Centers for Disease Control and Prevention National Center for HIV, Viral Hepatitis, STD, and TB Prevention



Viral Hepatitis Surveillance Report

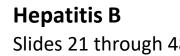
United States, 2020

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Hepatitis A Slides 3 through 20







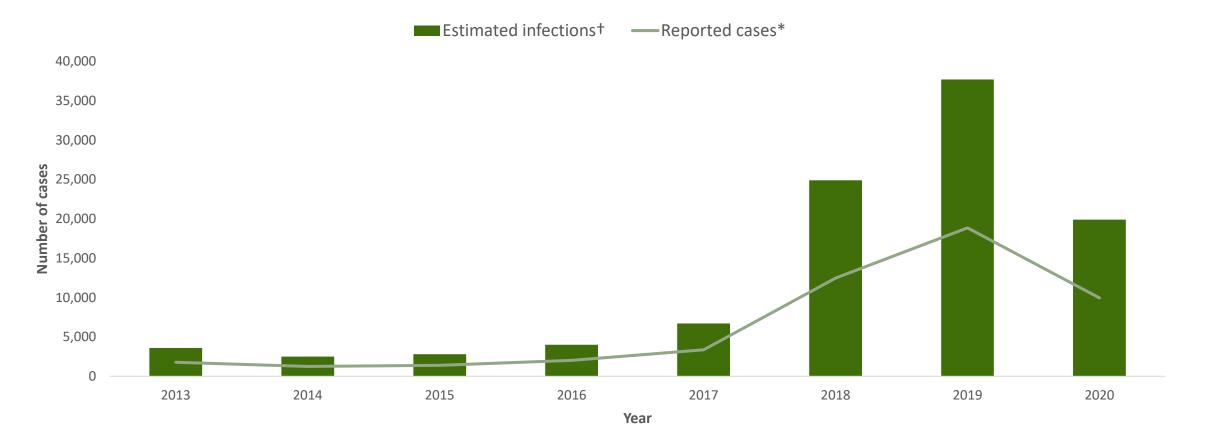
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Hepatitis C Slides 49 through 78 Appendix Slides 87 through 91



The slides in this deck are color coded and grouped according to each hepatitide based on the scheme above.

Figure 1.1 – Part 1 of 2 Number of reported cases* of hepatitis A virus infection and estimated infections† United States, 2013–2020



Source: CDC, National Notifiable Diseases Surveillance System.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



*Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/</u>.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Figure 1.1 – Part 2 of 2 Number of reported cases* of hepatitis A virus infection and estimated infections† United States, 2013–2020

Hepatitis A	2013	2014	2015	2016	2017	2018	2019	2020
Reported cases*	1,781	1,239	1,390	2,007	3,366	12,474	18,846	9,952
Estimated infections [†]	3,600	2,500	2,800	4,000	6,700	24,900	37,700	19,900

Source: CDC, National Notifiable Diseases Surveillance System.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections	
from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.	

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



*Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/</u>.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Table 1.1 – Part 1 of 3 Number and rates* of reported cases† of hepatitis A virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Alabama	19	0.4	23	0.5	38	0.8	242	4.9	966	19.6
Alaska	2	0.3	—	—	1	0.1	2	0.3	—	—
Arizona	32	0.5	59	0.8	77	1.1	584	8	45	0.6
Arkansas	13	0.4	7	0.2	254	8.4	203	6.7	396	13.1
California	229	0.6	947	2.4	189	0.5	256	0.6	203	0.5
Colorado	22	0.4	65	1.2	31	0.5	333	5.8	91	1.6
Connecticut	16	0.4	17	0.5	15	0.4	17	0.5	14	0.4
Delaware	1	0.1	6	0.6	7	0.7	36	3.7	28	2.8
District of Columbia	4	0.6	3	0.4	11	1.6	15	2.1	7	1
Florida	115	0.6	261	1.2	548	2.6	3,392	15.8	1,021	4.7
Georgia	44	0.4	24	0.2	84	0.8	844	7.9	588	5.5
Hawaii	285	20	8	0.6	4	0.3	1	0.1	8	0.6
Idaho	7	0.4	4	0.2	5	0.3	75	4.2	21	1.1
Illinois	71	0.6	73	0.6	93	0.7	185	1.5	97	0.8
Indiana	18	0.3	21	0.3	964	14.4	1,398	20.8	195	2.9
lowa	16	0.5	9	0.3	10	0.3	9	0.3	6	0.2
Kansas	5	0.2	6	0.2	14	0.5	10	0.3	317	10.9

* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/</u>.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 1.1 – Part 2 of 3 Number and rates* of reported cases† of hepatitis A virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Kentucky	9	0.2	71	1.6	3,560	79.7	1,318	29.5	57	1.3
Louisiana	12	0.3	8	0.2	37	0.8	687	14.8	790	17
Maine	8	0.6	7	0.5	9	0.7	45	3.3	145	10.7
Maryland	37	0.6	29	0.5	52	0.9	88	1.5	366	6
Massachusetts	64	0.9	52	0.8	364	5.3	204	3	32	0.5
Michigan	112	1.1	670	6.7	299	3	70	0.7	21	0.2
Minnesota	15	0.3	30	0.5	16	0.3	76	1.3	70	1.2
Mississippi	2	0.1	3	0.1	13	0.4	128	4.3	357	12
Missouri	16	0.3	27	0.4	243	4	359	5.8	350	5.7
Montana	3	0.3	3	0.3	_	—	15	1.4	8	0.7
Nebraska	21	1.1	4	0.2	6	0.3	15	0.8	6	0.3
Nevada	14	0.5	19	0.6	41	1.4	102	3.3	20	0.6
New Hampshire	8	0.6	7	0.5	12	0.9	309	22.7	27	2
New Jersey	74	0.8	71	0.8	70	0.8	610	6.9	155	1.7
New Mexico	4	0.2	4	0.2	23	1.1	104	5	6	0.3
New York	99	0.5	218	1.1	165	0.8	391	2	257	1.3
North Carolina	52	0.5	29	0.3	103	1	154	1.5	509	4.8
North Dakota	2	0.3	_	_	_	_	4	0.5	1	0.1

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 1.1 – Part 3 of 3 Number and rates* of reported cases† of hepatitis A virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Ohio	36	0.3	45	0.4	1,687	14.4	1,802	15.4	276	2.4
Oklahoma	11	0.3	9	0.2	5	0.1	13	0.3	15	0.4
Oregon	15	0.4	20	0.5	23	0.5	27	0.6	28	0.7
Pennsylvania	62	0.5	69	0.5	99	0.8	696	5.4	124	1
Rhode Island	4	0.4	6	0.6	7	0.7	6	0.6	4	0.4
South Carolina	21	0.4	21	0.4	30	0.6	662	12.9	1,197	22.9
South Dakota	1	0.1	1	0.1	1	0.1	8	0.9	1	0.1
Tennessee	7	0.1	6	0.1	654	9.7	2,160	31.6	264	3.8
Texas	139	0.5	129	0.5	88	0.3	159	0.5	223	0.8
Utah	12	0.4	159	5.1	135	4.3	20	0.6	12	0.4
Vermont	5	0.8	2	0.3	3	0.5	12	1.9	18	2.9
Virginia	190	2.3	46	0.5	82	1	309	3.6	214	2.5
Washington	31	0.4	28	0.4	35	0.5	181	2.4	284	3.7
West Virginia	15	0.8	6	0.3	2,247	124.4	467	26.1	97	5.4
Wisconsin	7	0.1	16	0.3	15	0.3	31	0.5	12	0.2
Wyoming	_	_	18	3.1	5	0.9	12	2.1	3	0.5
Total	2,007	0.6	3,366	1.0	12,474	3.8	18,846	5.7	9,952	3.0

* Rates per 100,000 population.

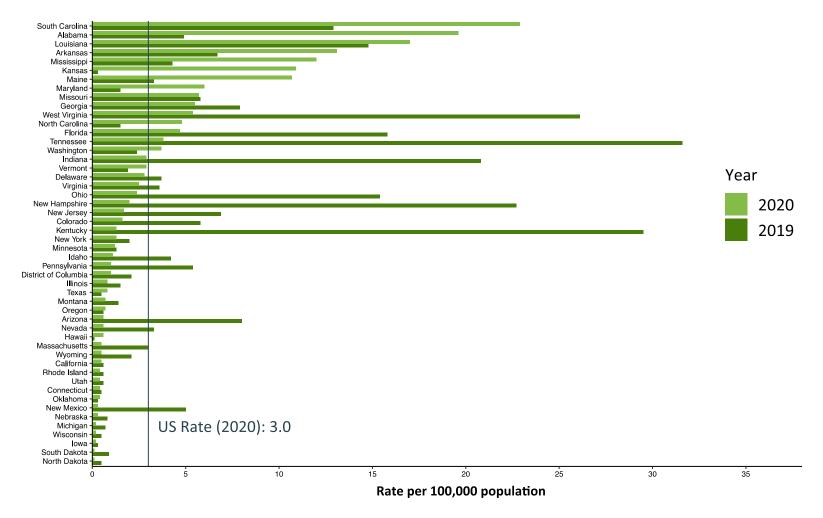
⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/</u>.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 1.2 Rates* of reported cases† of hepatitis A virus infection, by state or jurisdiction United States, 2019–2020



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

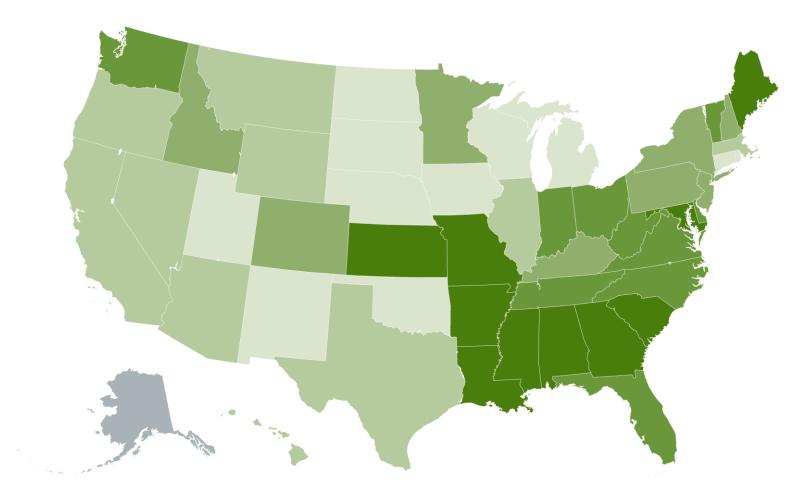
Alaska was not included as no hepatitis A cases were reported in 2020.

State or jurisdiction ranked in decreasing order by the 2020 rate, 2019 rate, and then alphabetical order by name.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 1.3 Rates* of reported cases† of hepatitis A virus infection, by state or jurisdiction United States, 2020



Cases/100,000 Population 0.0–0.4 2.3–5.4 0.5–0.8 5.5–22.9 0.9–2.2 No reported cases

Color Key	Cases/100,000 Population	State or Jurisdiction
	0.0–0.4	ND, SD, IA, MI, WI, NE, NM, CT, OK, RI, UT
	0.5–0.8	CA, MA, WY, AZ, HI, NV, MT, OR, IL, TX
	0.9–2.2	DC, PA, ID, MN, KY, NY, CO, NJ, NH
	2.3–5.4	OH, VA, DE, IN, VT, WA, TN, FL, NC, WV
	5.5–22.9	GA, MO, MD, ME, KS, MS, AR, LA, AL, SC
	No reported cases	VK

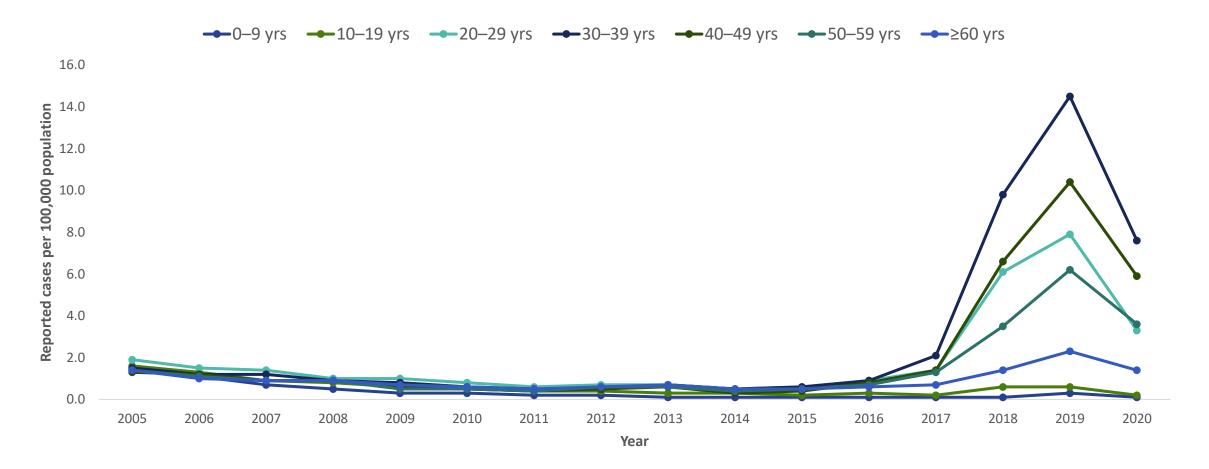
No reported cases AK

Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.

* Rates per 100,000 population.

Figure 1.4 – Part 1 of 2 Rates* of reported cases† of hepatitis A virus infection, by age group United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

Figure 1.4 – Part 2 of 2 Rates* of reported cases† of hepatitis A virus infection, by age group United States, 2005–2020

Age (years)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0–9	1.4	1.1	0.7	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1
10–19	1.6	1.3	0.9	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.6	0.6	0.2
20–29	1.9	1.5	1.4	1.0	1.0	0.8	0.6	0.7	0.7	0.5	0.6	0.9	1.4	6.1	7.9	3.3
30–39	1.5	1.2	1.2	0.9	0.8	0.6	0.5	0.5	0.7	0.5	0.6	0.9	2.1	9.8	14.5	7.6
40–49	1.3	1.2	0.9	0.9	0.6	0.5	0.4	0.5	0.6	0.3	0.4	0.8	1.4	6.6	10.4	5.9
50–59	1.4	1.1	0.9	0.9	0.5	0.5	0.4	0.6	0.6	0.4	0.5	0.7	1.3	3.5	6.2	3.6
≥60	1.4	1.0	0.9	0.9	0.7	0.6	0.5	0.6	0.7	0.5	0.5	0.6	0.7	1.4	2.3	1.4

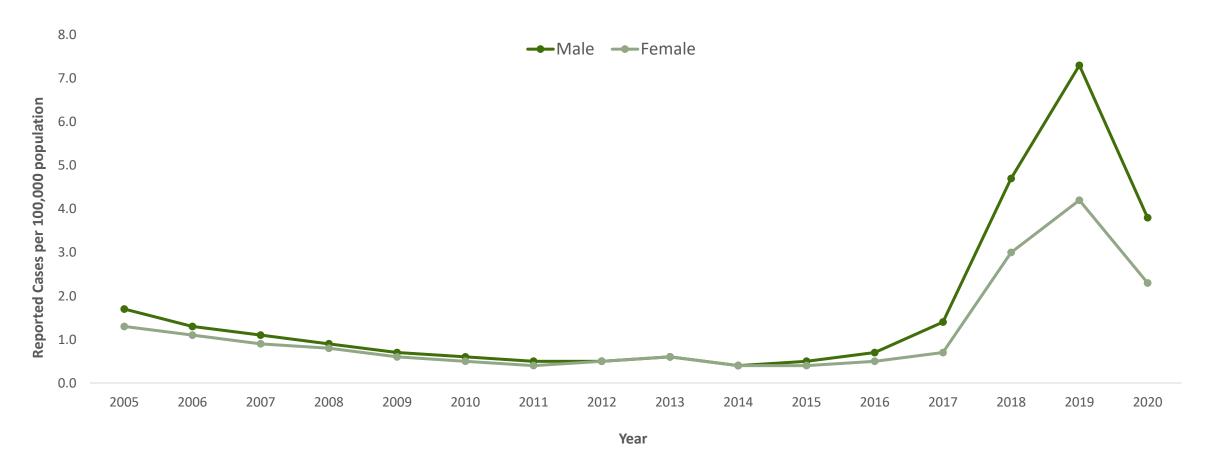
Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

Figure 1.5 – Part 1 of 2 Rates* of reported cases† of hepatitis A virus infection, by sex United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

Figure 1.5 – Part 2 of 2 Rates* of reported cases† of hepatitis A virus infection, by sex United States, 2005–2020

Sex	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Male	1.7	1.3	1.1	0.9	0.7	0.6	0.5	0.5	0.6	0.4	0.5	0.7	1.4	4.7	7.3	3.8
Female	1.3	1.1	0.9	0.8	0.6	0.5	0.4	0.5	0.6	0.4	0.4	0.5	0.7	3.0	4.2	2.3

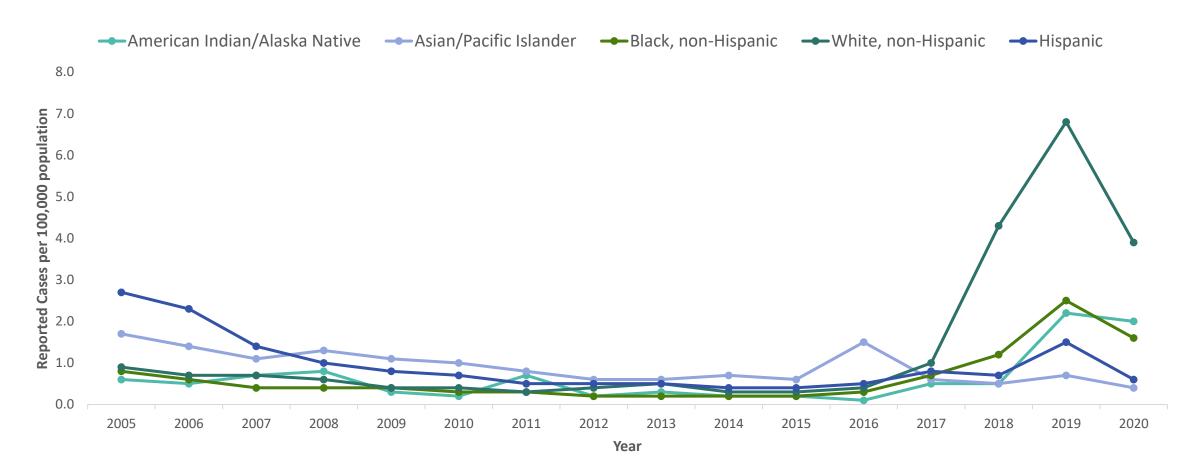
Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/</u>.

