

Hepatitis C in Colorado 2010 Surveillance Report

Cases of Acute and Chronic Hepatitis C in Colorado

Note: This report is published by the Viral Hepatitis Program (VHP), Disease Control and Environmental Epidemiology Division, Colorado Department of Public Health and Environment, Denver Colorado. Data are presented for acute and chronic hepatitis C cases newly reported to CDPHE in 2010



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of Public Health
and Environment

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Hepatitis C

Hepatitis C is the most common chronic blood borne infection in the United States. Severity and duration of Hepatitis C can range from mild symptoms lasting a few weeks to a serious lifelong illness leading to cirrhosis and/or cancer of the liver. Data from the National Health and Nutrition Examination Survey conducted from 1999-2002 indicate that between 3.4 and 4.9 million people in the United States have ever been infected with the hepatitis C virus (HCV) .¹ In Colorado, it is estimated that more than 76,000 residents have ever been infected with hepatitis C. Hepatitis C infections can be either “acute” or “chronic.”

Viral hepatitis surveillance in Colorado is primarily based on laboratory reporting of serologic results. Laboratory-based reporting enables the identification of asymptomatic persons infected by the virus as well as those displaying symptoms. In Colorado, the Board of Health requires physicians and other health care providers to report suspected cases of acute hepatitis C within 7 days, and it requires laboratories to report positive HCV serologic tests within 7 days. Upon receipt of these reports, either electronically, by fax, or via another reporting system, the VHP uses established case definitions to assign the appropriate diagnosis and case status for each patient.

Acute Hepatitis C

Acute hepatitis C is the first stage of hepatitis C infection. It is usually mildly symptomatic, with jaundice and abnormal liver function tests being the most characteristic features. Approximately 15 percent of individuals appear to resolve hepatitis infection after the acute stage.

Chronic Hepatitis C

Up to 85% of persons infected with hepatitis C, develop chronic infection. Chronic liver disease or liver cancer develops in approximately 10 to 25 percent of people infected with the hepatitis C virus for 20 years or longer. Laboratories in Colorado report positive serum antibody titers (with signal-to-cutoff ratios) or more specific tests within seven days. Reported cases of chronic hepatitis C include persons who are presently infected or who may have been infected in the past.

Summary of Surveillance

Men had the highest number of reported cases of acute and chronic hepatitis C infection. Fifteen (55.56%) acute infection were reported in men and 12 (44.44%) reported cases were in women. For chronic infection, 2,152 (65.90%) of the cases were found in men and 1,113 (34.07%) in women. The reasons for this are unclear.

Table 1 represents the age distribution of acute and chronic hepatitis C cases. For acute cases persons 20-39 years of age, 14 (51.86%) had the highest number of reported cases. For chronic infections persons 40-59 years of age, 2091 (64.02%) had the highest number of reported cases. This suggests that individuals in this age group may be diagnosed later in the course of infection when symptoms become more common.

White non-Hispanic people had the majority of acute cases reported with 18 (66.70%). The category of Other/Multiple/Unknown had the majority of cases reported for chronic 1477 (45.20%).

Risk factor data was added to the 2010 statistics. Those risk factor data listed with no, yes, and unknown data represent the responses that were obtained during interview, record review, or from a physician, hospital, or other healthcare provider. The VHP collected risk factor information on 22 (81.49%) HCV acute cases and 978 (29.90%) HCV chronic cases.

Acute hepatitis C was reported in 11 counties. Reported chronic cases resided in 59 of the 64 Colorado counties. Outside of Denver, rural and frontier counties (rural areas sparsely populated that are isolated from population centers and services), had the highest rates of reported chronic cases. However, this is based on small numbers of cases reported, and five rural and frontier counties did not report a case. Incarcerated HCV chronic cases are counted in the “Unspecified” section under Colorado Department of Corrections (CDOC).

