

# **Hepatitis C in Colorado 2009 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 2009**



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and Environment

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## **Hepatitis C**

Hepatitis C (HCV) is the most common chronic blood borne infection in the United States. Severity and duration of HCV 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.<sup>1</sup> 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 seven days, and it requires laboratories to report positive HCV serologic tests within seven 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 to 25 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 tests for HCV antibodies as well as for HCV RNA. Thus, 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 were more likely to be reported with an acute hepatitis C infection than women (65% for men vs. 35.% for women). However, women were more likely to be reported with a chronic infection (33.3% for men vs. 66.3% for women). The reasons for this are unclear.

For both acute and chronic cases, persons 40-59 years of age are more likely to be reported with hepatitis C infection. This suggests two things: 1) individuals in this age group continue to engage in high risk behavior, 2) individuals in this age group may be diagnosed later in the course of infection when symptoms become more common. Both hypotheses need further investigation.

Half of the reported cases reported no or multiple race. White non-hispanic people were the majority of cases reported with a single race. However, the highest rate of hepatitis C

infection was among Native Americans (13.8/100,000 population) followed by non-hispanic blacks (12.4/100,000 population).<sup>1</sup>

Acute hepatitis C was reported in 10 counties. Reported chronic cases resided in 61 of the 64 Colorado counties. Those counties without reported cases were frontier counties that are underserved medical areas. Incarcerated people are counted in the Colorado Department of Corrections (CDOC) category rather than in the county in which they are housed.

Figure 1 map shows the rate distribution of hepatitis C per 100,000 county populations in Colorado. The rate is calculated using the 2008 population figures from the Colorado Division of Local Government, Demography section.

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<sup>1</sup> [Armstrong GL, Wasley A, Simard EP, McQuillan GM, Kuhnert WL, Alter MJ. The prevalence of hepatitis C virus infection in the United States, 1999 through 2002. Ann Intern Med 2006;144:705--14.](#)

Table 1

**Reported Hepatitis C Cases, Colorado, 2009**  
**Colorado Electronic Disease Reporting System (CEDRS)**

<b>Category</b>	<b>Acute HCV Cases</b>		<b>Chronic HCV Cases</b>		<b>Total</b>	<b>Rate**</b>
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Rate Per 100,000</b>
<b>Total</b>	34	100%	3693	100%	3727	74.4
<b>Case Status</b>						
Confirmed	28	82.4%	3396	92.0%	3424	68.3
Probable	5	14.7%	0	0.0%	5	0.1
Suspect	1	2.9%	297	8.0%	298	5.9
<b>Sex</b>						
Male	22	64.7%	1231	33.3%	1253	50.0
Female	12	35.3%	2448	66.32%	2460	98.8
Unknown	0	0.0%	14	0.38%	14	--
<b>Age</b>						
0 – 4	0	0.0%	7	0.19%	7	2.0
5 – 9	0	0.0%	2	0.05%	2	0.6
10 – 19	1	2.9%	29	0.80%	30	4.4
20 – 29	3	8.8%	300	8.12%	303	42.9
30 – 39	5	14.7%	584	15.81%	589	80.9
40 – 49	12	35.3%	1079	29.22%	1091	143.3
50 – 59	10	29.5%	1282	34.71%	1292	186.6
60+	3	8.8%	401	10.86%	404	55.4
Unknown	0	0.0%	9	0.24%	9	--
<b>Race/Ethnicity</b>						
Hispanic	9	26.5%	392	10.61%	401	5.5
White non-Hispanic	21	61.7%	1198	32.40%	1219	3.8
Black non-Hispanic	1	2.90%	195	5.300%	196	12.4
American Indian	1	2.90%	39	1.100%	40	13.8
Asian/Pacific	0	0.00%	18	0.490%	18	1.9
Islander						
	2	6.00%	1851	50.10%	1853	145.1
Other/Multiple/Unknown						
<b>County of Residence</b>						
Adams	4	11.8%	235	6.40%	305	70.1
Alamosa	0	0.00%	17	0.46%	11	68.8
Arapahoe	4	11.8%	296	8.00%	356	63.3
Archuleta	0	0.00%	5	0.13%	5	38.5
Baca	0	0.00%	0	0.00%	3	72.2
Bent	0	0.00%	7	0.19%	7	113.6