Figure 1.6 – Part 1 of 2 Rates* of reported cases† of hepatitis A virus infection, by race/ethnicity United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

Figure 1.6 – Part 2 of 2 Rates* of reported cases† of hepatitis A virus infection, by race/ethnicity United States, 2005–2020

Race/ethnicity	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
American Indian/Alaska Native	0.6	0.5	0.7	0.8	0.3	0.2	0.7	0.2	0.3	0.2	0.2	0.1	0.5	0.5	2.2	2.0
Asian/Pacific Islander	1.7	1.4	1.1	1.3	1.1	1.0	0.8	0.6	0.6	0.7	0.6	1.5	0.6	0.5	0.7	0.4
Black, non- Hispanic	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.7	1.2	2.5	1.6
White, non- Hispanic	0.9	0.7	0.7	0.6	0.4	0.4	0.3	0.4	0.5	0.3	0.3	0.4	1.0	4.3	6.8	3.9
Hispanic	2.7	2.3	1.4	1.0	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.5	0.8	0.7	1.5	0.6

Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

Table 1.2 – Part 1 of 2 Numbers and rates* of reported cases† of hepatitis A virus infection, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Total [§]	2,007	0.6	3,366	1.0	12,474	3.8	18,846	5.7	9,952	3.0
Age (years)										
0–9	47	0.1	40	0.1	54	0.1	127	0.3	39	0.1
10–19	131	0.3	86	0.2	231	0.6	231	0.6	90	0.2
20–29	392	0.9	659	1.4	2,763	6.1	3,582	7.9	1,476	3.3
30–39	391	0.9	893	2.1	4,268	9.8	6,400	14.5	3,381	7.6
40–49	333	0.8	621	1.5	2,658	6.6	4,177	10.4	2,389	5.9
50–59	297	0.7	554	1.3	1,509	3.5	2,635	6.2	1,497	3.6
≥60	409	0.6	509	0.7	987	1.4	1,691	2.3	1,077	1.4
Sex										
Male	1,107	0.7	2,209	1.4	7,497	4.7	11,824	7.3	6,141	3.8
Female	897	0.5	1,149	0.7	4,952	3.0	6,997	4.2	3,802	2.3
Race/ethnicity										
American Indian/Alaska Native	3	0.1	13	0.5	15	0.5	60	2.2	56	2.0
Asian/Pacific Islander	299	1.5	124	0.6	104	0.5	139	0.7	92	0.4
Black, non-Hispanic	137	0.3	303	0.7	508	1.2	1,072	2.5	693	1.6
White, non-Hispanic	865	0.4	1,979	1.0	8,670	4.3	13,709	6.8	7,780	3.9
Hispanic	293	0.5	471	0.8	413	0.7	916	1.5	386	0.6

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

Source: CDC, National Notifiable Diseases Surveillance System.



Table 1.2 – Part 2 of 2 Numbers and rates* of reported cases† of hepatitis A virus infection, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Urbanicity ¹										
Urban	1,769	0.6	3,055	1.1	7,657	2.7	14,637	5.2	7,972	2.8
Rural	182	0.4	180	0.4	3,153	6.8	3,372	7.3	1,853	4.0
HHS Region**										
Region 1: Boston	105	0.7	91	0.6	410	2.8	593	4.0	240	1.6
Region 2: New York	173	0.6	289	1.0	235	0.8	1,001	3.5	412	1.5
Region 3: Philadelphia	309	1.0	159	0.5	2,498	8.1	1,611	5.2	836	2.7
Region 4: Atlanta	269	0.4	438	0.7	5,030	7.6	8,900	13.3	4,959	7.3
Region 5: Chicago	259	0.5	855	1.6	3,074	5.9	3,562	6.8	671	1.3
Region 6: Dallas	179	0.4	157	0.4	407	1.0	1,166	2.7	1,430	3.3
Region 7: Kansas City	58	0.4	46	0.3	273	1.9	393	2.8	679	4.8
Region 8: Denver	40	0.3	246	2.1	172	1.4	392	3.2	116	0.9
Region 9: San Francisco	560	1.1	1,033	2.0	311	0.6	943	1.8	276	0.5
Region 10: Seattle	55	0.4	52	0.4	64	0.5	285	2.0	333	2.3

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

¶ Urbanicity was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (<u>https://www.cdc.gov/nchs/data_access/urban_rural.htm</u>). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

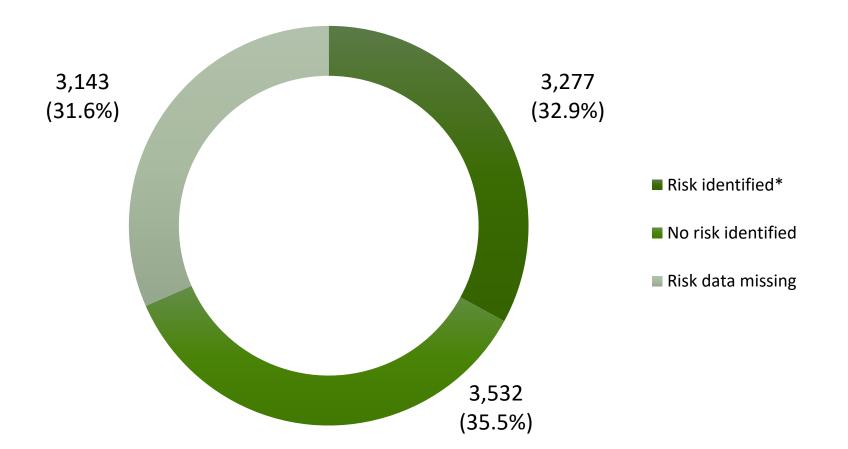
** US Department of Health and Human Services (HHS) Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices

(https://www.hhs.gov/about/agencies/iea/regional-offices/index.html). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 1.7 Availability of information regarding risk behaviors or exposures* associated with reported cases of hepatitis A virus infection United States, 2016–2020



* Case reports with at least one of the following risk behaviors/exposures reported 2-6 weeks prior to symptom onset or documented seroconversion if asymptomatic: 1) injection drug use; 2) sexual, household, or other contact;
3) men who have sex with men; 4) travel to hepatitis A-endemic region. Reported cases may include more than one risk behavior/exposure.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 1.3 Reported risk behaviors or exposures among reported cases* of hepatitis A virus infection United States, 2020

Risk behaviors/exposures ⁺	Risk identified	No risk identified	Risk data missing
Injection drug use	2,339	2,477	5,136
Sexual contact [§]	373	3,527	6,052
Household contact (nonsexual) [§]	266	3,634	6,052
Other contact [§]	382	3,518	6,052
Men who have sex with men [¶]	179	2,261	3,701
International travel	36	5,069	4,847

* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-a-acute/.

+ Reported cases may include more than one risk behavior/exposure. Case reports with at least one of the following risk behaviors/exposures reported 2–6 weeks prior to symptom onset or documented seroconversion if asymptomatic: 1) injection drug use; 2) sexual, household, or other contact; 3) men who have sex with men; 4) travel to hepatitis A-endemic region.

§ Cases with more than one type of contact reported were categorized according to a hierarchy: 1) sexual contact; 2) household contact (nonsexual); and 3) other contact with hepatitis A case.

¶ A total of 6,141 hepatitis A cases were reported among males in 2020.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 1.4

Numbers and rates^{*} of deaths with hepatitis A virus infection listed as a cause of death⁺ among residents, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
Total	70	0.01 (0.00 - 0.01)	91	0.02 (0.02 - 0.03)	171	0.05 (0.04 - 0.06)	225	0.04 (0.03 - 0.05)	179	0.04 (0.03 - 0.05)
Age (years)										
0–44	6	UR [§]	9	UR [§]	33	0.02 (0.01 - 0.02)	24	0.01 (0.01 - 0.02)	19	UR [§]
45–64	33	0.04 (0.03 - 0.06)	35	0.04 (0.03 - 0.06)	72	0.09 (0.07 - 0.11)	118	0.14 (0.12 - 0.17)	72	0.09 (0.07 - 0.11)
≥65	31	0.06 (0.04 - 0.09)	47	0.09 (0.07 - 0.12)	66	0.13 (0.10 - 0.16)	83	0.15 (0.12 - 0.19)	88	0.16 (0.13 - 0.19)
Sex										
Male	38	0.01 (0.01 - 0.02)	63	0.03 (0.02 - 0.03)	115	0.07 (0.06 - 0.08)	159	0.09 (0.07 - 0.10)	120	0.06 (0.05 - 0.07)
Female	32	0.01 (0.01 - 0.02)	28	0.00 (0.00 - 0.00)	56	0.02 (0.02 - 0.03)	66	0.04 (0.03 - 0.05)	59	0.01 (0.01 - 0.02)
Race/ethnicity										
White, non- Hispanic	50	0.02 (0.01 - 0.02)	69	0.02 (0.02 - 0.03)	150	0.06 (0.05 - 0.07)	194	0.09 (0.07 - 0.10)	147	0.05 (0.04 - 0.06)
Other or not stated	20	Sٵ	22	Sٵ	21	Sٵ	31	Sٵ	32	Sٵ

* Rates for race/ethnicity, sex, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B15 (hepatitis A).

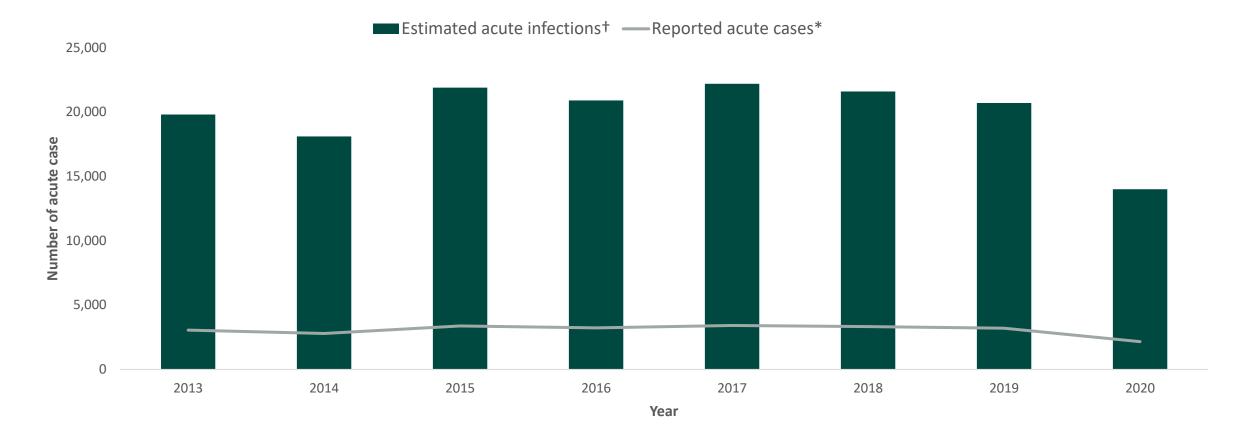
§ UR Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

¶ S Suppressed: CDC WONDER did not have the functionality to calculate rates for the "Other or not stated" race/ethnicity group.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER online database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Figure 2.1 – Part 1 of 2 Number of reported cases* of acute hepatitis B virus infection and estimated infections† United States, 2013–2020



Source: CDC, National Notifiable Diseases Surveillance System.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Figure 2.1 – Part 2 of 2 Number of reported cases* of acute hepatitis B virus infection and estimated infections† United States, 2013–2020

Acute Hepatitis B	2013	2014	2015	2016	2017	2018	2019	2020
Reported acute cases*	3,050	2,791	3,370	3,218	3,409	3,322	3,192	2,157
Estimated acute infections [†]	19,800	18,100	21,900	20,900	22,200	21,600	20,700	14,000

Source: CDC, National Notifiable Diseases Surveillance System.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Table 2.1 – Part 1 of 3 Numbers and rates* of reported cases† of acute hepatitis B virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Alabama	59	1.2	82	1.7	48	1.0	75	1.5	61	1.2
Alaska	6	0.8	9	1.2	7	0.9	6	0.8	4	0.5
Arizona	14	0.2	26	0.4	23	0.3	28	0.4	18	0.2
Arkansas	49	1.6	46	1.5	47	1.6	39	1.3	36	1.2
California	115	0.3	126	0.3	105	0.3	111	0.3	53	0.1
Colorado	28	0.5	32	0.6	21	0.4	17	0.3	13	0.2
Connecticut	7	0.2	10	0.3	10	0.3	3	0.1	_	_
Delaware	3	0.3	9	0.9	7	0.7	12	1.2	7	0.7
District of Columbia	U	U	U	U	U	U	U	U	U	U
Florida	558	2.7	588	2.8	617	2.9	595	2.8	456	2.1
Georgia	100	1.0	106	1.0	179	1.7	114	1.1	104	1.0
Hawaii	_	_	_	_	3	0.2	1	0.1	_	_
Idaho	6	0.4	6	0.3	6	0.3	7	0.4	—	—
Illinois	37	0.3	27	0.2	25	0.2	43	0.3	29	0.2
Indiana	146	2.2	170	2.5	169	2.5	170	2.5	98	1.5
lowa	10	0.3	12	0.4	14	0.4	24	0.8	17	0.5
Kansas	21	0.7	24	0.8	16	0.5	11	0.4	2	0.1

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.1 – Part 2 of 3 Numbers and rates* of reported cases† of acute hepatitis B virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Kentucky	222	5.0	236	5.3	260	5.8	188	4.2	112	2.5
Louisiana	48	1.0	73	1.6	57	1.2	73	1.6	38	0.8
Maine	53	4.0	77	5.8	52	3.9	58	4.3	40	3.0
Maryland	27	0.4	34	0.6	53	0.9	41	0.7	37	0.6
Massachusetts	31	0.5	51	0.7	46	0.7	37	0.5	17	0.2
Michigan	45	0.5	61	0.6	77	0.8	64	0.6	43	0.4
Minnesota	21	0.4	23	0.4	16	0.3	16	0.3	7	0.1
Mississippi	31	1.0	44	1.5	40	1.3	49	1.6	35	1.2
Missouri	40	0.7	31	0.5	18	0.3	33	0.5	16	0.3
Montana	1	0.1	3	0.3	1	0.1	1	0.1	5	0.5
Nebraska	8	0.4	10	0.5	3	0.2	—		1	0.1
Nevada	22	0.7	30	1.0	23	0.8	23	0.7	14	0.4
New Hampshire	—	—	—	—	4	0.3	5	0.4	—	—
New Jersey	59	0.7	57	0.6	64	0.7	78	0.9	44	0.5
New Mexico	1	0.0	1	0.0	2	0.1	4	0.2	_	
New York	103	0.5	81	0.4	56	0.3	85	0.4	45	0.2
North Carolina	170	1.7	190	1.8	220	2.1	187	1.8	135	1.3
North Dakota	2	0.3	_	_	2	0.3		_	4	0.5

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.1 – Part 3 of 3 Numbers and rates* of reported cases† of acute hepatitis B virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Ohio	299	2.6	285	2.4	310	2.7	311	2.7	131	1.1
Oklahoma	32	0.8	41	1.0	6	0.2	17	0.4	31	0.8
Oregon	20	0.5	23	0.6	18	0.4	17	0.4	17	0.4
Pennsylvania	43	0.3	69	0.5	61	0.5	91	0.7	50	0.4
Rhode Island	U	U	U	U	U	U	U	U	U	U
South Carolina	34	0.7	40	0.8	45	0.9	42	0.8	66	1.3
South Dakota	2	0.2	2	0.2	1	0.1	5	0.6	1	0.1
Tennessee	204	3.1	215	3.2	192	2.8	208	3.0	156	2.3
Texas	156	0.6	106	0.4	102	0.4	69	0.2	50	0.2
Utah	5	0.2	18	0.6	36	1.1	29	0.9	11	0.3
Vermont	2	0.3	1	0.2	3	0.5	9	1.4	3	0.5
Virginia	56	0.7	61	0.7	58	0.7	57	0.7	41	0.5
Washington	45	0.6	45	0.6	51	0.7	52	0.7	38	0.5
West Virginia	268	14.6	212	11.7	132	7.3	76	4.2	57	3.2
Wisconsin	9	0.2	14	0.2	14	0.2	8	0.1	13	0.2
Wyoming	U	U	2	0.3	2	0.3	3	0.5	1	0.2
Total	3,218	1.0	3,409	1.1	3,322	1.0	3,192	1.0	2,157	0.7

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

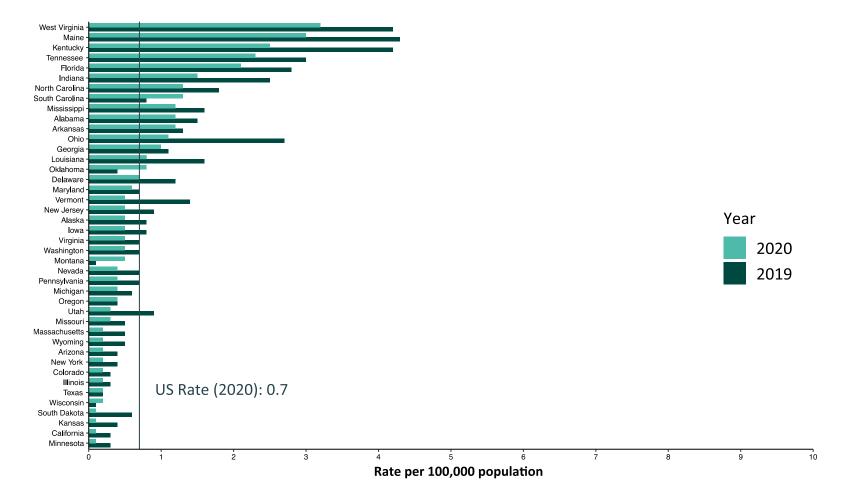
N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 2.2 Rates* of reported cases of hepatitis B virus infection⁺, by state or jurisdiction United States, 2019–2020



* Rates per 100,000 population.