Figure 1 map shows the rate distribution of hepatitis C per 100,000 county populations in Colorado. The rate is calculated using the 2010 Census figures from the Colorado Division of Local Government, Demography section. The rates for the counties were calculated based on population but rounded to the lowest or highest county population figures (ex. 1,499 down to the nearest thousand and 1,500 up to the nearest thousand).²

¹<http://www.ncbi.nlm.nih.gov/sites/entrez/16702586%20>

²<http://dola.colorado.gov/dlg/demog/2010censusdata.html>

Table 1

**Reported Hepatitis C Cases, Colorado, 2010
Colorado Electronic Disease Reporting System (CEDRS)**

Category	Acute HCV Cases		Chronic HCV Cases		Total Number	Rate* Rate Per 100,000
	Number	Percent	Number	Percent		
Total	27	100.00%	3266	100.00%	3293	65.5
Case Status						
Confirmed	20	74.10%	3086	94.50%	3106	61.8
Probable	6	22.20%	0	0.00%	6	0.09
Suspect	1	3.70%	180	5.50%	181	3.60
Sex						
Male	15	55.56%	2152	65.90%	2167	83.4
Female	12	44.44%	1113	34.07%	1125	44.0
Unknown	0	0.00%	1	0.03%	1	0.02
Age						
0 - 4	1	3.70%	11	0.33%	12	3.3
5 - 9	0	0.00%	2	0.06%	2	0.6
10 - 19	0	0.00%	24	0.70%	24	3.5
20 - 29	7	25.90%	331	10.10%	338	46.6
30 - 39	7	25.90%	422	13.00%	429	60.9
40 - 49	4	14.90%	896	27.41%	900	119.7
50 - 59	6	22.20%	1195	36.60%	1201	166.3
60+	2	7.40%	374	11.47%	376	45.9
Unknown	0	0.00%	11	0.33%	11	0.2
Race/Ethnicity						
Hispanic	5	18.50%	396	12.10%	401	38.6
White non-Hispanic	18	66.70%	1148	35.20%	1166	28.5
Black non-Hispanic	1	3.70%	193	5.90%	194	96.0
American Indian	0	0.00%	26	0.80%	26	46.4
Asian/Pacific Islander	0	0.00%	26	0.80%	26	17.8
Other/Multiple/Unknown	3	11.10%	1477	45.20%	1480	275.6

Table 1

**Reported Hepatitis C Cases, Colorado, 2010
Colorado Electronic Disease Reporting System (CEDRS)**

Category	Acute HCV Cases		Chronic HCV Cases		Total Number
	Number	Percent	Number	Percent	
Risk Factors**					
IVDU					
No	14	51.90%	118	3.60%	132
Yes	8	29.60%	305	9.30%	313
Missing	5	18.50%	2228	70.10%	2293
Unknown	0	0.00%	555	17.00%	555
MSM					
No	6	40.00%	13	0.60%	19
Yes	2	13.30%	21	0.98%	23
Missing	7	46.70%	1763	81.92%	1770
Unknown	0	0.00%	355	16.50%	355
Sex Contact					
No	0	0.00%	0	0.00%	0
Yes	2	7.40%	44	1.30%	46
Missing	25	92.60%	3222	98.70%	3247
Unknown	0	0.00%	0	0.00%	0
Household Contact					
No	0	0.00%	0	0.00%	0
Yes	6	22.20%	6	0.18%	12
Missing	21	77.80%	3260	99.82%	3281
Unknown	0	0.00%	0	0.00%	0
Endemic					
No	0	0.00%	0	0.00%	0
Yes	0	0.00%	6	0.18%	6
Missing	0	0.00%	3260	99.82%	3260
Unknown	0	0.00%	0	0.00%	0

Table 1

Reported Hepatitis C Cases, Colorado, 2010
Colorado Electronic Disease Reporting System (CEDRS)