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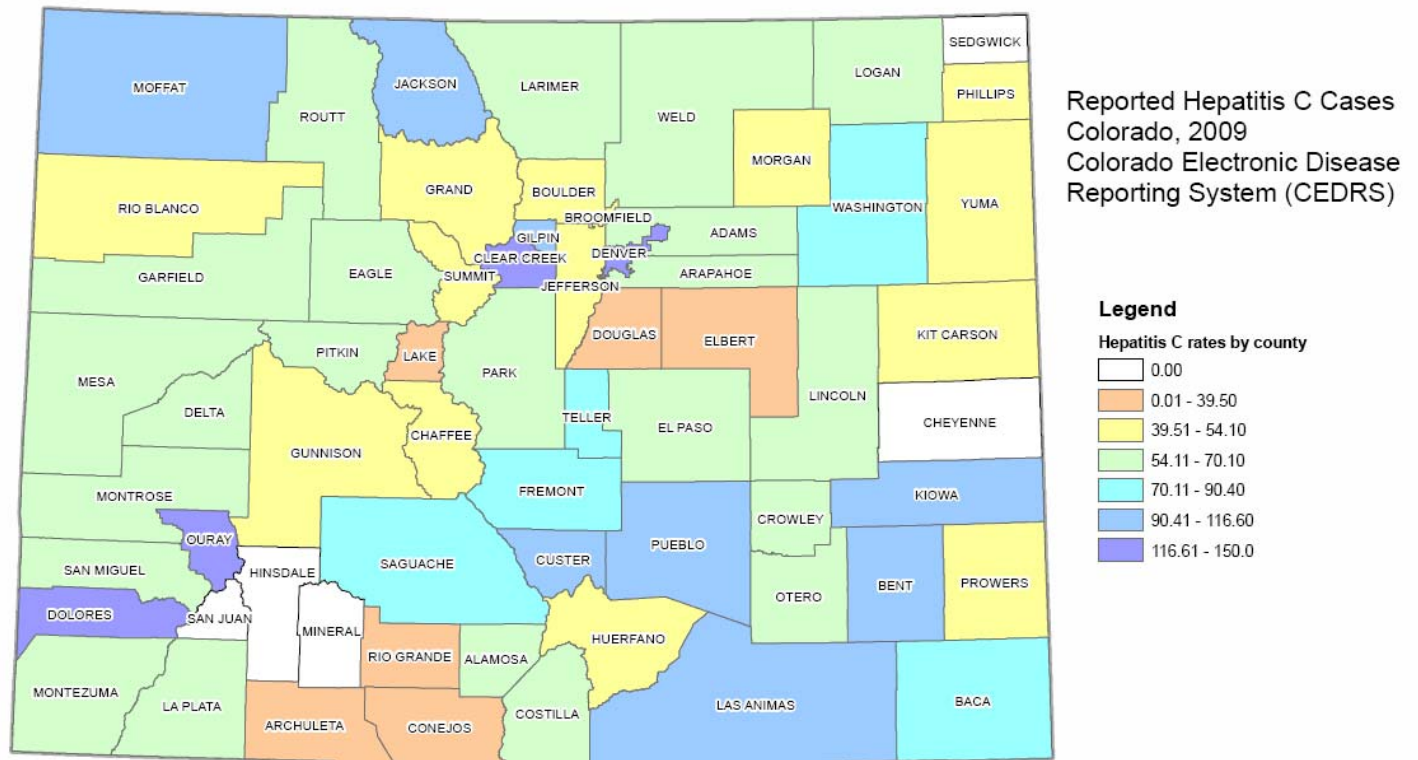
Category	Acute HCV Cases		Chronic HCV Cases		Total Number	Rate** Rate Per 100,000
	Number	Percent	Number	Percent		
Boulder	1	2.90%	126	3.40%	149	49.8
Broomfield	0	0.00%	7	0.19%	24	43.6
Chaffee	0	0.00%	8	0.22%	9	52.9
Cheyenne	0	0.00%	0	0.00%	0	0.00
Clear Creek	0	0.00%	6	0.16%	12	133.3
Conejos	0	0.00%	3	0.08%	1	12.5
Costilla	0	0.00%	2	0.05%	2	57.1
Crowley	1	2.90%	3	0.08%	4	66.7
Custer	0	0.00%	4	0.11%	4	100.0
Delta	0	0.00%	25	0.68%	20	62.5
Denver	9	26.50%	688	18.60%	765	125.0
Dolores	0	0.00%	3	0.08%	3	150.0
Douglas	1	2.90%	62	1.68%	82	28.9
Eagle	0	0.00%	13	0.35%	31	57.4
El Paso	2	6.00%	333	9.00%	387	64.8
Elbert	0	0.00%	7	0.19%	5	21.7
Fremont	0	0.00%	37	1.00%	36	75.0
Garfield	1	2.90%	31	0.83%	39	68.4
Gilpin	0	0.00%	8	0.22%	5	100.0
Grand	0	0.00%	7	0.19%	7	46.7
Gunnison	0	0.00%	1	0.03%	6	40.0
Hinsdale	0	0.00%	0	0.00%	0	0.00
Huerfano	1	2.90%	4	0.11%	4	50.0
Jackson	0	0.00%	1	0.03%	1	100.0
Jefferson	4	11.8%	302	8.20%	294	54.1
Kiowa	0	0.00%	0	0.00%	1	100.0
Kit Carson	0	0.00%	2	0.05%	4	50.0
La Plata	0	0.00%	29	0.80%	30	58.8
Lake	0	0.00%	10	0.27%	1	12.5
Larimer	1	2.90%	154	4.20%	162	55.1
Las Animas	1	2.90%	18	0.49%	16	94.1
Lincoln	1	2.90%	4	0.11%	4	66.7
Logan	0	0.00%	9	0.24%	12	54.5
Mesa	0	0.00%	118	3.20%	100	69.4
Mineral	0	0.00%	0	0.00%	0	0.00
Moffat	0	0.00%	9	0.24%	13	92.9
Montezuma	0	0.00%	9	0.24%	15	57.7
Montrose	0	0.00%	21	0.60%	24	58.5
Morgan	0	0.00%	11	0.30%	12	41.4
Otero	0	0.00%	14	0.38%	12	63.2