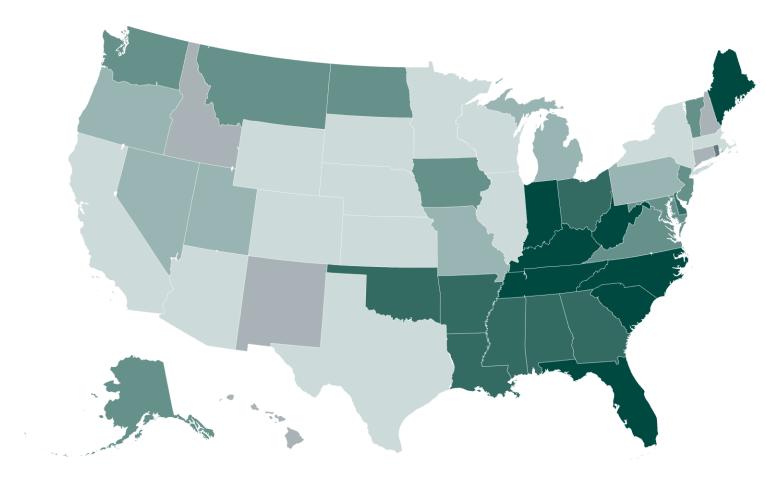
+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

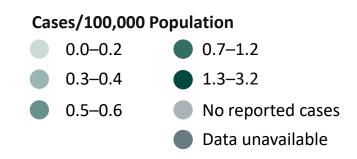
Only states with rates for 2019 and 2020 are shown. State/jurisdiction and year for no reported cases: Connecticut (2020), Hawaii (2020), Idaho (2020), Nebraska (2019), New Hampshire (2020), New Mexico (2020), North Dakota (2019); for unavailable data: District of Columbia (2019, 2020), Rhode Island (2019, 2020). State or jurisdiction ranked in decreasing order by the 2020 rate, 2019 rate, and then alphabetical order by name."

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 2.3 Rates* of reported cases† of acute hepatitis B virus infection, by state or jurisdiction United States, 2020





Color Key	Cases/100,000 Population	State or Jurisdiction
	0.0–0.2	CA, KS, MN, NE, SD, AZ, CO, IL, MA, NY, TX, WI, WY
	0.3–0.4	MO, UT, MI, NV, OR, PA
	0.5–0.6	AK, IA, MT, ND, NJ, VA, VT, WA, MD
	0.7–1.2	DE, LA, OK, GA, OH, AL, AR, MS
	1.3–3.2	NC, SC, IN, FL, TN, KY, ME, WV
	No reported cases	CT, HI, ID, NH, NM
	Data unavailable	DC, RI

Source: CDC, National Notifiable Diseases Surveillance System.

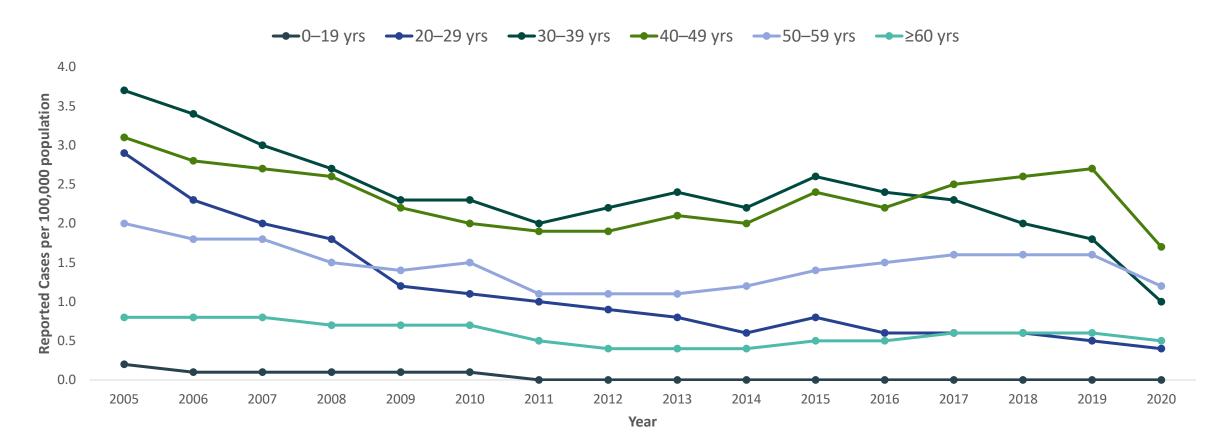
Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.4 – Part 1 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by age group United States, 2005–2020







* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.4 – Part 2 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by age group United States, 2005–2020

Age (years)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0–19	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–29	2.9	2.3	2.0	1.8	1.2	1.1	1.0	0.9	0.8	0.6	0.8	0.6	0.6	0.6	0.5	0.4
30–39	3.7	3.4	3.0	2.7	2.3	2.3	2.0	2.2	2.4	2.2	2.6	2.4	2.3	2.0	1.8	1.0
40–49	3.1	2.8	2.7	2.6	2.2	2.0	1.9	1.9	2.1	2.0	2.4	2.2	2.5	2.6	2.7	1.7
50–59	2.0	1.8	1.8	1.5	1.4	1.5	1.1	1.1	1.1	1.2	1.4	1.5	1.6	1.6	1.6	1.2
≥60	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.5

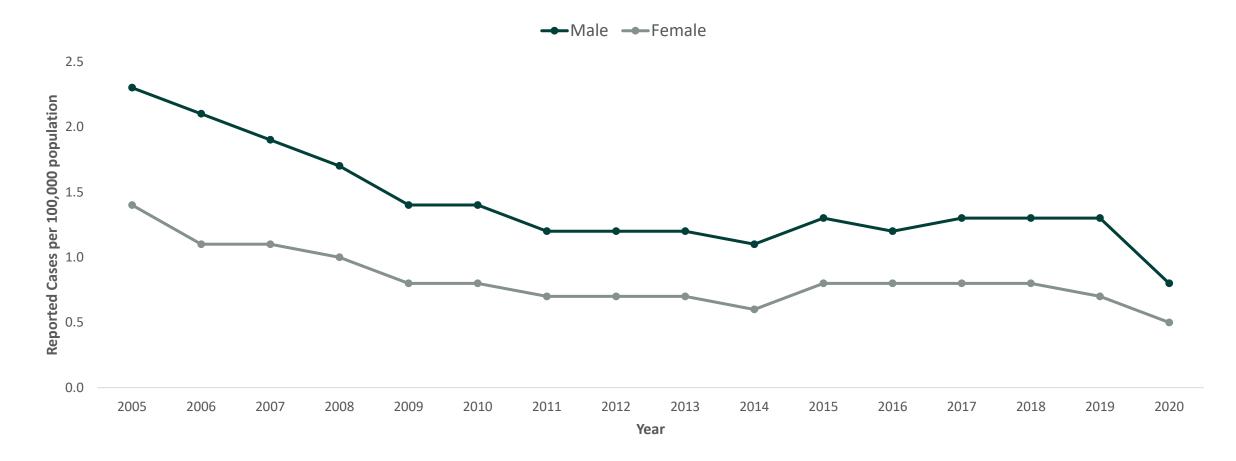
Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.5 – Part 1 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by sex United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.5 – Part 2 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by sex United States, 2005–2020

Sex	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Male	2.3	2.1	1.9	1.7	1.4	1.4	1.2	1.2	1.2	1.1	1.3	1.2	1.3	1.3	1.3	0.8
Female	1.4	1.1	1.1	1.0	0.8	0.8	0.7	0.7	0.7	0.6	0.8	0.8	0.8	0.8	0.7	0.5

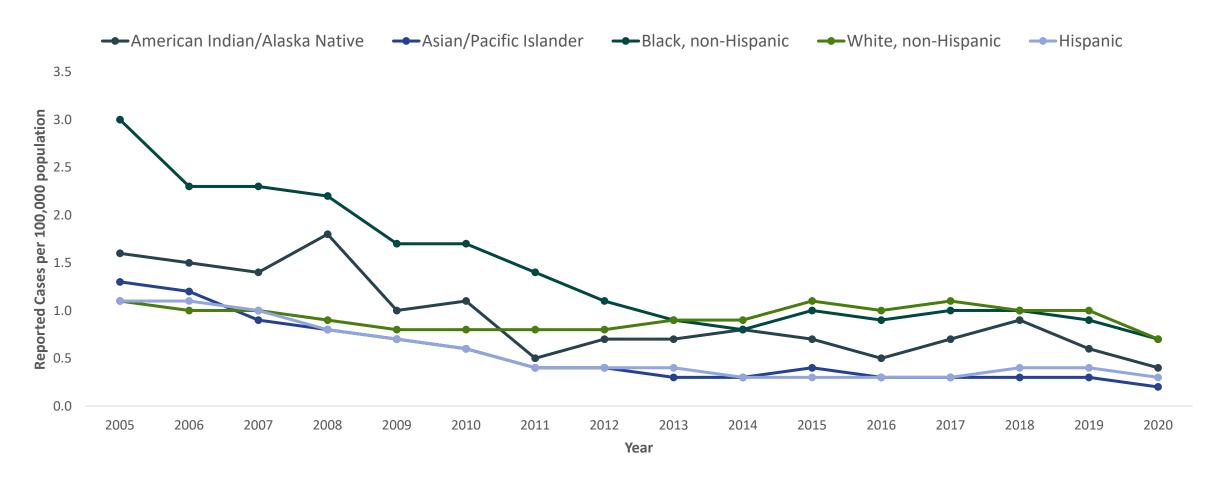
Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.6 – Part 1 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by race/ethnicity United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Figure 2.6 – Part 2 of 2 Rates* of reported cases† of acute hepatitis B virus infection, by race/ethnicity United States, 2005–2020

Race/ethnicity	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
American Indian/Alaska Native	1.6	1.5	1.4	1.8	1.0	1.1	0.5	0.7	0.7	0.8	0.7	0.5	0.7	0.9	0.6	0.4
Asian/Pacific Islander	1.3	1.2	0.9	0.8	0.7	0.6	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2
Black, non- Hispanic	3.0	2.3	2.3	2.2	1.7	1.7	1.4	1.1	0.9	0.8	1.0	0.9	1.0	1.0	0.9	0.7
White, non- Hispanic	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.9	0.9	1.1	1.0	1.1	1.0	1.0	0.7
Hispanic	1.1	1.1	1.0	0.8	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3

Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Table 2.2 – Part 1 of 2 Numbers and rates* of reported cases† of acute hepatitis B virus infection, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Total [§]	3,218	1.0	3,409	1.1	3,322	1.0	3,192	1.0	2,157	0.7
Age (years)										
0–19	18	0.0	16	0.0	27	0.0	13	0.0	20	0.0
20–29	286	0.6	271	0.6	249	0.6	218	0.5	160	0.4
30–39	1,000	2.4	998	2.3	868	2.0	801	1.8	443	1.0
40–49	906	2.2	1,028	2.5	1,052	2.6	1,067	2.7	685	1.7
50–59	655	1.5	700	1.6	675	1.6	675	1.6	502	1.2
≥60	342	0.5	395	0.6	450	0.6	418	0.6	346	0.5
Sex										
Male	1,957	1.2	2,095	1.3	2,050	1.3	2,021	1.3	1,297	0.8
Female	1,252	0.8	1,301	0.8	1,260	0.8	1,169	0.7	857	0.5
Race/ethnicity										
American Indian/Alaska Native	14	0.5	19	0.7	25	0.9	15	0.6	10	0.4
Asian/Pacific Islander	56	0.3	64	0.3	55	0.3	63	0.3	52	0.2
Black, non-Hispanic	386	0.9	411	1.0	405	1.0	382	0.9	309	0.7
White, non-Hispanic	2,059	1.0	2,197	1.1	2,084	1.0	2,045	1.0	1,391	0.7
Hispanic	194	0.3	196	0.3	222	0.4	215	0.4	155	0.3

* Rates per 100,000 population.

⁺ Reported cases that met the classification criteria for a confirmed case. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

Table 2.2 – Part 2 of 2 Numbers and rates* of reported cases† of acute hepatitis B virus infection, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Urbanicity [¶]										
Urban	2,329	0.8	2,333	0.8	2,519	0.9	2,504	0.9	1,714	0.6
Rural	495	1.1	490	1.1	589	1.3	519	1.2	402	0.9
HHS Region**										
Region 1: Boston	93	0.7	139	1.0	115	0.8	112	0.8	60	0.4
Region 2: New York	162	0.6	138	0.5	120	0.4	163	0.6	89	0.3
Region 3: Philadelphia	397	1.3	385	1.3	311	1.0	277	0.9	192	0.6
Region 4: Atlanta	1,378	2.1	1,501	2.3	1,601	2.4	1,458	2.2	1,125	1.7
Region 5: Chicago	557	1.1	580	1.1	611	1.2	612	1.2	321	0.6
Region 6: Dallas	286	0.7	267	0.6	214	0.5	202	0.5	155	0.4
Region 7: Kansas City	79	0.6	77	0.5	51	0.4	68	0.6	36	0.3
Region 8: Denver	38	0.3	57	0.5	63	0.5	55	0.5	35	0.3
Region 9: San Francisco	151	0.3	182	0.4	154	0.3	163	0.3	85	0.2
Region 10: Seattle	77	0.6	83	0.6	82	0.6	82	0.6	59	0.4

* Rates per 100,000 population.

+ Reported cases that met the classification criteria for a confirmed case. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

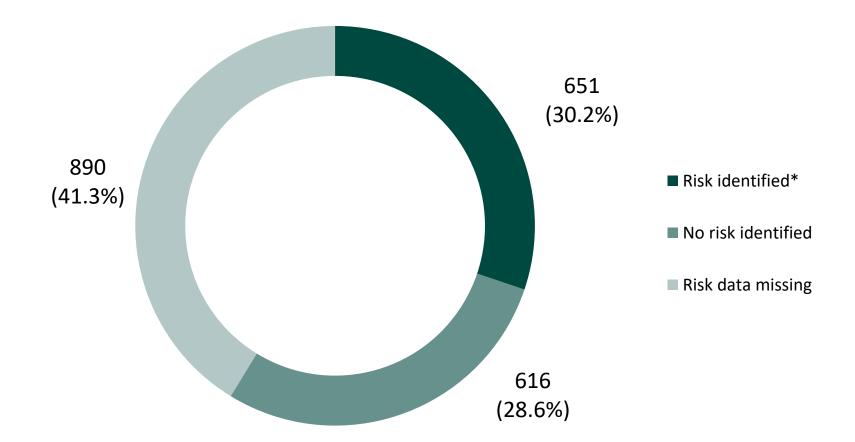
¶ Urbanicity was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (<u>https://www.cdc.gov/nchs/data_access/urban_rural.htm</u>). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services (HHS) Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices (<u>https://www.hhs.gov/about/agencies/iea/regional-offices/index.html</u>). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 2.7 Availability of information on risk behaviors or exposures* associated with reported cases of acute hepatitis B virus infection United States, 2020



* Case reports with at least one of the following risk behaviors/exposures reported 6 weeks to 6 months prior to symptom onset or documented seroconversion if asymptomatic: 1) injection drug use; 2) multiple sexual partners; 3) underwent surgery;
4) men who have sex with men; 5) sexual contact with suspected/confirmed hepatitis B case; 6) sustained a percutaneous injury; 7) household contact with suspected/confirmed hepatitis B case; 8) occupational exposure to blood; 9) dialysis; and 10) transfusion. Reported cases may include more than one risk behavior/exposure.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.3 Reported risk behaviors or exposures among reported cases* of acute hepatitis B virus infection United States, 2020

Risk behaviors/exposures ⁺	Risk identified	No risk identified	Risk data missing
Injection drug use	402	713	1,042
Multiple sexual partners	124	512	1,521
Surgery	91	688	1,378
Sexual contact [§]	46	498	1,613
Needlestick	36	742	1,379
Men who have sex with men [¶]	64	281	952
Household contact (nonsexual) [§]	9	535	1,613
Dialysis patient	31	786	1,340
Occupational	1	970	1,186
Transfusion	1	809	1,347

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.4

Number of newly reported cases^{*} of perinatal hepatitis B virus infection, by state or jurisdiction United States, 2020

State or Jurisdiction	Perinatal Hepatitis B
Alabama	1
Alaska	_
Arizona	—
Arkansas	—
California	1
Colorado	_
Connecticut	_
Delaware	_
District of Columbia	U
Florida	_
Georgia	1
Hawaii	_
Idaho	_
Illinois	_
Indiana	1
lowa	_
Kansas	-
Kentucky	_

State or Jurisdiction	Perinatal Hepatitis B
Louisiana	2
Maine	_
Maryland	1
Massachusetts	_
Michigan	_
Minnesota	—
Mississippi	_
Missouri	_
Montana	
Nebraska	_
Nevada	_
New Hampshire	_
New Jersey	_
New Mexico	_
New York	_
North Carolina	_
North Dakota	-
Ohio	1

State or Jurisdiction	Perinatal Hepatitis B
Oklahoma	_
Oregon	_
Pennsylvania	—
Rhode Island	U
South Carolina	—
South Dakota	—
Tennessee	—
Texas	—
Utah	—
Vermont	_
Virginia	—
Washington	—
West Virginia	1
Wisconsin	1
Wyoming	_
Total	10

* Reported confirmed cases. For case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-perinatal-virus-infection/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.5

Number and rate* of newly reported cases⁺ of chronic hepatitis B virus infection, by state or jurisdiction United States, 2020

State or Jurisdiction	No.	Rate*
Alabama	—	—
Alaska	48	6.6
Arizona	41	0.6
Arkansas	Ν	Ν
California	—	—
Colorado	180	3.1
Connecticut	Ν	Ν
Delaware	52	5.3
District of Columbia	U	U
Florida	2,060	9.5
Georgia	962	9.0
Hawaii	U	U
Idaho	59	3.2
Illinois	388	3.1
Indiana	251	3.7
lowa	22	0.7
Kansas	20	0.7
Kentucky	Ν	N

State or Jurisdiction	No.	Rate*
Louisiana	250	5.4
Maine	53	3.9
Maryland	410	6.8
Massachusetts	271	3.9
Michigan	169	1.7
Minnesota	194	3.4
Mississippi	N	Ν
Missouri	333	5.4
Montana	14	1.3
Nebraska	49	2.5
Nevada	U	U
New Hampshire	U	U
New Jersey	261	2.9
New Mexico	19	0.9
New York	1,583	8.2
North Carolina	384	3.6
North Dakota	56	7.3
Ohio	543	4.6

State or Jurisdiction	No.	Rate*
Oklahoma	385	9.7
Oregon	93	2.2
Pennsylvania	631	4.9
Rhode Island	U	U
South Carolina	214	4.1
South Dakota	28	3.1
Tennessee	466	6.8
Texas	Ν	Ν
Utah	57	1.8
Vermont	6	1.0
Virginia	452	5.3
Washington	461	6.0
West Virginia	124	6.9
Wisconsin	34	0.6
Wyoming	12	2.1
Total	11,635	5.0

* Rates per 100,000 population.