Category	Acute HCV Cases		Chronic HCV Cases		Total Number	Rate* Rate Per 100,000
	Number	Percent	Number	Percent		
County of Residence						
Adams	0	0.00%	218	6.70%	218	49.3
Alamosa	0	0.00%	6	0.18%	6	40.0
Arapahoe	4	14.90%	258	7.90%	262	45.1
Archuleta	0	0.00%	4	0.12%	4	33.1
Baca	0	0.00%	1	0.03%	1	25.0
Bent	0	0.00%	3	0.09%	3	50.0
Boulder	2	7.40%	100	3.10%	102	34.6
Broomfield	0	0.00%	15	0.45%	15	26.8
Chaffee	0	0.00%	12	0.36%	12	66.7
Cheyenne	0	0.00%	1	0.03%	1	50.0
Clear Creek	0	0.00%	4	0.12%	4	44.4
Conejos	0	0.00%	8	0.24%	8	100.0
Costilla	0	0.00%	4	0.12%	4	100.0
Crowley	0	0.00%	5	0.15%	5	83.3
Custer	0	0.00%	2	0.06%	2	50.0
Delta	0	0.00	17	0.50%	17	54.8
Denver	5	18.5%	627	19.20%	632	105.3
Dolores	0	0.00%	1	0.03%	1	50.0
Douglas	0	0.00	55	1.70%	55	19.3
Eagle	0	0.00%	13	0.40%	13	25.0
El Paso	3	11.10%	307	9.40%	310	50.0
Elbert	0	0.00%	7	0.21%	7	30.4
Fremont	0	0.00%	34	1.00%	34	72.3
Garfield	0	0.00%	24	0.70%	24	42.9
Gilpin	0	0.00%	8	0.24%	8	160.0
Grand	0	0.00%	7	0.21%	7	46.7
Gunnison	1	3.70%	3	0.09%	4	26.7
Hinsdale	0	0.00%	0	0.00%	0	0.0
Huerfano	0	0.00%	9	0.27%	9	128.6
Jackson	0	0.00%	0	0.00%	0	0.0
Jefferson	3	11.10%	250	7.70%	253	47.3
Kiowa	0	0.00%	0	0.00%	0	0.0
Kit Carson	0	0.00%	2	0.06%	2	25.0
La Plata	0	0.00%	27	0.80%	27	51.0
Lake	0	0.00%	4	0.12%	4	57.1
Larimer	0	0.00%	123	3.80%	123	41.0
Las Animas	0	0.00%	13	0.40%	13	81.3

