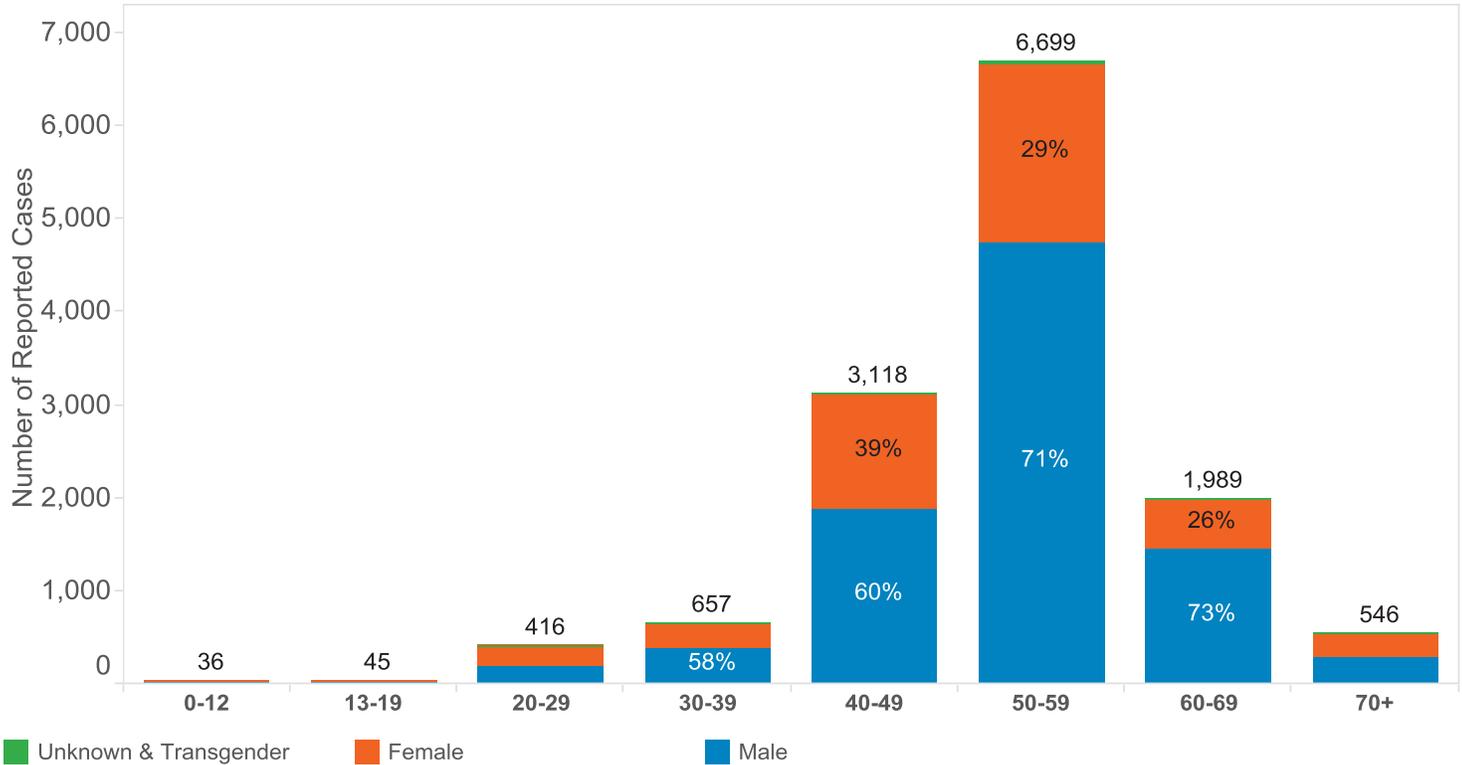


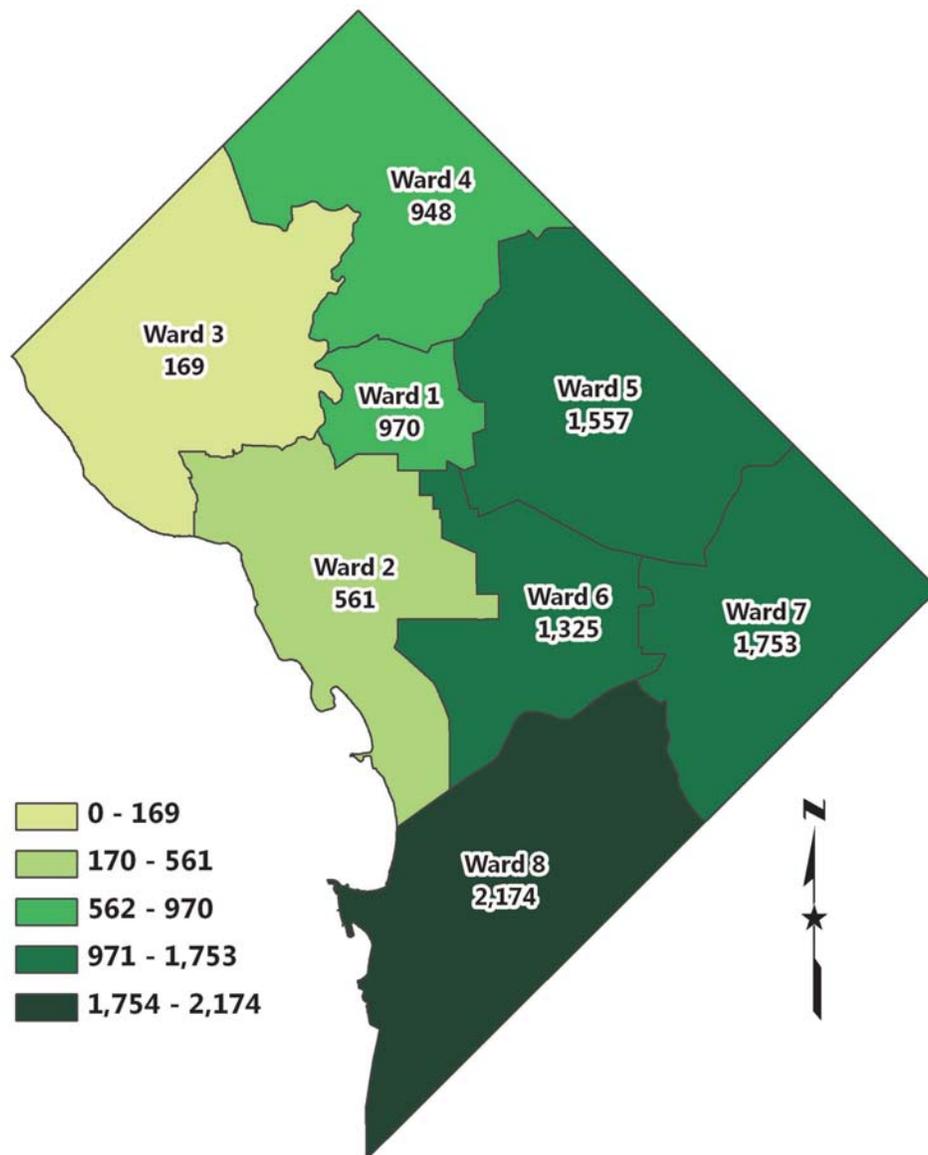
Table 10

- From 2007 to 2011, there were 13,520 reports of chronic hepatitis C in the District.
- Nearly all (92.1%) chronic hepatitis C cases were diagnosed among persons 40 years of age or older, with the largest proportion (49.6%) of reported diagnoses among persons 50 to 59 years of age.
- As with hepatitis B, two-thirds (67.4%) of the cases had missing race/ethnicity; among cases with available data, 90.7% were black.
- The majority of chronic hepatitis C cases diagnosed in the District are confirmed (77%). Approximately 22% of the reports are for suspect cases, without a confirmatory test reported.
- The District is improving and expanding hepatitis C screening which may lead to an increase in confirmed hepatitis C cases.

Figure 35

- More than half of the chronic hepatitis C cases diagnosed in each age group were men.
- The 50-59 age group has the majority of hepatitis C cases diagnosed in the District, more than twice the number as 40 to 49 year olds, the group with the next largest number of reported cases.

Map 7. Number of Newly Diagnosed Chronic Hepatitis C Cases by Ward
District of Columbia, 2007-2011



- Address and ward information was available for 78.6 of chronic hepatitis C cases.
- Ward 8 had the greatest number of chronic hepatitis C cases diagnosed between 2007 and 2011 (n=2,174).
- Ward 3 had the lowest number of chronic hepatitis C cases diagnosed between 2007 and 2011 (n=169).
- In addition, 679 chronic hepatitis C cases were diagnosed in jail and 496 chronic hepatitis C cases were homeless at time of diagnosis, between 2007 and 2011.

Acute Hepatitis A

Hepatitis A infection is an acute or newly occurring liver disease, which can last from a few weeks to several months. The majority of people with hepatitis A are able to clear the infection from their bodies and their symptoms improve without treatment. Once exposed to hepatitis A either by vaccination or natural infection, a person develops lifelong antibodies that will protect them against the virus should they be exposed again. Hepatitis A is spread by ingesting fecal matter contaminated by the hepatitis A virus. Common modes of transmission include direct contact with objects, foods, or drinks that have been handled by an infected individual, engaging in oral-anal sexual activity (rimming) with an infected person, eating contaminated produce, or eating raw or undercooked mollusks from contaminated waters.