+ Reported confirmed cases. For case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-chronic/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.6

Number and rate* of newly reported cases⁺ of chronic hepatitis B virus infection, by demographic characteristics United States, 2020

Characteristics	No.	Rate*
Total [§]	11,635	5.0
Age (years)		
0–19	174	0.3
20–29	1,245	4.0
30–39	2,841	9.1
40–49	2,551	9.0
50–59	2,267	7.5
≥60	2,526	4.5
Sex		
Male	6,614	5.7
Female	4,999	4.2

Characteristics	No.	Rate*	
Race/ethnicity			
American Indian/Alaska Native	36	1.6	
Asian/Pacific Islander	2,019	17.6	
Black, non-Hispanic	1,904	5.8	
White, non-Hispanic	2,406	1.5	
Hispanic	475	1.5	
Urbanicity [¶]			
Urban	10,538	5.3	
Rural	1,020	2.9	

Characteristics	No.	Rate*		
HHS Region**				
Region 1: Boston	330	3.7		
Region 2: New York	1,844	6.5		
Region 3: Philadelphia	1,669	5.5		
Region 4: Atlanta	4,086	7.4		
Region 5: Chicago	1,579	3.0		
Region 6: Dallas	654	6.1		
Region 7: Kansas City	424	3.0		
Region 8: Denver	347	2.8		
Region 9: San Francisco	41	0.6		
Region 10: Seattle	661	4.6		

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-chronic/.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

¶ Urban-rural region was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (<u>https://www.cdc.gov/nchs/data_access/urban_rural.htm</u>). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices

(https://www.hhs.gov/about/agencies/iea/regional-offices/index.html). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 2.7 – Part 1 of 4 Numbers and rates* of deaths with hepatitis B virus infection listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Alabama	19	UR [§]	19	UR [§]	19	UR [§]	12	UR [§]	12	UR [§]
Alaska	S¶	UR [§]	S¶	UR [§]	S [¶]	UR [§]	S¶	UR [§]	S¶	UR [§]
Arizona	29	0.34	19	UR [§]	31	0.34	30	0.34	20	0.24
Arkansas	10	UR [§]	22	0.6	17	UR [§]	16	UR [§]	19	UR [§]
California	337	0.78	346	0.8	304	0.67	327	0.7	357	0.75
Colorado	23	0.39	32	0.51	26	0.39	35	0.49	34	0.5
Connecticut	S¶	UR [§]	S¶	UR [§]	13	UR [§]	S¶	UR [§]	S¶	UR [§]
Delaware	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]
District of Columbia	11	UR [§]	12	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]
Florida	98	0.36	129	0.45	109	0.41	111	0.4	121	0.41
Georgia	35	0.3	34	0.28	40	0.35	44	0.35	37	0.28
Hawaii	26	1.5	15	UR [§]	14	UR [§]	21	1.17	18	UR [§]
Idaho	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]
Illinois	40	0.28	30	0.19	31	0.2	25	0.17	36	0.24

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

UR§ Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

S¶ Suppressed: Subnational data representing <10 deaths (0–9) are suppressed or CDC WONDER did not have the functionality to calculate rates.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2015–2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Table 2.7 – Part 2 of 4 Numbers and rates* of deaths with hepatitis B virus infection listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Indiana	26	0.32	29	0.34	16	UR [§]	21	0.26	27	0.37
lowa	16	UR [§]	15	UR [§]	19	UR [§]	11	UR [§]	S¶	UR [§]
Kansas	15	UR [§]	11	UR [§]	12	UR [§]	13	UR [§]	14	UR [§]
Kentucky	36	0.72	35	0.75	47	0.98	37	0.77	40	0.83
Louisiana	26	0.49	30	0.53	36	0.6	31	0.55	31	0.56
Maine	S¶	UR [§]								
Maryland	31	0.43	31	0.43	37	0.52	39	0.53	44	0.57
Massachusetts	32	0.37	36	0.47	28	0.36	22	0.24	28	0.3
Michigan	27	0.18	28	0.22	33	0.25	23	0.17	31	0.25
Minnesota	25	0.42	21	0.3	33	0.51	48	0.7	45	0.65
Mississippi	22	0.64	23	0.67	20	0.61	25	0.72	23	0.61
Missouri	13	UR [§]	19	UR [§]	24	0.31	19	UR [§]	18	UR [§]
Montana	S¶	UR [§]								
Nebraska	S¶	UR [§]	S¶	UR [§]	10	UR [§]	S¶	UR [§]	10	UR [§]

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

UR§ Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

S¶ Suppressed: Subnational data representing <10 deaths (0–9) are suppressed or CDC WONDER did not have the functionality to calculate rates.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2015– 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Table 2.7 – Part 3 of 4 Numbers and rates* of deaths with hepatitis B virus infection listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Nevada	23	0.66	13		20	0.51	16	UR [§]	16	
New Hampshire		UR [§]	S¶	UR [§]	<u> </u>	UR [§]	S¶	UR [§]	S¶	UR [§]
New Jersey	39	0.34	43	0.43	41	0.39	34	0.29	29	0.26
New Mexico	S [¶]	UR [§]	S¶	UR [§]						
New York	138	0.6	123	0.5	115	0.47	113	0.48	125	0.5
North Carolina	42	0.37	36	0.29	35	0.27	39	0.29	38	0.3
North Dakota	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]
Ohio	44	0.34	55	0.42	42	0.32	49	0.36	53	0.39
Oklahoma	43	0.95	40	0.95	54	1.16	45	0.98	37	0.74
Oregon	27	0.54	29	0.52	23	0.45	42	0.78	44	0.82
Pennsylvania	41	0.25	35	0.2	34	0.22	37	0.25	31	0.19
Rhode Island	S¶	UR [§]	S¶	UR [§]	11	UR [§]	S¶	UR [§]	S¶	UR [§]
South Carolina	38	0.6	26	0.39	26	0.42	17	UR [§]	25	0.38
South Dakota	S¶	UR [§]	S٩	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

UR§ Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

S¶ Suppressed: Subnational data representing <10 deaths (0–9) are suppressed or CDC WONDER did not have the functionality to calculate rates.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2015– 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Table 2.7 – Part 4 of 4 **Numbers and rates* of deaths with hepatitis B virus infection listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020**

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Tennessee	55	0.71	63	0.83	50	0.61	63	0.87	56	0.73
Texas	149	0.51	150	0.51	119	0.4	135	0.43	141	0.44
Utah	S¶	UR [§]	11	UR [§]	S¶	UR [§]	S¶	UR [§]	S¶	UR [§]
Vermont	S¶	UR [§]	S¶	UR [§]	S٩	UR [§]	S٩	UR [§]	S¶	UR [§]
Virginia	23	0.24	29	0.3	28	0.28	20	0.18	36	0.34
Washington	47	0.55	47	0.56	53	0.57	50	0.54	50	0.53
West Virginia	11	UR [§]	14	UR [§]	23	1.26	18	UR [§]	15	UR [§]
Wisconsin	19	UR [§]	21	0.31	19	UR [§]	S٩	UR [§]	20	0.27
Wyoming	S [¶]	UR [§]	S¶	UR [§]	S [¶]	UR [§]	S [¶]	UR [§]	S [¶]	UR [§]
Total	1,690	0.45	1,727	0.46	1,649	0.43	1,662	0.42	1,752	0.45

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

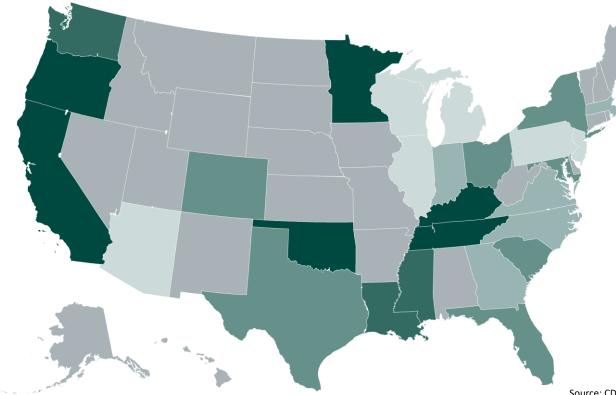
UR§ Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

S¶ Suppressed: Subnational data representing <10 deaths (0–9) are suppressed or CDC WONDER did not have the functionality to calculate rates.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2015– 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Figure 2.8 Rates* of deaths with hepatitis B virus infection listed as a cause of death⁺ among residents, by state or jurisdiction United States, 2020

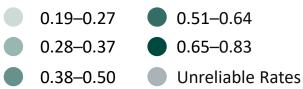


* Rates are age-adjusted per 100,000 US standard population in 2000 using the following age group distribution (in years): <1, 1– 4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and =85. For age-adjusted death rates, the age-specific death rate is rounded to one decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step may affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

+ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Revision (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

Deaths/100,000 Population

Co



olor Key	Cases/100,000 Population	State or Jurisdiction
	0.19–0.27	PA, AZ, IL, MI, NJ, WI
	0.28–0.37	GA, MA, NC, VA, IN
	0.38–0.50	SC, OH, FL, TX, CO, NY
	0.51–0.64	WA, LA, MD, MS
	0.64–0.83	MN, TN, OK, CA, OR, KY
	Unreliable Rates	AK, AL, AR, CT, DC, DE, HI, IA, ID, KS, ME, MO, MT, ND, NE, NH, NM, NV, RI, SD, UT, VT, WV, WY

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2015–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the fifty states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2015– 2016 due to NCHS standards which restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 11, 2021. CDC WONDER dataset documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html.



Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.

Unreliable rates: death counts that were less than 20 were not displayed due to the instability associated with those rates.

Table 2.8 – Part 1 of 3 **Numbers and rates* of deaths with hepatitis B virus infections listed as a cause of death† among residents, by demographic characteristics United States, 2016–2020**

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
Total	1690	0.45 (0.43 - 0.48)	1727	0.46 (0.44 - 0.49)	1649	0.43 (0.41 - 0.45)	1662	0.42 (0.40 - 0.44)	1752	0.45 (0.42 - 0.47)
Age (years)										
0–34	39	0.03 (0.02 - 0.04)	29	0.02 (0.01 - 0.03)	32	0.02 (0.01 - 0.03)	45	0.03 (0.02 - 0.04)	36	0.02 (0.02 - 0.03)
35–44	116	0.29 (0.23 - 0.34)	106	0.26 (0.21 - 0.31)	122	0.30 (0.24 - 0.35)	110	0.26 (0.21 - 0.31)	109	0.26 (0.21 - 0.31)
45–54	324	0.76 (0.67 - 0.84)	323	0.76 (0.68 - 0.85)	283	0.68 (0.60 - 0.76)	255	0.62 (0.55 - 0.70)	269	0.67 (0.59 - 0.75)
55–64	576	1.39 (1.28 - 1.50)	548	1.30 (1.20 - 1.41)	520	1.23 (1.12 - 1.34)	502	1.18 (1.08 - 1.29)	483	1.14 (1.04 - 1.24)
65–74	383	1.34 (1.20 - 1.47)	417	1.40 (1.27 - 1.54)	422	1.38 (1.25 - 1.52)	484	1.54 (1.40 - 1.67)	495	1.52 (1.39 - 1.65)
≥75	252	1.22 (1.07 - 1.37)	303	1.43 (1.27 - 1.59)	270	1.23 (1.08 - 1.38)	266	1.18 (1.04 - 1.32)	360	1.56 (1.40 - 1.72)
Sex										
Male	1231	0.67 (0.64 - 0.71)	1275	0.70 (0.66 - 0.74)	1191	0.65 (0.61 - 0.69)	1248	0.66 (0.62 - 0.70)	1278	0.66 (0.63 - 0.70)
Female	459	0.22 (0.20 - 0.24)	452	0.23 (0.20 - 0.25)	458	0.22 (0.20 - 0.24)	414	0.21 (0.19 - 0.24)	474	0.22 (0.20 - 0.24)

* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at <u>http://wonder.cdc.gov/mcd-icd10.html</u> on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at <u>https://wonder.cdc.gov/wonder/help/mcd.html</u>#.



⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on

Table 2.8 – Part 2 of 3 **Numbers and rates* of deaths with hepatitis B virus infections listed as a cause of death† among residents, by demographic characteristics United States, 2016–2020**

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
Race/ethnicity										
White, non-Hispanic	767	0.29 (0.27-0.31)	776	0.28 (0.26-0.30)	760	0.27 (0.25-0.29)	761	0.28 (0.26-0.30)	745	0.27 (0.25-0.29)
Black, non-Hispanic	315	0.73 (0.65-0.81)	320	0.74 (0.66-0.83)	304	0.70 (0.62-0.79)	291	0.64 (0.56-0.71)	308	0.67 (0.60-0.75)
Hispanic	128	0.30 (0.25-0.36)	109	0.26 (0.21-0.32)	122	0.28 (0.23-0.33)	117	0.27 (0.21-0.32)	132	0.28 (0.23-0.33)
Asian/Pacific Islander, non-Hispanic	454	2.38 (2.16-2.60)	492	2.45 (2.23-2.67)	439	2.10 (1.90-2.30)	463	2.10 (1.90-2.29)	541	2.46 (2.25-2.67)
American Indian/Alaska Native, non-Hispanic	16	UR§	17	UR§	6	UR§	20	0.76 (0.46-1.18)	17	UR§

* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



UR§ Unreliable rate: Rates where death counts were <20 were not displayed because of the instability associated with those rates.

Table 2.8 – Part 3 of 3 **Numbers and rates* of deaths with hepatitis B virus infections listed as a cause of death† among residents, by demographic characteristics United States, 2016–2020**

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
HHS Region: Regional Office										
Region 1: Boston	56	0.28 (0.21 - 0.37)	60	0.35 (0.27 - 0.46)	64	0.34 (0.26 - 0.45)	43	0.22 (0.16 - 0.30)	49	0.24 (0.18 - 0.33)
Region 2: New York	177	0.51 (0.43 - 0.59)	166	0.47 (0.39 - 0.54)	156	0.44 (0.36 - 0.51)	147	0.42 (0.35 - 0.49)	154	0.43 (0.36 - 0.50)
Region 3: Philadelphia	118	0.32 (0.26 - 0.38)	128	0.32 (0.27 - 0.38)	130	0.35 (0.29 - 0.41)	126	0.32 (0.26 - 0.38)	135	0.35 (0.29 - 0.41)
Region 4: Atlanta	345	0.44 (0.39 - 0.49)	365	0.45 (0.41 - 0.50)	346	0.45 (0.40 - 0.50)	348	0.42 (0.38 - 0.47)	352	0.43 (0.39 - 0.48)
Region 5: Chicago	181	0.29 (0.25 - 0.33)	184	0.29 (0.24 - 0.33)	174	0.28 (0.24 - 0.33)	173	0.27 (0.23 - 0.31)	212	0.33 (0.29 - 0.38)
Region 6: Dallas	230	0.51 (0.44 - 0.57)	247	0.55 (0.48 - 0.62)	230	0.47 (0.41 - 0.53)	230	0.48 (0.42 - 0.55)	229	0.47 (0.40 - 0.53)
Region 7: Kansas City	52	0.33 (0.24 - 0.44)	50	0.29 (0.22 - 0.39)	65	0.38 (0.29 - 0.48)	51	0.3 (0.22 - 0.40)	51	0.32 (0.23 - 0.42)
Region 8: Denver	35	0.27 (0.19 - 0.38)	48	0.37 (0.27 - 0.49)	34	0.25 (0.17 - 0.35)	47	0.32 (0.23 - 0.43)	54	0.41 (0.31 - 0.54)
Region 9: San Francisco	415	0.73 (0.66 - 0.80)	393	0.69 (0.62 - 0.76)	369	0.62 (0.56 - 0.69)	394	0.64 (0.57 - 0.70)	411	0.66 (0.59 - 0.72)
Region 10: Seattle	81	0.51 (0.40 - 0.63)	86	0.52 (0.41 - 0.64)	81	0.47 (0.37 - 0.59)	103	0.58 (0.47 - 0.70)	105	0.60 (0.48 - 0.72)

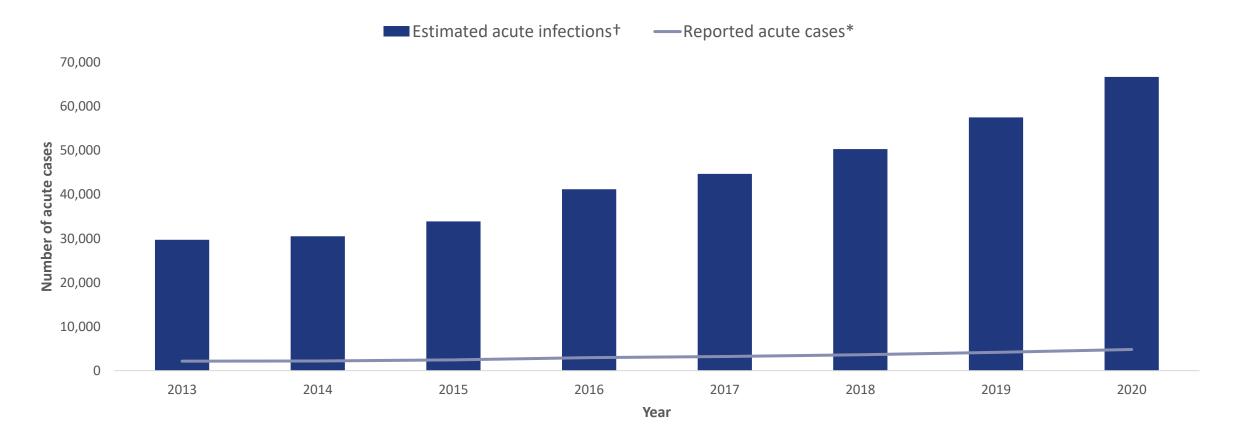
* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

+ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev (ICD-10) codes B16, B17.0, B18.0, B18.1 (hepatitis B).

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html#.



Figure 3.1 – Part 1 of 2 Number of reported cases* of acute hepatitis C virus infection and estimated infections† United States, 2013–2020



* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 3.1 – Part 2 of 2 Number of reported cases* of acute hepatitis C virus infection and estimated infections† United States, 2013–2020

Acute Hepatitis C	2013	2014	2015	2016	2017	2018	2019	2020
Reported acute cases*	2,138	2,194	2,436	2,967	3,216	3,621	4,136	4,798
Estimated acute infections [†]	29,700	30,500	33,900	41,200	44,700	50,300	57,500	66,700

Source: CDC, National Notifiable Diseases Surveillance System.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-b-acute/.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting. The 95% bootstrap confidence intervals for the estimated number of infections are displayed in the Appendix.