Table 1

**Reported Hepatitis C Cases, Colorado, 2010
Colorado Electronic Disease Reporting System (CEDRS)**

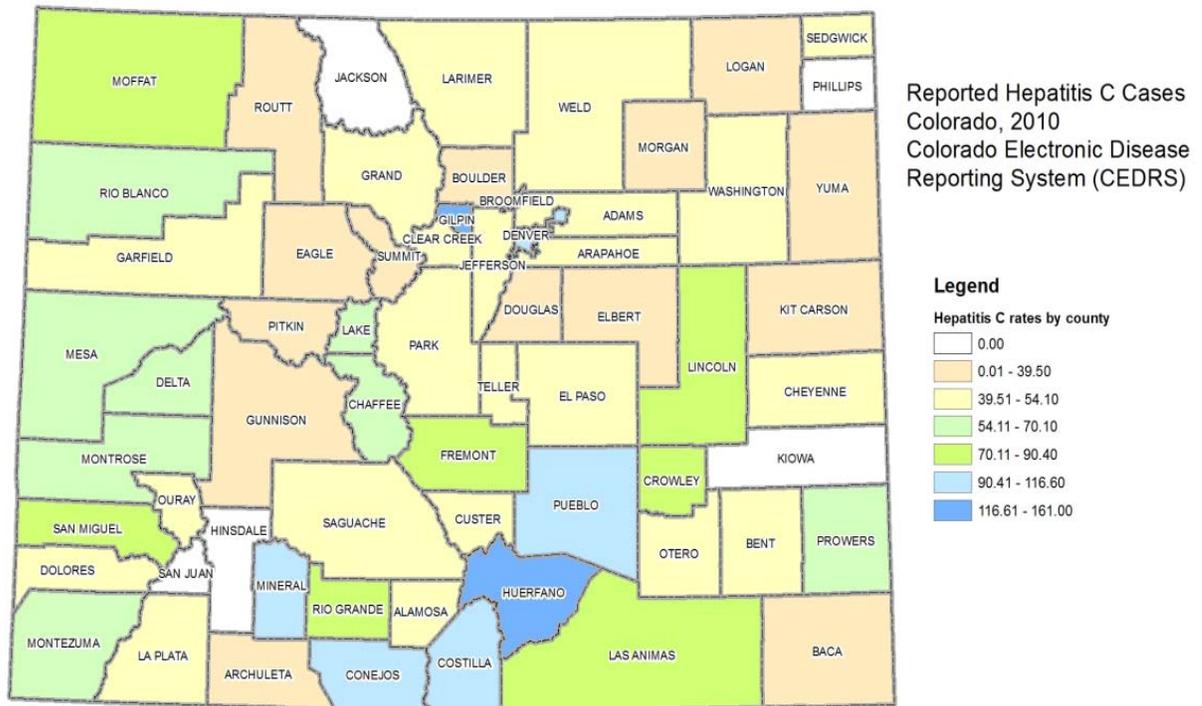
Category	Acute HCV Cases		Chronic HCV Cases		Total Number	Rate* Rate Per 100,000
	Number	Percent	Number	Percent		
Lincoln	0	0.00%	4	0.12%	4	80.0
Logan	1	3.70%	5	0.15%	6	26.1
Mesa	2	7.40%	97	3.00%	99	66.7
Mineral	0	0.00%	1	0.03%	1	100.0
Moffat	0	0.00%	10	0.30%	10	71.4
Montezuma	0	0.00%	18	0.55%	18	69.2
Montrose	0	0.00%	24	0.70%	24	58.5
Morgan	0	0.00%	5	0.15%	5	17.9
Otero	0	0.00%	10	0.30%	10	52.6
Ouray	0	0.00%	3	0.06%	3	50.0
Park	0	0.00%	7	0.21%	7	43.8
Phillips	0	0.00%	0	0.00%	0	0.0
Pitkin	1	3.70%	5	0.18%	6	35.3
Prowers	0	0.00%	9	0.27%	9	69.2
Pueblo	3	11.10%	151	4.59%	154	96.9
Rio Blanco	0	0.00%	4	0.12%	4	57.1
Rio Grande	0	0.00%	10	0.30%	10	83.3
Routt	0	0.00%	5	0.15%	5	20.8
Saguache	0	0.00%	3	0.09%	3	50.0
San Juan	0	0.00%	0	0.00%	0	0.0
San Miguel	0	0.00%	5	0.15%	5	74.4
Sedgwick	0	0.00%	1	0.03%	1	50.0
Summit	0	0.00%	9	0.27%	9	32.1
Teller	0	0.00%	11	0.33%	11	47.8
Washington	0	0.00%	2	0.06%	2	40.0
Weld	2	7.40%	111	3.38%	113	44.7
Yuma	0	0.00%	1	0.03%	1	10.0
Unspecified***	0	0.00%	583	18.00%	583	11.6
Total Unspecified						
CDOC	0	0.00%	520	89.20%	520	
FCI	0	0.00%	2	0.30%	2	
Unknown	0	0.00%	61	10.50%	61	

*Rates were calculated using the 2010-Census from the Demography Section, Colorado Division of Local Government. Rates calculated for counties with a small number of reported cases should be interpreted with caution.

**Risk factor data is not mutually exclusive.

***Unspecified – Cases reported as unspecified include federal and state inmates housed in a facility located in Colorado and cases for which no residential address could be obtained.

FIGURE 1



Rates were calculated per 100,000 population using 2010 Census population figures from The 2010- Census population provided by the Colorado Division of Local Government, Demography Section. Rates calculated for counties with a small number of reported cases should be interpreted with caution.