Table 11. Reported Acute Hepatitis A Cases by Sex, Race/Ethnicity, Age at Diagnosis, Year of Diagnosis
District of Columbia, 2007-2011

Acute Hepatitis A Cases*		
	N	%
Gender		
Male	112	60.5
Female	71	38.4
Transgender/Unknown	2	1.1
Total	185	100.0
Race/Ethnicity		
Black	55	29.7
White	21	11.4
Hispanic	4	2.2
Asian/Pacific Islander	3	1.6
American Indian	1	0.5
Mixed	1	0.5
Unknown	100	54.1
Total	185	100.0
Age at Diagnosis		
0 - 12	1	0.5
13 - 19	5	2.7
20 - 29	28	15.1
30 - 39	30	16.2
40 - 49	35	18.9
50 - 59	48	25.9
≥60	38	20.5
Unknown	0	0.0
Total	185	100.0
Year of Diagnosis		
2007	41	22.2
2008	37	20.0
2009	50	27.0
2010	34	18.4
2011	23	12.4
Total	185	100.0

Figure 36. Newly Reported Cases of Acute Hepatitis A by Age at Diagnosis and Sex
 District of Columbia, 2007-2011

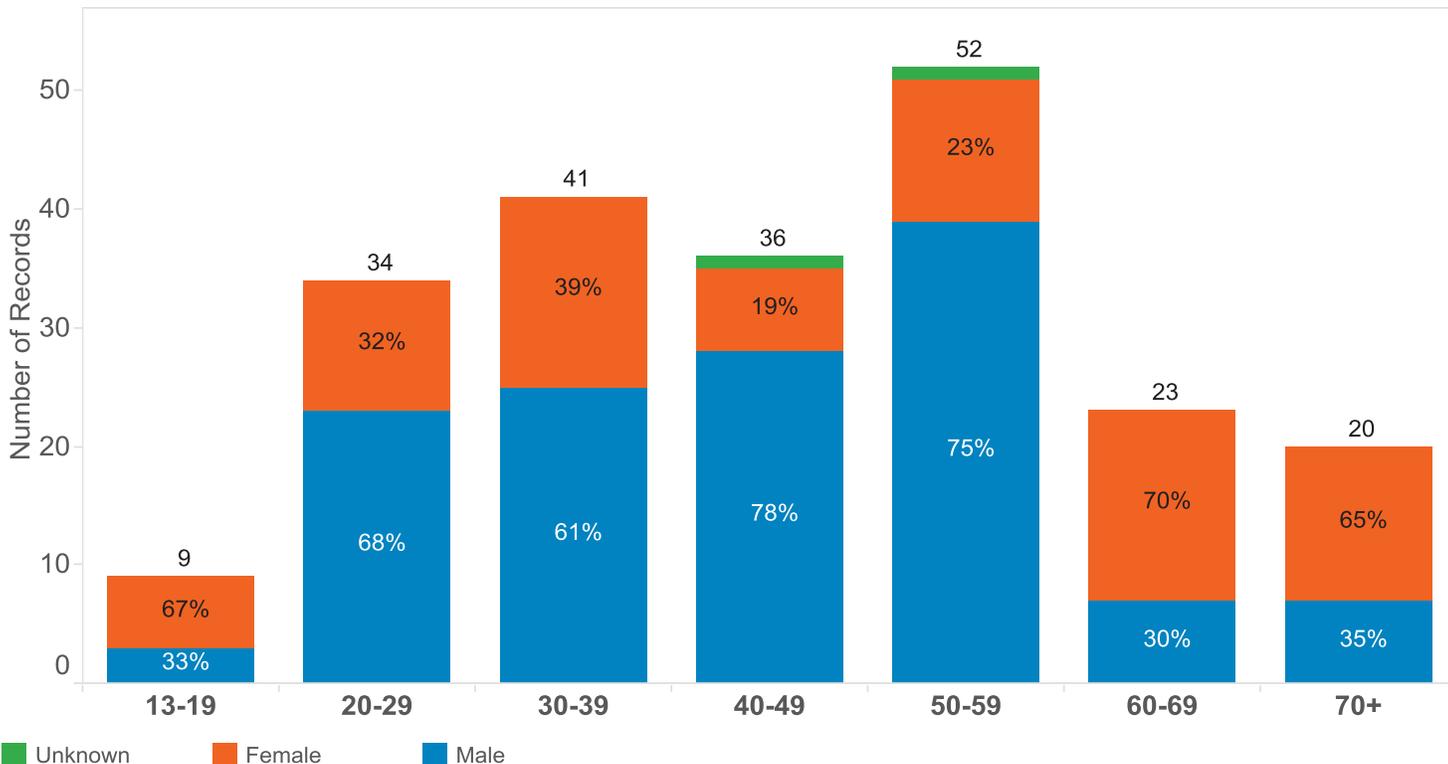


Table 11

- There were 185 reports of acute hepatitis A between 2007 and 2011 in the District.
- Almost half (54.1%) of individuals diagnosed with acute hepatitis A have unknown race/ethnicity. Among those with known race/ethnicity, 47.8% of the cases were black.

Figure 36

- Overall, more than half (52.1%) of acute hepatitis A cases occurred among men. Among young persons 13 to 19 years old and persons 60+ years old the majority of cases were women.