Table 3.1 – Part 1 of 3 Numbers and rates* of reported cases† of acute hepatitis C virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Alabama	32	0.7	17	0.3	52	1.1	87	1.8	49	1.0
Alaska	N	N	N	N	N	N	N	N	Ν	Ν
Arizona	U	U	U	U	U	U	U	U	U	U
Arkansas	_	_	1	0.0	10	0.3	58	1.9	65	2.1
California	60	0.2	103	0.3	114	0.3	200	0.5	59	0.1
Colorado	35	0.6	42	0.7	46	0.8	45	0.8	10	0.2
Connecticut	17	0.5	9	0.3	10	0.3	7	0.2	12	0.3
Delaware	25	2.6	4	0.4	U	U	U	U	49	5.0
District of Columbia	U	U	U	U	U	U	U	U	U	U
Florida	236	1.1	357	1.7	435	2.0	616	2.9	1,336	6.1
Georgia	93	0.9	100	1.0	84	0.8	61	0.6	138	1.3
Hawaii	—	—	—	—	—	—	7	0.5	—	—
Idaho	7	0.4	8	0.5	4	0.2	17	1.0	2	0.1
Illinois	21	0.2	39	0.3	93	0.7	156	1.2	203	1.6
Indiana	146	2.2	191	2.9	266	4.0	325	4.8	243	3.6
lowa	U	U	U	U	U	U	10	0.3	17	0.5
Kansas	15	0.5	19	0.7	13	0.4	19	0.7	9	0.3
Kentucky	103	2.3	83	1.9	164	3.7	128	2.9	143	3.2

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.1 – Part 2 of 3 Numbers and rates* of reported cases† of acute hepatitis C virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Louisiana	5	0.1	7	0.1	8	0.2	8	0.2	281	6.0
Maine	25	1.9	21	1.6	23	1.7	43	3.2	160	11.9
Maryland	35	0.6	32	0.5	38	0.6	33	0.5	47	0.8
Massachusetts	424	6.2	327	4.8	110	1.6	161	2.3	150	2.2
Michigan	107	1.1	152	1.5	142	1.4	117	1.2	119	1.2
Minnesota	51	0.9	57	1.0	60	1.1	62	1.1	58	1.0
Mississippi	U	U	U	U	U	U	U	U	40	1.3
Missouri	24	0.4	49	0.8	74	1.2	41	0.7	25	0.4
Montana	20	1.9	14	1.3	8	0.8	17	1.6	17	1.6
Nebraska	2	0.1	2	0.1	2	0.1	4	0.2	9	0.5
Nevada	16	0.5	35	1.2	19	0.6	15	0.5	12	0.4
New Hampshire	Ν	Ν	25	1.9	25	1.8	20	1.5	6	0.4
New Jersey	122	1.4	125	1.4	96	1.1	99	1.1	115	1.3
New Mexico	18	0.9	16	0.8	22	1.0	10	0.5	1	0.0
New York	179	0.9	188	0.9	236	1.2	306	1.6	340	1.8
North Carolina	82	0.8	114	1.1	149	1.4	150	1.4	75	0.7
North Dakota	1	0.1	1	0.1	10	1.3	—	_	_	_
Ohio	187	1.6	159	1.4	282	2.4	281	2.4	186	1.6

* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/</u>.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.1 – Part 3 of 3 Numbers and rates* of reported cases† of acute hepatitis C virus infection, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Oklahoma	32	0.8	46	1.2	28	0.7	23	0.6	20	0.5
Oregon	19	0.5	35	0.8	14	0.3	23	0.5	30	0.7
Pennsylvania	225	1.8	224	1.7	249	1.9	210	1.6	146	1.1
Rhode Island	U	U	U	U	U	U	U	U	U	U
South Carolina	10	0.2	13	0.3	15	0.3	9	0.2	6	0.1
South Dakota	20	2.3	19	2.2	19	2.2	28	3.2	7	0.8
Tennessee	150	2.3	142	2.1	157	2.3	202	3.0	170	2.5
Texas	40	0.1	35	0.1	46	0.2	58	0.2	17	0.1
Utah	76	2.5	81	2.6	120	3.8	127	4.0	104	3.2
Vermont	5	0.8	9	1.4	4	0.6	6	1.0	1	0.2
Virginia	43	0.5	62	0.7	47	0.6	70	0.8	29	0.3
Washington	62	0.9	52	0.7	101	1.3	81	1.1	105	1.4
West Virginia	94	5.1	102	5.6	70	3.9	79	4.4	94	5.3
Wisconsin	103	1.8	94	1.6	134	2.3	112	1.9	93	1.6
Wyoming	U	U	5	0.9	22	3.8	5	0.9	_	
Total	2,967	1.0	3,216	1.0	3,621	1.2	4,136	1.3	4,798	1.5

* Rates per 100,000 population.

* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

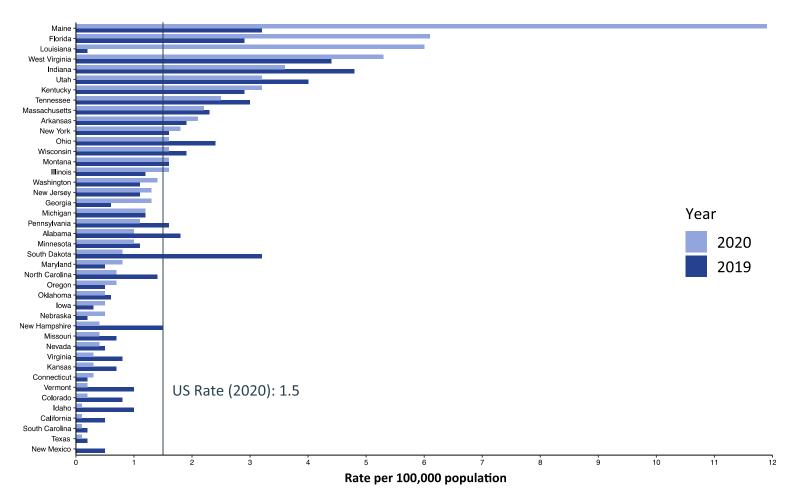
N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 3.2 Rates* of reported cases† of acute hepatitis C virus infection, by state or jurisdiction United States, 2019–2020



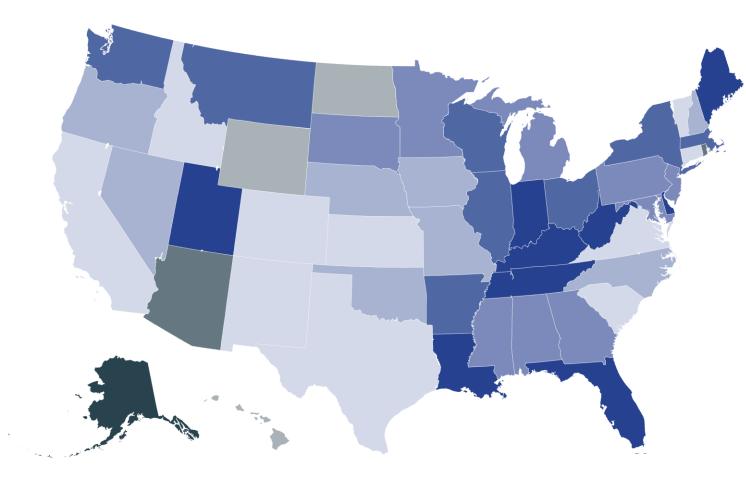
* Rates per 100,000 population.

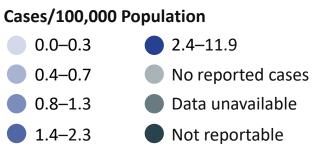
* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/. Only states with rates for 2019 and 2020 are shown. State/jurisdiction and year for no reported cases: Hawaii (2020), North Dakota (2019, 2020), Wyoming (2020); for not reportable condition: Alaska (2019, 2020); for unavailable data: Arizona (2019, 2020), Delaware (2019), District of Columbia (2019, 2020), Mississippi (2019), Rhode Island (2019, 2020). State or jurisdiction ranked in decreasing order by the 2020 rate, 2019 rate, and then alphabetical order by name.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 3.3 Rates* of reported cases† of acute hepatitis C virus infection, by state or jurisdiction United States, 2020





Color Key	Cases/100,000 Population	State or Jurisdiction
	0.0–0.3	NM, CA, ID, SC, TX, CO, VT, CT, KS, VA
	0.4–0.7	MO, NH, NV, IA, NE, OK, NC, OR
	0.8–1.3	MD, SD, AL, MN, PA, MI, GA, MS, NJ
	1.4–2.3	WA, IL, MT, OH, WI, NY, AR, MA
	2.4–11.9	TN, KY, UT, IN, DE, WV, LA, FL, ME
	No reported cases	HI, ND, WY
	Data unavailable	AZ, DC, RI
	Not reportable	АК

Source: CDC, National Notifiable Diseases Surveillance System.

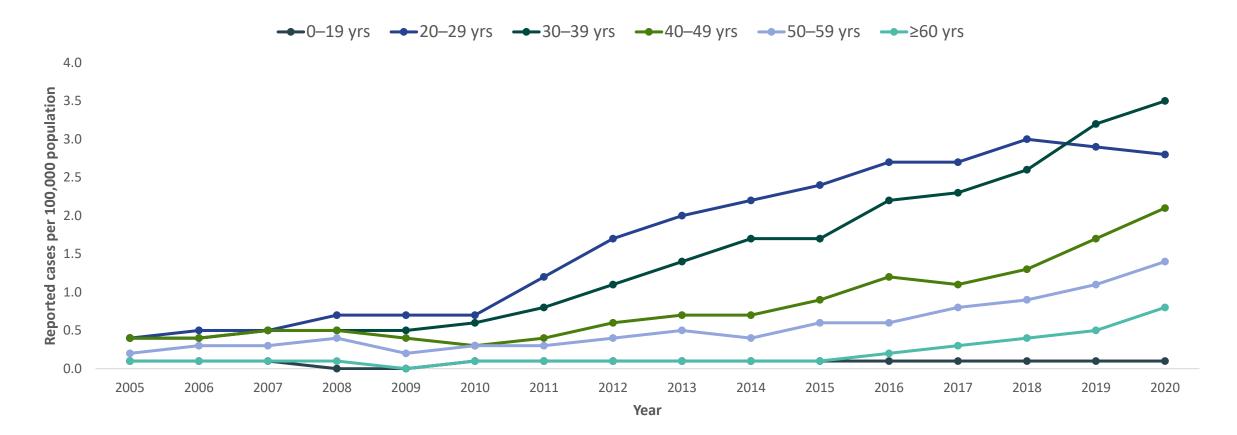
Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Rates per 100,000 population.

⁺ Reported cases that met the classification criteria for a confirmed case. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

Figure 3.4 – Part 1 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by age group United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.

* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/</u>.

Figure 3.4 – Part 2 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by age group United States, 2005–2020

Age (years)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0–19	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
20–29	0.4	0.5	0.5	0.7	0.7	0.7	1.2	1.7	2.0	2.2	2.4	2.7	2.7	3.0	2.9	2.8
30–39	0.4	0.4	0.5	0.5	0.5	0.6	0.8	1.1	1.4	1.7	1.7	2.2	2.3	2.6	3.2	3.5
40–49	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.6	0.7	0.7	0.9	1.2	1.1	1.3	1.7	2.1
50–59	0.2	0.3	0.3	0.4	0.2	0.3	0.3	0.4	0.5	0.4	0.6	0.6	0.8	0.9	1.1	1.4
≥60	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.8

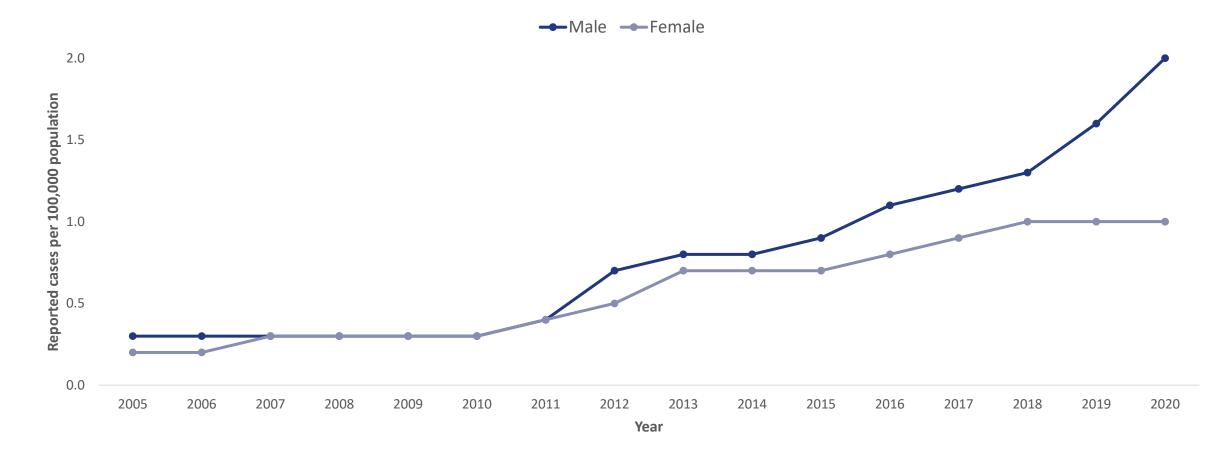
Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

Figure 3.5 – Part 1 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by sex United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



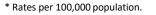
* Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

Figure 3.5 – Part 2 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by sex United States, 2005–2020

Sex	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Male	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.8	0.8	0.9	1.1	1.2	1.3	1.6	2.0
Female	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.7	0.7	0.8	0.9	1.0	1.0	1.0

Source: CDC, National Notifiable Diseases Surveillance System.

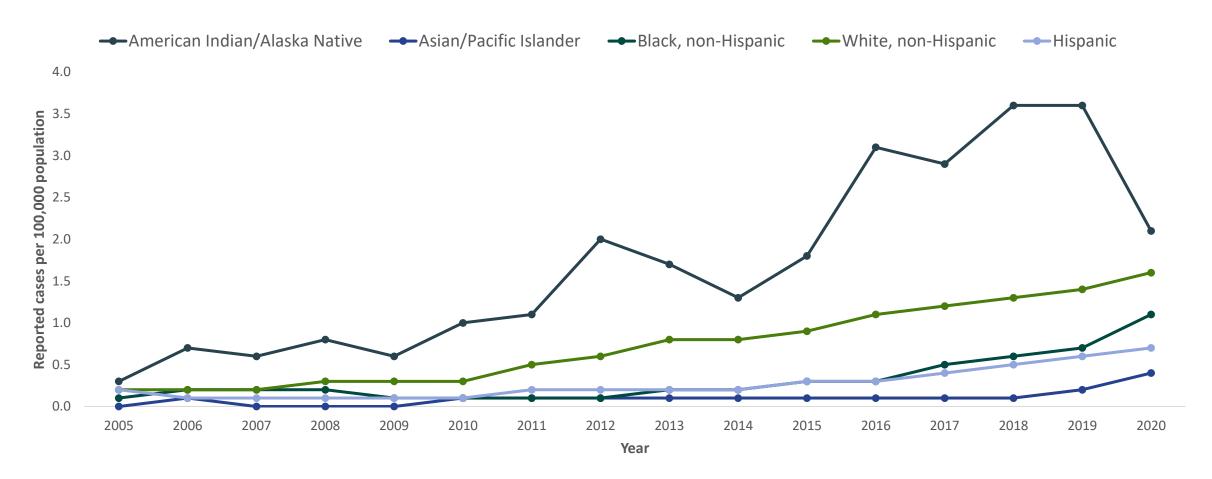
Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



† Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.



Figure 3.6 – Part 1 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by race/ethnicity United States, 2005–2020



Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/</u>.

Figure 3.6 – Part 2 of 2 Rates* of reported cases† of acute hepatitis C virus infection, by race/ethnicity United States, 2005–2020

Race/ethnicity	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
American Indian/Alaska Native	0.3	0.7	0.6	0.8	0.6	1.0	1.1	2.0	1.7	1.3	1.8	3.1	2.9	3.6	3.6	2.1
Asian/Pacific Islander	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
Black, non- Hispanic	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.5	0.6	0.7	1.1
White, non- Hispanic	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.6	0.8	0.8	0.9	1.1	1.2	1.3	1.4	1.6
Hispanic	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7

Source: CDC, National Notifiable Diseases Surveillance System.



* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/</u>.

Table 3.2 – Part 1 of 2 Numbers and rates* of reported cases† of acute hepatitis C virus infection, by demographic characteristics United States 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Total [§]	2,967	1.0	3,216	1.0	3,621	1.2	4,136	1.3	4,798	1.5
Age (years)										
0–19	86	0.1	103	0.1	81	0.1	63	0.1	57	0.1
20–29	1,135	2.7	1,189	2.7	1,310	3.0	1,262	2.9	1,230	2.8
30–39	868	2.2	937	2.3	1,070	2.6	1,347	3.2	1,526	3.5
40–49	452	1.2	441	1.1	494	1.3	664	1.7	820	2.1
50–59	264	0.6	332	0.8	366	0.9	442	1.1	578	1.4
≥60	141	0.2	185	0.3	295	0.4	358	0.5	586	0.8
Sex										
Male	1,627	1.1	1,775	1.2	2,012	1.3	2,471	1.6	3,105	2.0
Female	1,310	0.8	1,431	0.9	1,605	1.0	1,653	1.0	1,687	1.0
Race/ethnicity										
American Indian/Alaska Native	70	3.1	67	2.9	83	3.6	83	3.6	48	2.1
Asian/Pacific Islander	25	0.1	23	0.1	29	0.1	36	0.2	76	0.4
Black, non-Hispanic	130	0.3	202	0.5	231	0.6	267	0.7	458	1.1
White, non-Hispanic	2,109	1.1	2,227	1.2	2,405	1.3	2,683	1.4	3,060	1.6
Hispanic	191	0.3	234	0.4	280	0.5	350	0.6	415	0.7

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.2 – Part 2 of 2 Numbers and rates* of reported cases† of acute hepatitis C virus infection, by demographic characteristics United States 2016–2020

Characteristics	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Urbanicity [¶]										
Urban	2,227	0.8	2,397	0.9	2,782	1.0	3,275	1.2	3,957	1.4
Rural	501	1.2	485	1.1	676	1.6	720	1.7	757	1.7
HHS Region**										
Region 1: Boston	471	3.8	391	2.8	172	1.2	237	1.7	329	2.4
Region 2: New York	301	1.0	313	1.1	332	1.2	405	1.4	455	1.6
Region 3: Philadelphia	422	1.4	424	1.4	404	1.4	392	1.3	365	1.2
Region 4: Atlanta	706	1.1	826	1.3	1,056	1.7	1,253	2.0	1,957	2.9
Region 5: Chicago	615	1.2	692	1.3	977	1.9	1,053	2.0	902	1.7
Region 6: Dallas	95	0.2	105	0.2	114	0.3	157	0.4	384	0.9
Region 7: Kansas City	41	0.4	70	0.6	89	0.8	74	0.5	60	0.4
Region 8: Denver	152	1.4	162	1.4	225	1.9	222	1.9	138	1.1
Region 9: San Francisco	76	0.2	138	0.3	133	0.3	222	0.5	71	0.2
Region 10: Seattle	88	0.7	95	0.7	119	0.9	121	0.9	137	1.0

* Rates per 100,000 population.

+ Reported confirmed cases. For the case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/.

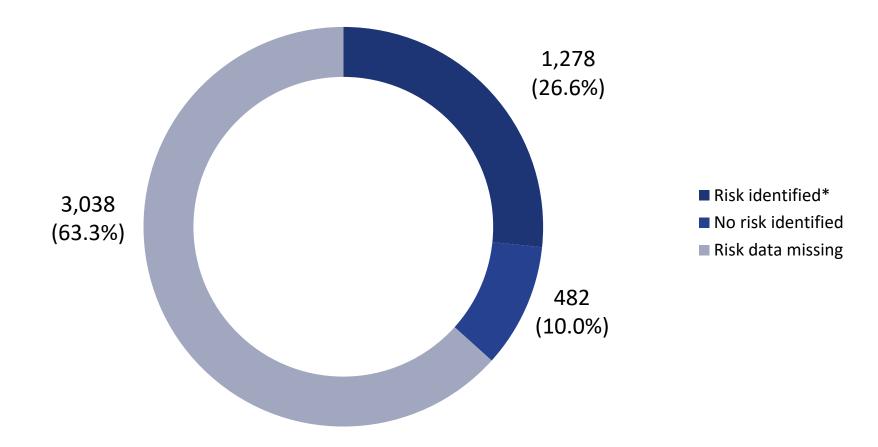
¶ Urbanicity was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (<u>https://www.cdc.gov/nchs/data_access/urban_rural.htm</u>). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services (HHS) Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices (<u>https://www.hhs.gov/about/agencies/iea/regional-offices/index.html</u>). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Notifiable Diseases Surveillance System.



Figure 3.7 Availability of information on risk behaviors or exposures* associated with reported cases of acute hepatitis C virus infection United States, 2020



* Case reports with at least one of the following risk behaviors/exposures reported 6 weeks to 6 months prior to symptom onset or documented seroconversion if asymptomatic: 1) injection drug use; 2) multiple sexual partners; 3) underwent surgery; 4) men who have sex with men; 5) sexual contact with suspected/confirmed hepatitis C case; 6) sustained a percutaneous injury; 7) household contact with suspected/confirmed hepatitis C case; 8) occupational exposure to blood; 9) dialysis; and 10) transfusion. Reported cases may include more than one risk behavior/exposure. " Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.3 Reported risk behaviors or exposures among reported cases* of acute hepatitis C virus infection United States, 2020

Risk behaviors/exposures [†]	Risk identified	No risk identified	Risk data missing
Injection drug use	1,017	523	3,258
Multiple sexual partners	167	352	4,279
Surgery	142	713	3,942
Sexual contact [§]	83	336	4,379
Needlestick	64	706	4,028
Men who have sex with men [¶]	44	258	2,803
Household contact (nonsexual) [§]	17	402	4,379
Dialysis patient	69	964	3,765
Occupational	9	923	3,866
Transfusion	1	885	3,912

* Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/</u>.

+ Reported cases may include more than one risk behavior/exposure. Case reports with at least one of the following risk behaviors/ exposures reported 6 weeks to 6 months prior to symptom onset or documented seroconversion if asymptomatic: 1) injection drug use; 2) multiple sexual partners; 3) underwent surgery; 4) men who have sex with men; 5) sexual contact with suspected/confirmed hepatitis C case; 6) sustained a percutaneous injury; 7) household contact with suspected/confirmed hepatitis C case; 8) occupational exposure to blood; 9) dialysis; and 10) transfusion.

§ Cases with more than one type of contact reported were categorized according to a hierarchy: (1) sexual contact; (2) household contact (nonsexual).

¶ A total of 3,105 acute hepatitis C cases were reported among males in 2020.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.4

Number of newly reported cases^{*} of perinatal hepatitis C virus infection, by state or jurisdiction United States, 2020

State or Jurisdiction	Perinatal Hepatitis C
Alabama	—
Alaska	-
Arizona	—
Arkansas	1
California	7
Colorado	3
Connecticut	1
Delaware	1
District of Columbia	—
Florida	5
Georgia	2
Hawaii	—
Idaho	—
Illinois	5
Indiana	16
lowa	_
Kansas	_
Kentucky	_

State or Jurisdiction	Perinatal Hepatitis C
Louisiana	2
Maine	7
Maryland	1
Massachusetts	3
Michigan	9
Minnesota	5
Mississippi	—
Missouri	—
Montana	-
Nebraska	_
Nevada	3
New Hampshire	—
New Jersey	8
New Mexico	—
New York	2
North Carolina	_
North Dakota	_
Ohio	38

State or Jurisdiction	Perinatal Hepatitis C
Oklahoma	—
Oregon	2
Pennsylvania	17
Rhode Island	U
South Carolina	—
South Dakota	_
Tennessee	9
Texas	Ν
Utah	_
Vermont	_
Virginia	5
Washington	5
West Virginia	_
Wisconsin	8
Wyoming	_
Total	165

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Reported confirmed cases. For case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-perinatal-infection/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

Table 3.5

Number and rate* of newly reported cases⁺ of chronic hepatitis C virus infection, by state or jurisdiction United States, 2020

State or Jurisdiction	No.	Rate*
Alabama	5,697	115.8
Alaska	529	72.4
Arizona	U	U
Arkansas	2,511	82.9
California [§]	8,717	22.1
Colorado	1,883	32.4
Connecticut	880	24.7
Delaware	U	U
District of Columbia	U	U
Florida	9,365	43.1
Georgia	3,872	36.2
Hawaii	U	U
Idaho	702	38.4
Illinois	2,873	22.8
Indiana	Ν	Ν
lowa	830	26.2
Kansas	587	20.1
Kentucky	N	N

State or Jurisdiction	No.	Rate*
Louisiana	4,207	90.6
Maine	740	54.8
Maryland	2,202	36.4
Massachusetts	2,163	31.4
Michigan	2,475	24.8
Minnesota	816	14.4
Mississippi	2,613	88.1
Missouri	4,867	79.1
Montana	672	62.2
Nebraska	355	18.3
Nevada	U	U
New Hampshire	48	3.5
New Jersey	2,488	28
New Mexico	2	0.1
New York	4,849	25.1
North Carolina	N	N
North Dakota	456	59.6
Ohio	7,027	60.1

State or Jurisdiction	No.	Rate*
Oklahoma	3,068	77.1
Oregon	1,848	43.6
Pennsylvania	7,615	59.6
Rhode Island	U	U
South Carolina	3,036	58.2
South Dakota	364	40.8
Tennessee	5,307	77.1
Texas	Ν	N
Utah	647	19.9
Vermont	251	40.3
Virginia	3,884	45.2
Washington	2,968	38.6
West Virginia	2,180	122.1
Wisconsin	1,400	24
Wyoming	306	52.5
Total	107,300	40.7

§ California excludes chronic hepatitis C case counts from Los Angeles County (except for the City of Long Beach and the City of Pasadena) and San Diego County, geographic areas which include approximately 32% of California's total population.

Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



* Reported confirmed cases. For case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-perinatal-infection/.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Table 3.6 – Part 1 of 2 **Number and rate* of newly reported cases† of chronic hepatitis C virus infection, by demographic characteristics United States, 2020**

Characteristics	No.	Rate*
Total [§]	107,300	40.7
Age (years)		
0–19	718	1.1
20–29	16,026	45
30–39	26,194	73.6
40–49	16,415	51.2
50–59	18,474	54.4
≥60	23,242	37.3
Sex		
Male	68,561	52.9
Female	38,283	28.6

Characteristics	No.	Rate*				
Race/ethnicity						
American Indian/Alaska Native	1,443	66.8				
Asian/Pacific Islander	619	3.6				
Black, non-Hispanic	9,084	25.9				
White, non-Hispanic	43,288	26.3				
Hispanic	3,954	9				
Urbanicity [¶]						
Urban	82,577	36.4				
Rural	20,944	57.3				

* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-chronic/</u>.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

¶ Urbanicity was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (https://www.cdc.gov/nchs/data_access/urban_rural.htm). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services (HHS) Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices

(https://www.hhs.gov/about/agencies/iea/regional-offices/index.html). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only. Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.6 – Part 2 of 2 **Number and rate* of newly reported cases† of chronic hepatitis C virus infection, by demographic characteristics United States, 2020**

Characteristics	No.	Rate*		
HHS Region**				
Region 1: Boston	4,082	29.6		
Region 2: New York	7,337	26		
Region 3: Philadelphia	15,881	54.4		
Region 4: Atlanta	29,890	57		
Region 5: Chicago	14,591	31.9		
Region 6: Dallas	9,788	71.1		
Region 7: Kansas City	6,639	46.9		
Region 8: Denver	4,328	35		
Region 9: San Francisco	8,717	22.1		
Region 10: Seattle	6,047	41.7		

* Rates per 100,000 population.

⁺ Reported confirmed cases. For the case definition, see <u>https://ndc.services.cdc.gov/conditions/hepatitis-c-chronic/</u>.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

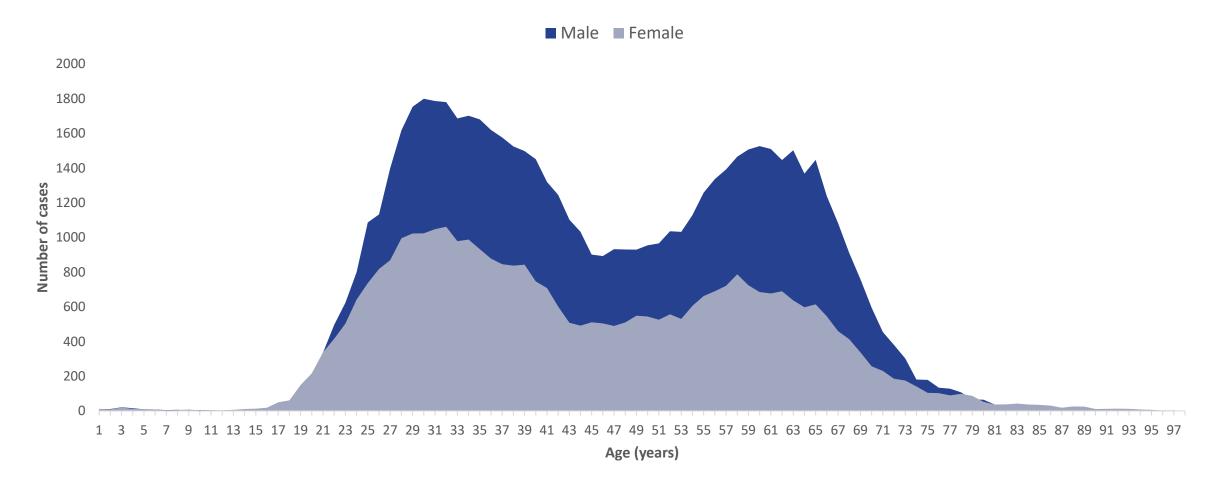
¶ Urbanicity was categorized according to the 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (https://www.cdc.gov/nchs/data_access/urban_rural.htm). Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services (HHS) Regions were categorized according to the grouping of states and US territories assigned under each of the ten Department of Health and Human Services regional offices

(https://www.hhs.gov/about/agencies/iea/regional-offices/index.html). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only. Source: CDC, National Notifiable Diseases Surveillance System.



Figure 3.8 Number of newly reported* chronic hepatitis C virus infection cases† by sex and age United States, 2020



* During 2020, cases of chronic hepatitis C were either not reportable by law, statute, or regulation; not reported; or otherwise, unavailable to CDC from Arizona, Delaware, District of Columbia, Hawaii, Indiana, Kentucky, Nevada, North Carolina, Rhode Island, and Texas.

⁺ Only confirmed, newly diagnosed, chronic hepatitis C cases are included. For the complete case definition, see https://ndc.services.cdc.gov/conditions/hepatitis-c-chronic/.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 3.7 – Part 1 of 4 Numbers and rates* of deaths with hepatitis C listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Alabama	166	2.63	188	2.97	167	2.54	134	2.06	178	2.67
Alaska	50	5.38	38	4.38	40	5.00	41	4.66	46	5.17
Arizona	500	5.81	480	5.45	348	3.84	277	3.01	329	3.36
Arkansas	184	4.91	169	4.43	150	3.86	134	3.45	138	3.43
California	2,917	6.33	2,630	5.58	2,391	4.98	2,114	4.36	2,209	4.54
Colorado	385	5.74	386	5.62	387	5.48	376	5.24	424	5.84
Connecticut	123	2.52	130	2.61	89	1.72	102	2.03	102	1.97
Delaware	47	3.63	49	3.80	34	2.33	26	2.12	30	1.94
District of Columbia	95	13.37	83	11.42	70	9.40	75	10.08	73	9.65
Florida	1,222	4.26	1,222	4.16	1,005	3.34	1,025	3.31	1,012	3.22
Georgia	368	2.98	344	2.66	326	2.46	313	2.33	318	2.38
Hawaii	70	3.75	67	3.48	49	2.42	45	2.38	55	2.63
Idaho	115	5.40	84	3.82	108	4.87	93	4.07	90	3.88
Illinois	354	2.18	288	1.72	279	1.67	221	1.31	288	1.68
Indiana	295	3.60	269	3.16	259	2.98	241	2.76	223	2.56

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75– 84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html.



⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Table 3.7 – Part 2 of 4 Numbers and rates* of deaths with hepatitis C listed as a cause of death⁺ among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
lowa	109	2.67	122	3.01	98	2.40	116	2.82	102	2.36
Kansas	148	4.20	141	3.83	130	3.48	116	3.12	135	3.54
Kentucky	269	5.05	306	5.58	319	5.77	267	5.08	332	6.17
Louisiana	383	6.60	382	6.49	352	5.92	347	5.70	349	5.60
Maine	40	1.87	32	1.60	34	1.69	23	1.31	34	2.14
Maryland	327	4.32	340	4.41	352	4.44	282	3.48	311	3.77
Massachusetts	261	2.98	267	3.00	211	2.33	192	2.09	205	2.26
Michigan	415	3.06	368	2.61	384	2.72	359	2.50	326	2.26
Minnesota	240	3.28	235	3.19	209	2.81	199	2.65	220	3.03
Mississippi	183	5.08	159	4.38	141	3.70	144	3.85	157	4.05
Missouri	258	3.23	247	3.06	244	3.09	205	2.47	200	2.44
Montana	75	5.71	68	4.89	76	5.36	54	4.02	80	5.54
Nebraska	78	3.25	79	3.29	72	3.26	59	2.41	63	2.53
Nevada	181	4.97	153	4.00	140	3.59	128	3.19	115	2.81
New Hampshire	68	3.57	57	2.90	64	3.36	44	2.28	38	2.05
New Jersey	378	3.24	342	2.90	309	2.64	224	1.89	252	2.10

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75– 84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html.



⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Table 3.7 – Part 3 of 4 Numbers and rates* of deaths with hepatitis C listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
New Mexico	203	8.12	175	6.70	163	6.30	165	6.33	185	6.91
New York	789	3.06	701	2.71	615	2.40	556	2.12	567	2.14
North Carolina	511	3.92	460	3.44	426	3.11	402	2.82	369	2.65
North Dakota	20	2.25	23	2.88	23	2.52	30	3.42	20	2.34
Ohio	546	3.58	541	3.48	480	3.16	450	2.90	491	3.11
Oklahoma	538	11.46	555	11.84	534	11.00	533	10.75	501	10.28
Oregon	491	8.90	518	9.24	466	8.03	425	7.26	448	7.41
Pennsylvania	564	3.28	563	3.15	417	2.37	445	2.48	423	2.39
Rhode Island	89	6.57	76	5.15	91	6.37	57	3.79	51	3.50
South Carolina	299	4.51	302	4.51	259	3.70	220	3.09	240	3.27
South Dakota	37	3.46	29	2.56	30	2.80	29	2.61	32	2.82
Tennessee	482	5.89	469	5.57	517	6.01	491	5.77	491	5.66
Texas	1,886	6.12	1,888	6.03	1,708	5.30	1,383	4.20	1,397	4.15
Utah	85	2.98	68	2.29	78	2.59	69	2.17	73	2.28
Vermont	35	3.72	40	4.44	30	3.32	30	2.95	37	4.54

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75– 84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at https://wonder.cdc.gov/wonder/help/mcd.html.



⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Table 3.7 – Part 4 of 4 Numbers and rates* of deaths with hepatitis C listed as a cause of death† among residents, by state or jurisdiction United States, 2016–2020

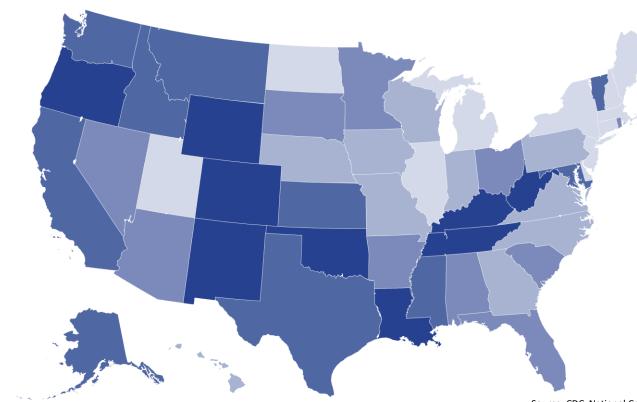
State or Jurisdiction	2016 No.	2016 Rate*	2017 No.	2017 Rate*	2018 No.	2018 Rate*	2019 No.	2019 Rate*	2020 No.	2020 Rate*
Virginia	327	3.03	290	2.68	272	2.48	249	2.29	293	2.62
Washington	517	5.53	528	5.46	466	4.76	441	4.43	444	4.32
West Virginia	118	4.85	116	4.94	108	4.90	108	4.92	112	5.64
Wisconsin	214	2.70	145	1.82	151	1.90	141	1.72	202	2.49
Wyoming	38	4.89	41	5.50	42	5.84	42	5.33	53	6.31
Total	18,093	4.42	17,253	4.13	15,713	3.72	14,242	3.33	14,863	3.45

* Rates are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75– 84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

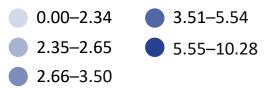
⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at https://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html.

Figure 3.9 Rates* of death with hepatitis C virus infection listed as a cause of death⁺ among residents, by state or jurisdiction United States, 2020



Cases/100,000 Population



Color Key	Death/100,000 Population	State or Jurisdiction
	0.00-2.34	IL, DE, CT, NH, NJ, ME, NY, MA, MI, UT, ND
	2.35–2.65	IA, GA, PA, MO, WI, NE, IN, VA, HI, NC
	2.66–3.50	AL, NV, SD, MN, OH, FL, SC, AZ, AR, RI
	3.51–5.54	KS, MD, ID, MS, TX, WA, CA, VT, AK, MT
	5.55–10.28	LA, WV, TN, CO, KY, WY, NM, OR, DC, OK

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the fifty states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 due to NCHS standards which restrict displayed data to US residents. Accessed at http://wonder.cdc.gov/mcd-icd10.html on January 13, 2022. CDC WONDER dataset documentation and technical methods can be accessed at https://wonder.cdc.gov/wonder/help/mcd.html.



(in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and \geq 85. For age-adjusted death rates, the age-specific death rate is rounded to one decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step may affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

* Rates are age-adjusted per 100,000 US standard population in 2000 using the following age group distribution

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Revision (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Table 3.8 – Part 1 of 3 Numbers and rates* of deaths with hepatitis C virus infection listed as a cause of death[†] among residents, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
Total	18,093	4.42 (4.36 - 4.49)	17,253	4.13 (4.07 - 4.20)	15,713	3.72 (3.66 - 3.78)	14,242	3.33 (3.28 - 3.39)	14,863	3.45 (3.39 - 3.50)
Age (years)										
0–34	164	0.11 (0.09 - 0.13)	180	0.12 (0.10 - 0.14)	212	0.14 (0.12 - 0.16)	170	0.11 (0.10 - 0.13)	229	0.15 (0.13 - 0.17)
35–44	532	1.31 (1.20 - 1.43)	507	1.24 (1.13 - 1.35)	499	1.21 (1.10 - 1.31)	472	1.13 (1.03 - 1.24)	544	1.29 (1.18 - 1.40)
45–54	3,026	7.07 (6.82 - 7.32)	2,556	6.03 (5.80 - 6.27)	2,040	4.90 (4.69 - 5.11)	1,676	4.10 (3.90 - 4.30)	1,555	3.85 (3.66 - 4.04)
55–64	9,011	21.73 (21.28 - 22.18)	8,275	19.70 (19.28 - 20.13)	7,297	17.26 (16.87 - 17.66)	6,304	14.85 (14.48 - 15.22)	6 <i>,</i> 053	14.27 (13.92 - 14.63)
65–74	4,071	14.22 (13.78 - 14.66)	4,397	14.81 (14.38 - 15.25)	4,429	14.52 (14.10 - 14.95)	4,499	14.29 (13.87 - 14.71)	5,195	15.96 (15.53 - 16.39)
≥75	1,288	6.25 (5.91 - 6.59)	1,329	6.28 (5.94 - 6.61)	1,235	5.63 (5.32 - 5.94)	1,117	4.95 (4.66 - 5.24)	1,286	5.56 (5.26 - 5.87)
Sex										
Male	12,815	6.48 (6.36 - 6.59)	12,287	6.12 (6.01 - 6.23)	11,242	5.53 (5.42 - 5.63)	10,229	4.96 (4.86 - 5.05)	10,551	5.07 (4.97 - 5.17)
Female	5,278	2.54 (2.47 - 2.61)	4,966	2.32 (2.26 - 2.39)	4,471	2.09 (2.02 - 2.15)	4,013	1.83 (1.77 - 1.89)	4,312	1.94 (1.88 - 2.00)

* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. Missing data are not included. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths.

+ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

¶ US Department of Health and Human Services (HHS) regions were categorized according to the grouping of states and US territories assigned under each of the 10 HHS regional offices (<u>https://www.hhs.gov/about/agencies/iea/regional-offices/index.html</u>). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2019 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at <u>http://wonder.cdc.gov/mcd-icd10.html</u> on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at <u>https://wonder.cdc.gov/wonder/help/mcd.html</u>.



Table 3.8 – Part 2 of 3 Numbers and rates* of deaths with hepatitis C virus infection listed as a cause of death⁺ among residents, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% Cl)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
Race/ethnicity										
White, non-Hispanic	11,389	3.95 (3.88 - 4.03)	10,781	3.70 (3.63 - 3.78)	9,858	3.35 (3.28 - 3.42)	9,056	3.08 (3.01 - 3.14)	9,397	3.18 (3.12 - 3.25)
Black, non-Hispanic	3,360	7.42 (7.16 - 7.68)	3,262	7.03 (6.79 - 7.28)	2,978	6.31 (6.08 - 6.54)	2,646	5.44 (5.23 - 5.65)	2,743	5.63 (5.42 - 5.85)
Hispanic	2,510	5.76 (5.53 - 6.00)	2,399	5.29 (5.08 - 5.51)	2,190	4.64 (4.44 - 4.84)	1,865	3.84 (3.66 - 4.02)	1,979	4.00 (3.82 - 4.18)
Asian/Pacific Islander, non-Hispanic	384	2.03 (1.82 - 2.24)	368	1.86 (1.67 - 2.05)	300	1.43 (1.27 - 1.60)	308	1.43 (1.27 - 1.59)	324	1.44 (1.28 - 1.60)
American Indian/Alaska Native, non-Hispanic	285	9.80 (8.63 - 10.97)	299	10.24 (9.04 - 11.44)	264	9.05 (7.93 - 10.17)	259	8.63 (7.55 - 9.72)	308	10.17 (9.00 - 11.34)
HHS Region: Regional Office [¶]										
Region 1: Boston	616	3.10 (2.85 - 3.35)	602	2.97 (2.72 - 3.21)	519	2.56 (2.33 - 2.79)	448	2.15 (1.94 - 2.36)	467	2.34 (2.11 - 2.56)
Region 2: New York	1,167	3.12 (2.94 - 3.30)	1,043	2.76 (2.59 - 2.93)	924	2.48 (2.31 - 2.64)	780	2.06 (1.91 - 2.21)	819	2.11 (1.96 - 2.26)
Region 3: Philadelphia	1,478	3.68 (3.48 - 3.87)	1,441	3.53 (3.35 - 3.72)	1,253	3.04 (2.87 - 3.22)	1,185	2.85 (2.68 - 3.02)	1,242	2.98 (2.81 - 3.15)

* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. Missing data are not included. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths.

⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

¶ US Department of Health and Human Services (HHS) regions were categorized according to the grouping of states and US territories assigned under each of the 10 HHS regional offices (<u>https://www.hhs.gov/about/agencies/iea/regional-offices/index.html</u>). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2019 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at <u>http://wonder.cdc.gov/mcd-icd10.html</u> on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at <u>https://wonder.cdc.gov/wonder/help/mcd.html</u>.



Table 3.8 – Part 3 of 3 Numbers and rates* of deaths with hepatitis C virus infection listed as a cause of death⁺ among residents, by demographic characteristics United States, 2016–2020

Characteristics	2016 No.	2016 Rate* (95% CI)	2017 No.	2017 Rate* (95% CI)	2018 No.	2018 Rate* (95% CI)	2019 No.	2019 Rate* (95% CI)	2020 No.	2020 Rate* (95% CI)
HHS Region: Regional Office [¶]										
Region 4: Atlanta	3,500	4.18 (4.03 - 4.32)	3,450	4.03 (3.89 - 4.16)	3,160	3.60 (3.47 - 3.72)	2,996	3.36 (3.24 - 3.49)	3,097	3.45 (3.33 - 3.58)
Region 5: Chicago	2,064	3.01 (2.88 - 3.15)	1,846	2.63 (2.51 - 2.75)	1,762	2.52 (2.40 - 2.64)	1,611	2.27 (2.15 - 2.38)	1,750	2.45 (2.33 - 2.57)
Region 6: Dallas	3,194	6.69 (6.45 - 6.92)	3,169	6.54 (6.31 - 6.77)	2,907	5.85 (5.64 - 6.07)	2,562	5.06 (4.86 - 5.25)	2,570	4.98 (4.78 - 5.17)
Region 7: Kansas City	593	3.31 (3.04 - 3.59)	589	3.24 (2.97 - 3.51)	544	3.04 (2.78 - 3.30)	496	2.67 (2.43 - 2.92)	500	2.66 (2.42 - 2.90)
Region 8: Denver	640	4.69 (4.32 - 5.06)	615	4.38 (4.02 - 4.73)	636	4.45 (4.09 - 4.80)	600	4.10 (3.77 - 4.44)	682	4.57 (4.22 - 4.92)
Region 9: San Francisco	3,668	6.08 (5.88 - 6.28)	3,330	5.37 (5.19 - 5.56)	2,928	4.63 (4.46 - 4.80)	2,564	4.00 (3.84 - 4.15)	2,708	4.15 (3.99 - 4.31)
Region 10: Seattle	1,173	6.56 (6.17 - 6.94)	1,168	6.38 (6.01 - 6.76)	1,080	5.79 (5.43 - 6.14)	1,000	5.27 (4.94 - 5.61)	1,028	5.27 (4.94 - 5.60)

* Rates for race/ethnicity, sex, HHS region, and the overall total are age-adjusted per 100,000 US standard population during 2000 by using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. Missing data are not included. For age-adjusted death rates, the age-specific death rate is rounded to 1 decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step might affect the precision of rates calculated for small numbers of deaths.

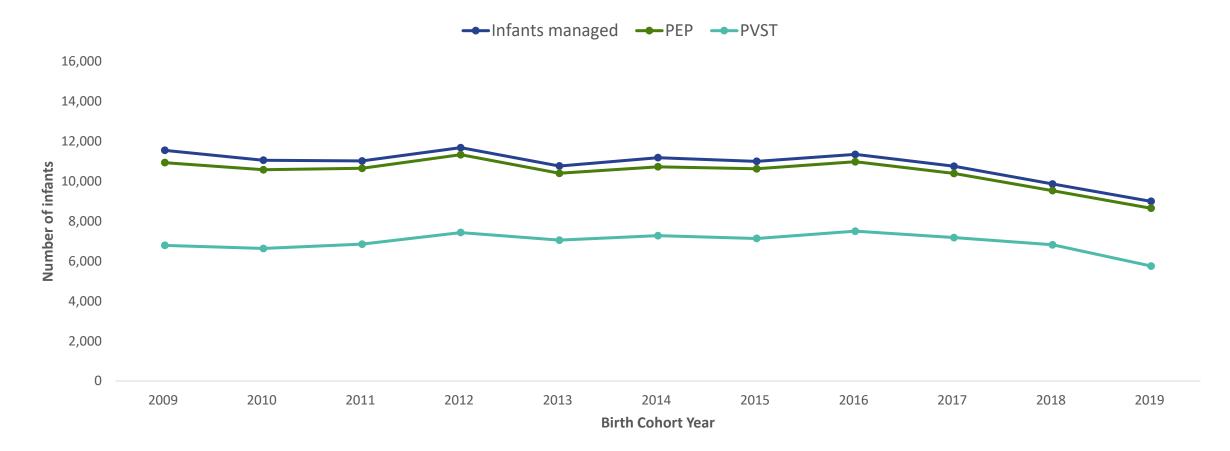
⁺ Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Rev. (ICD-10) codes B17.1, and B18.2 (hepatitis C).

¶ US Department of Health and Human Services (HHS) regions were categorized according to the grouping of states and US territories assigned under each of the 10 HHS regional offices (<u>https://www.hhs.gov/about/agencies/iea/regional-offices/index.html</u>). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2019 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the 50 states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 because of NCHS standards that restrict displayed data to US residents. Accessed at <u>http://wonder.cdc.gov/mcd-icd10.html</u> on January 13, 2022. CDC WONDER data set documentation and technical methods can be accessed at <u>https://wonder.cdc.gov/wonder/help/mcd.html</u>.



Figure 4.1 – Part 1 of 2 Outcomes of infants born to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program, by birth cohort year — 55 US Jurisdictions*, 2009–2019



Infants managed, number of infants case managed by the Perinatal Hepatitis B Prevention Program (PHBPP); PEP (postexposure prophylaxis), number of infants who received PEP (hepatitis B immune globulin and 1st dose of hepatitis B vaccine) for hepatitis B infection; PVST (postvaccination serological testing), number of infants who received PVST after hepatitis B vaccine series completion.

* Includes 49 states and 6 cities. Excludes Washington state, territories, and freely associated island nations.

Source: CDC, National Perinatal Hepatitis B Prevention Program.



Figure 4.1 – Part 2 of 2

Outcomes of infants born to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program, by birth cohort year — 55 US Jurisdictions*, 2009–2019

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Infants managed	11,551	11,054	11,018	11,687	10,769	11,186	11,000	11,350	10,757	9,864	8,995
PEP	10,937	10,580	10,650	11,333	10,402	10,726	10,627	10,980	10,394	9,531	8,653
PEP (%)	95%	96%	97%	97%	97%	96%	97%	97%	97%	97%	96%
PVST	6,792	6,637	6,852	7,433	7,053	7,276	7,135	7,499	7,181	6,820	5,753
PVST (%)	59%	60%	62%	64%	65%	65%	65%	66%	67%	69%	64%

Infants managed, number of infants case managed by the Perinatal Hepatitis B Prevention Program (PHBPP); PEP (postexposure prophylaxis), number of infants who received PEP (hepatitis B immune globulin and 1st dose of hepatitis B vaccine) for hepatitis B infection; PVST (postvaccination serological testing), number of infants who received PVST after hepatitis B vaccine series completion.

* Includes 49 states and 6 cities. Excludes Washington state, territories, and freely associated island nations.

Source: CDC, National Perinatal Hepatitis B Prevention Program.



Table 4.1 – Part 1 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

Jurisdiction	All infants managed No.	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth No. (%)	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Total with complete series No. (%)	POST VACCINATION SEROLOGIC TESTING Received [†] No. (%)	POST VACCINATION SEROLOGIC TESTING HBsAg positive No. (%)	POST VACCINATION SEROLOGIC TESTING Immune [§] No. (%)
All Jurisdictions	9,055	8,709 (96%)	7,653 (85%)	131 (1%)	7,784 (86%)	5,759 (64%)	16 (0%)	5,523 (96%)
State								
Alabama	78	78 (100%)	30 (38%)	0 (0%)	30 (38%)	24 (31%)	0 (0%)	11 (46%)
Alaska	28	27 (96%)	25 (89%)	1 (4%)	26 (93%)	17 (61%)	0 (0%)	17 (100%)
Arizona	133	119 (89%)	103 (77%)	10 (8%)	113 (85%)	64 (48%)	0 (0%)	59 (92%)
Arkansas	61	60 (98%)	45 (74%)	0 (0%)	45 (74%)	40 (66%)	1 (3%)	37 (93%)
California	1,600	1,551 (97%)	1,204 (75%)	6 (0%)	1,210 (76%)	908 (57%)	2 (0%)	866 (95%)
Colorado	111	111 (100%)	108 (97%)	1 (1%)	109 (98%)	100 (90%)	0 (0%)	99 (99%)
Connecticut	40	38 (95%)	1 (3%)	1 (3%)	2 (5%)	1 (3%)	0 (0%)	1 (100%)
Delaware	45	45 (100%)	26 (58%)	12 (27%)	38 (84%)	38 (84%)	0 (0%)	34 (89%)
Florida	394	347 (88%)	298 (76%)	2 (1%)	300 (76%)	96 (24%)	0 (0%)	90 (94%)
Georgia	283	270 (95%)	258 (91%)	2 (1%)	260 (92%)	230 (81%)	1 (0%)	222 (97%)
Hawaii	139	137 (99%)	131 (94%)	2 (1%)	133 (96%)	114 (82%)	0 (0%)	113 (99%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (https://www.cdc.gov/vaccines/imzmanagers/nis/index.html) and via VaxView (https://www.cdc.gov/vaccines/vaxview/index.html).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

¶ Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC. National Notifiable Diseases Surveillance System.



Table 4.1 – Part 2 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

	All infants managed	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age	HEPB VACCINE ADMINISTRATION Total with complete series	Received ⁺	HBsAg positive	SEROLOGIC TESTING Immune [§]
Jurisdiction	No.	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
State								
Idaho	17	16 (94%)	16 (94%)	0 (0%)	16 (94%)	11 (65%)	0 (0%)	11 (100%)
Illinois	162	160 (99%)	144 (89%)	1 (1%)	145 (90%)	99 (61%)	0 (0%)	92 (93%)
Indiana	117	117 (100%)	113 (97%)	0 (0%)	113 (97%)	86 (74%)	1 (1%)	85 (99%)
lowa	121	119 (98%)	111 (92%)	0 (0%)	111 (92%)	73 (60%)	0 (0%)	68 (93%)
Kansas	44	43 (98%)	39 (89%)	1 (2%)	40 (91%)	27 (61%)	0 (0%)	19 (70%)
Kentucky	60	55 (92%)	48 (80%)	2 (3%)	50 (83%)	30 (50%)	0 (0%)	29 (97%)
Louisiana	123	108 (88%)	103 (84%)	5 (4%)	108 (88%)	63 (51%)	2 (3%)	57 (90%)
Maine	10	10 (100%)	10 (100%)	0 (0%)	10 (100%)	7 (70%)	0 (0%)	7 (100%)
Maryland	253	239 (94%)	210 (83%)	7 (3%)	217 (86%)	158 (62%)	0 (0%)	151 (96%)
Massachusetts	307	303 (99%)	291 (95%)	0 (0%)	291 (95%)	271 (88%)	0 (0%)	265 (98%)
Michigan	152	152 (100%)	140 (92%)	2 (1%)	142 (93%)	121 (80%)	0 (0%)	118 (98%)
Minnesota	398	395 (99%)	376 (94%)	5 (1%)	381 (96%)	304 (76%)	0 (0%)	298 (98%)
Mississippi	54	51 (94%)	41 (76%)	1 (2%)	42 (78%)	31 (57%)	0 (0%)	29 (94%)
Missouri	84	81 (96%)	72 (86%)	1 (1%)	73 (87%)	48 (57%)	0 (0%)	43 (90%)
Montana	10	9 (90%)	6 (60%)	0 (0%)	6 (60%)	4 (40%)	0 (0%)	4 (100%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (<u>https://www.cdc.gov/vaccines/imz-managers/nis/index.html</u>) and via VaxView (<u>https://www.cdc.gov/vaccines/vaxview/index.html</u>).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

 \P Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 4.1 – Part 3 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

Jurisdiction	All infants managed No.	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth No. (%)	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Total with complete series No. (%)	POST VACCINATION SEROLOGIC TESTING Received [†] No. (%)	POST VACCINATION SEROLOGIC TESTING HBsAg positive No. (%)	POST VACCINATION SEROLOGIC TESTING Immune [§] No. (%)
State								
Nebraska	62	43 (69%)	56 (90%)	0 (0%)	56 (90%)	44 (71%)	0 (0%)	42 (95%)
Nevada	82	82 (100%)	81 (99%)	0 (0%)	81 (99%)	59 (72%)	0 (0%)	58 (98%)
New Hampshire	16	16 (100%)	10 (63%)	0 (0%)	10 (63%)	7 (44%)	0 (0%)	7 (100%)
New Jersey	271	244 (90%)	196 (72%)	10 (4%)	206 (76%)	98 (36%)	0 (0%)	88 (90%)
New Mexico	11	9 (82%)	10 (91%)	1 (9%)	11 (100%)	9 (82%)	0 (0%)	7 (78%)
New York State	218	205 (94%)	201 (92%)	1 (0%)	202 (93%)	166 (76%)	0 (0%)	163 (98%)
North Carolina	191	184 (96%)	174 (91%)	4 (2%)	178 (93%)	122 (64%)	0 (0%)	119 (98%)
North Dakota	36	35 (97%)	27 (75%)	5 (14%)	32 (89%)	15 (42%)	0 (0%)	15 (100%)
Ohio	269	264 (98%)	223 (83%)	2 (1%)	225 (84%)	113 (42%)	2 (2%)	102 (90%)
Oklahoma	69	67 (97%)	61 (88%)	2 (3%)	63 (91%)	46 (67%)	0 (0%)	45 (98%)
Oregon	50	40 (80%)	39 (78%)	4 (8%)	43 (86%)	0 (0%)	0 (0%)	0 (0%)
Pennsylvania	191	189 (99%)	171 (90%)	4 (2%)	175 (92%)	113 (59%)	0 (0%)	112 (99%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (<u>https://www.cdc.gov/vaccines/imz-managers/nis/index.html</u>) and via VaxView (<u>https://www.cdc.gov/vaccines/vaxview/index.html</u>).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

¶ Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC, National Notifiable Diseases Surveillance System.

Table 4.1 – Part 4 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

Jurisdiction State	All infants managed No.	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth No. (%)	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Total with complete series No. (%)	POST VACCINATION SEROLOGIC TESTING Received [†] No. (%)	POST VACCINATION SEROLOGIC TESTING HBsAg positive No. (%)	
Rhode Island	35	35 (100%)	33 (94%)	0 (0%)	33 (94%)	27 (77%)	0 (0%)	25 (93%)
South Carolina	64	59 (92%)	51 (80%)	1 (2%)	52 (81%)	36 (56%)	0 (0%)	36 (100%)
South Dakota	16	16 (100%)	16 (100%)	0 (0%)	16 (100%)	10 (63%)	0 (0%)	10 (100%)
Tennessee	117	113 (97%)	113 (97%)	2 (2%)	115 (98%)	78 (67%)	0 (0%)	74 (95%)
Texas	539	519 (96%)	462 (86%)	2 (0%)	464 (86%)	377 (70%)	0 (0%)	363 (96%)
Utah	77	76 (99%)	71 (92%)	1 (1%)	72 (94%)	43 (56%)	0 (0%)	43 (100%)
Vermont	5	5 (100%)	5 (100%)	0 (0%)	5 (100%)	1 (20%)	0 (0%)	0 (0%)
Virginia	243	229 (94%)	228 (94%)	2 (1%)	230 (95%)	146 (60%)	0 (0%)	141 (97%)
Washington	U	U (U)	U (U)	U (U)	U (U)	U (U)	U (U)	U (U)
West Virginia	21	21 (100%)	21 (100%)	0 (0%)	21 (100%)	19 (90%)	0 (0%)	19 (100%)
Wisconsin	142	142 (100%)	131 (92%)	3 (2%)	134 (94%)	95 (67%)	2 (2%)	92 (97%)
Wyoming	3	3 (100%)	2 (67%)	1 (33%)	3 (100%)	1 (33%)	0 (0%)	1 (100%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (<u>https://www.cdc.gov/vaccines/imz-managers/nis/index.html</u>) and via VaxView (<u>https://www.cdc.gov/vaccines/vaxview/index.html</u>).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

 \P Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 4.1 – Part 5 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

	All infants managed	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age	HEPB VACCINE ADMINISTRATION Total with complete series	POST VACCINATION SEROLOGIC TESTING Received [†]	POST VACCINATION SEROLOGIC TESTING HBsAg positive	POST VACCINATION SEROLOGIC TESTING Immune [§]
Jurisdiction	No.	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
City ^{**}								
Chicago	102	101 (99%)	78 (76%)	0 (0%)	78 (76%)	70 (69%)	0 (0%)	69 (99%)
District of Columbia	27	27 (100%)	25 (93%)	0 (0%)	25 (93%)	22 (81%)	0 (0%)	22 (100%)
Houston	119	113 (95%)	98 (82%)	4 (3%)	102 (86%)	87 (73%)	0 (0%)	85 (98%)
New York City	1,031	1,028 (100%)	949 (92%)	5 (0%)	954 (93%)	875 (85%)	0 (0%)	856 (98%)
Philadelphia	128	111 (87%)	103 (80%)	7 (5%)	110 (86%)	84 (66%)	0 (0%)	78 (93%)
San Antonio	36	36 (100%)	30 (83%)	2 (6%)	32 (89%)	25 (69%)	0 (0%)	25 (100%)
Territory								
American Samoa	3	3 (100%)	3 (100%)	0 (0%)	3 (100%)	0 (0%)	0 (0%)	0 (0%)
Guam	12	12 (100%)	3 (25%)	4 (33%)	7 (58%)	0 (0%)	0 (0%)	0 (0%)
N. Mariana Islands	5	5 (100%)	5 (100%)	0 (0%)	5 (100%)	5 (100%)	5 (100%)	0 (0%)
Puerto Rico	1	1 (100%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)
Virgin Islands	1	1 (100%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	0 (0%)	1 (100%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (<u>https://www.cdc.gov/vaccines/imz-managers/nis/index.html</u>) and via VaxView (<u>https://www.cdc.gov/vaccines/vaxview/index.html</u>).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

 \P Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC, National Notifiable Diseases Surveillance System.



Table 4.1 – Part 6 of 6 Outcomes of infants born in 2019 to persons infected with hepatitis B virus and managed by CDC Perinatal Hepatitis B Prevention Program through the end of 2020, 64 US Jurisdictions

Jurisdiction Freely Associated Island Nations	All infants managed No.	HEPB VACCINE ADMINISTRATION HBIG & HepB at birth No. (%)	HEPB VACCINE ADMINISTRATION Complete series by 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Complete series after 12 months of age No. (%)	HEPB VACCINE ADMINISTRATION Total with complete series No. (%)	SEPOLOGIC TESTING	POST VACCINATION SEROLOGIC TESTING HBsAg positive No. (%)	
Marshall Islands	U	U (U)	U (U)	U (U)	U (U)	U (U)	U (U)	U (U)
Micronesia	35	32 (91%)	23 (66%)	2 (6%)	25 (71%)	0 (0%)	0 (0%)	0 (0%)
Palau	3	2 (67%)	3 (100%)	0 (0%)	3 (100%)	0 (0%)	0 (0%)	0 (0%)

HBIG=hepatitis B immune globulin; HepB=hepatitis B vaccine; HBsAg=hepatitis B surface antigen; anti-HBs= antibody to hepatitis B surface antigen; U= The data were unavailable

* These data only include infants followed by the PHBPP. National and jurisdictional level HepB vaccination coverage rates are available via annual MMWR publications of National Immunization Survey data (<u>https://www.cdc.gov/vaccines/imz-managers/nis/index.html</u>) and via VaxView (<u>https://www.cdc.gov/vaccines/vaxview/index.html</u>).

⁺ Post vaccination serologic testing includes a test for HBsAg, anti-HBs, or both. Results from post vaccination serologic testing may be reported as HBsAg positive, HBsAg negative and immune or not immune, or indeterminate.

§ Anti-HBs >10 mIU/mL

¶ Percentage is among infants that completed the vaccine series and received PVST.

** City data are mutually exclusive from state data.

Source: CDC, National Notifiable Diseases Surveillance System.



Appendix Table 1 Number of reported acute viral hepatitis cases* and estimated infections† with 95% bootstrap confidence intervals United States, 2013–2020

Year	Hepatitis A Reported	Hepatitis A Estimated* (95% bootstrap confidence interval)	Hepatitis B Reported	Hepatitis B Estimated* (95% bootstrap confidence interval)	Hepatitis C Reported	Hepatitis C Estimated* (95% bootstrap confidence interval)
2013	1,781	3,600 (2,500-3,900)	3,050	19,800 (11,300-48,500)	2,138	29,700 (23,500-101,300)
2014	1,239	2,500 (1,700-2,700)	2,791	18,100 (10,300-44,400)	2,194	30,500 (24,100-104,000)
2015	1,390	2,800 (1,900-3,100)	3,370	21,900 (12,500-53,600)	2,436	33,900 (26,800-115,500)
2016	2,007	4,000 (2,800-4,400)	3,218	20,900 (11,900-51,200)	2,967	41,200 (32,600-140,600)
2017	3,366	6,700 (4,700-7,400)	3,409	22,200 (12,600-54,200)	3,216	44,700 (35,400-152,400)
2018	12,474	24,900 (17,500-27,400)	3,322	21,600 (12,300-52,800)	3,621	50,300 (39,800-171,600)
2019	18,846	37,700 (26,400-41,500)	3,192	20,700 (11,800-50,800)	4,136	57,500 (45,500-196,000)
2020	9,952	19,900 (13,900-21,900)	2,157	14,000 (8,000-34,300)	4,798	66,700 (52,700-227,400)

* Reported confirmed cases. For case definitions, see https://ndc.services.cdc.gov/.

⁺ The number of estimated viral hepatitis infections was determined by multiplying the number of reported cases that met the classification criteria for a confirmed case by a factor that adjusted for underascertainment and underreporting.

Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3953761/pdf/AJPH.2013.301601.pdf</u>.

Source: CDC, National Notifiable Diseases Surveillance System.



Appendix Table 2 – Part 1 of 2 Number of reported acute and chronic cases* of hepatitis C virus infection by case status United States, 2020

State or Jurisdiction	Acute Hepatitis C Confirmed (Probable)	Chronic Hepatitis C Confirmed (Probable)
Alabama	49 (4)	5,697 (1,983)
Alaska	N (N)	529 (302)
Arizona	U (U)	U (U)
Arkansas	65 (72)	2,511 (1,721)
California†	59 (13)	8,717 (10,647)
Colorado	10 (—)	1,883 (998)
Connecticut	12 (—)	880 (—)
Delaware	49 (1)	U (U)
District of Columbia	U (U)	U (U)
Florida	1,336 (352)	9,365 (4,272)
Georgia	138 (99)	3,872 (5,600)
Hawaii	— (—)	U (U)
Idaho	2 (1)	702 (779)
Illinois	203 (20)	2,873 (1,038)
Indiana	243 (21)	N (N)
lowa	17 (—)	830 (—)
Kansas	9 (3)	587 (1,283)
Kentucky	143 (115)	N (N)

* For confirmed and probable case definition, see <u>https://ndc.services.cdc.gov/nndss/conditions/hepatitis-c-acute/</u> for acute hepatitis C and <u>https://ndc.services.cdc.gov/nndss/conditions/hepatitis-c-chronic/</u> for chronic hepatitis C.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction

U: Unavailable. The data were unavailable.

State or Jurisdiction	Acute Hepatitis C Confirmed (Probable)	Chronic Hepatitis C Confirmed (Probable)
Louisiana	281 (2)	4,207 (1,222)
Maine	160 (46)	740 (672)
Maryland	47 (10)	2,202 (1,663)
Massachusetts	150 (8)	2,163 (1,463)
Michigan	119 (23)	2,475 (1,892)
Minnesota	58 (3)	816 (216)
Mississippi	40 (34)	2,613 (—)
Missouri	25 (—)	4,867 (—)
Montana	17 (1)	672 (310)
Nebraska	9 (2)	355 (293)
Nevada	12 (4)	U (U)
New Hampshire	6 (20)	48 (111)
New Jersey	115 (6)	2,488 (2,908)
New Mexico	1 (—)	2 (9)
New York	340 (24)	4,849 (2,365)
North Carolina	75 (25)	N (N)
North Dakota	— (—)	456 (367)
Ohio	186 (55)	7,027 (5,649)

†: California excludes chronic hepatitis C case counts from Los Angeles County (except for the City of Long Beach and the City of Pasadena) and San Diego County, geographic areas which include approximately 32% of California's total population.

Source: CDC, National Notifiable Diseases Surveillance System.



Appendix Table 2 – Part 2 of 2 Number of reported acute and chronic cases* of hepatitis C virus infection by case status United States, 2020

State or Jurisdiction	Acute Hepatitis C Confirmed (Probable)	Chronic Hepatitis C Confirmed (Probable)
Oklahoma	20 (25)	3,068 (3,811)
Oregon	30 (7)	1,848 (1,934)
Pennsylvania	146 (—)	7,615 (4,315)
Rhode Island	U (U)	U (U)
South Carolina	6 (3)	3,036 (4,034)
South Dakota	7 (4)	364 (367)
Tennessee	170 (65)	5,307 (3,846)
Texas	17 (21)	N (N)
Utah	104 (55)	647 (570)
Vermont	1 (—)	251 (268)
Virginia	29 (22)	3,884 (3,257)
Washington	105 (14)	2,968 (1,551)
West Virginia	94 (43)	2,180 (1,733)
Wisconsin	93 (4)	1,400 (511)
Wyoming	— (—)	306 (—)
Total	4,798 (1,227)	107,300 (73,960)

* For confirmed and probable case definition, see <u>https://ndc.services.cdc.gov/nndss/conditions/hepatitis-c-acute/</u> for acute hepatitis C and <u>https://ndc.services.cdc.gov/nndss/conditions/hepatitis-c-chronic/</u> for chronic hepatitis C.

-: No reported cases. The reporting jurisdiction did not submit any cases to CDC.

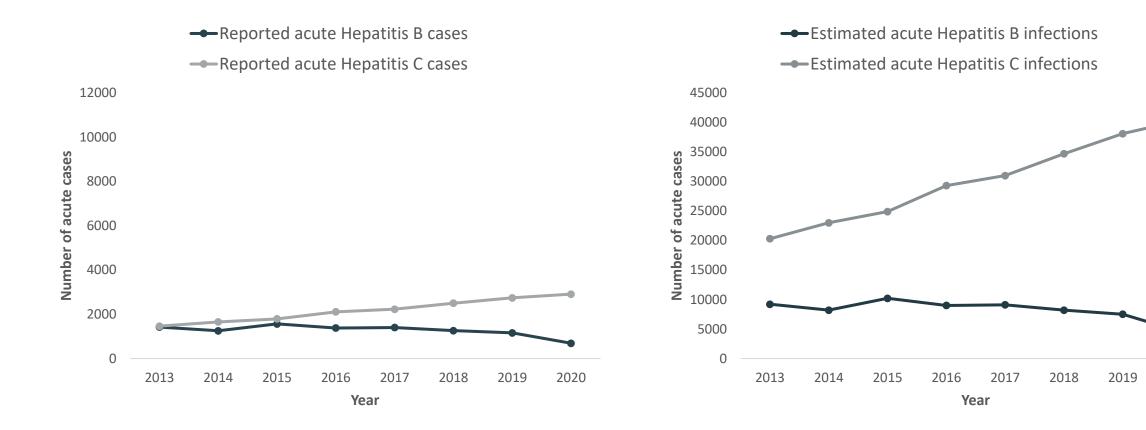
N: Not reportable. The disease or condition was not reportable by law, statue, or regulation in the reporting jurisdiction.

U: Unavailable. The data were unavailable.

Source: CDC, National Notifiable Diseases Surveillance System.



Appendix Figure 1 Number of reported acute hepatitis B and hepatitis C cases (Panel A) and estimated infections (Panel B) among adults aged 18-40 years old* United States, 2013–2020



Source: CDC, National Notifiable Diseases Surveillance System.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <u>https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm</u>. Published September 2022.



2020

Appendix Table 3

Numbers and rates^{*} of reported acute hepatitis B infections⁺ and acute hepatitis C infections⁺ among adults aged 18-40 years old, by demographic characteristics United States, 2020

Characteristics	Acute Hepatitis B No. (Rate*)	Acute Hepatitis C No. (Rate*)
Total [§]	690 (0.7)	2,908 (2.9)
Sex		
Male	402 (0.8)	1,824 (3.6)
Female	287 (0.6)	1,079 (2.2)
Race/ethnicity		
American Indian/Alaskan Native	4 (0.4)	40 (5.1)
Asian/Pacific Islander	16 (0.2)	29 (0.4)
Black, non-Hispanic	102 (0.7)	202 (1.4)
White, non-Hispanic	443 (0.8)	1,974 (3.6)
Hispanic	55 (0.3)	223 (1.1)

Characteristics	Acute Hepatitis B No. (Rate*)	Acute Hepatitis C No. (Rate*)
Urbanicity [¶]		
Urban	539 (0.6)	2,360 (2.6)
Rural	131 (1)	498 (3.9)
HHS Region**		
Region 1: Boston	24 (0.6)	247 (5.9)
Region 2: New York	30 (0.3)	284 (3.3)
Region 3: Philadelphia	63 (0.7)	235 (2.6)
Region 4: Atlanta	351 (1.7)	1,013 (5)
Region 5: Chicago	116 (0.7)	615 (3.9)
Region 6: Dallas	54 (0.4)	214 (1.5)
Region 7: Kansas City	11 (0.3)	42 (1)
Region 8: Denver	11 (0.3)	101 (2.5)
Region 9: San Francisco	14 (0.1)	55 (0.4)
Region 10: Seattle	16 (0.3)	101 (2.3)

* Rate per 100,000 population.

§ Numbers reported in each category may not add up to the total number of reported cases in a year due to cases with missing data or, in the case of race/ethnicity, cases categorized as "Other".

¶ Urban-rural region was categorized according to 2013 National Center for Health Statistics (NCHS) urban-rural classification scheme for counties and county-equivalent entities (<u>https://www.cdc.gov/nchs/data_access/urban_rural.htm</u>.) Large central metro, large fringe metro, medium metro, and small metro counties were grouped as urban. Micropolitan and noncore counties were grouped as rural.

** US Department of Health and Human Services Regions were categorized according to the grouping of states and US Territories assigned under each of the ten Department of Health and Human Services regional offices

(https://www.hhs.gov/about/agencies/iea/regional-offices/index.html). For the purposes of this report, regions with US territories (Region 2 and Region 9) contain data from states only.

Source: CDC, National Notifiable Diseases Surveillance System.



For more information, contact CDC 1-800-CDC-INFO (232-4636) TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