**Reported Hepatitis C Cases, Colorado, 2009**  
**Colorado Electronic Disease Reporting System (CEDRS)**

Category	Acute HCV Cases		Chronic HCV Cases		Total Number	Rate** Rate Per 100,000
	Number	Percent	Number	Percent		
Ouray	0	0.00%	2	0.05%	6	120.0
Park	0	0.00%	11	0.30%	11	64.7
Phillips	0	0.00%	2	0.05%	2	40.0
Pitkin	0	0.00%	7	0.19%	11	64.7
Prowers	0	0.00%	3	0.08%	7	53.8
Pueblo	1	2.90%	172	4.70%	165	105.1
Rio Blanco	0	0.00%	4	0.11%	3	42.9
Rio Grande	0	0.00%	9	0.24%	5	38.5
Routt	0	0.00%	10	0.27%	13	56.5
Saguache	0	0.00%	5	0.13%	6	85.7
San Juan	0	0.00%	0	0.00%	0	0.00
San Miguel	0	0.00%	7	0.19%	5	62.5
Sedgwick	0	0.00%	0	0.00%	0	0.00
Summit	0	0.00%	10	0.27%	13	44.8
Teller	0	0.00%	18	0.49%	17	73.9
Washington	0	0.00%	0	0.00%	4	80.0
Weld	0	0.00%	109	3.00%	136	54.2
Yuma	0	0.00%	2	0.05%	5	50.0
*Unspecified	2	6.00%	670	18.10%	627	--
*Unspecified – For chronic hepatitis C, unspecified includes federal and state inmates housed in a Colorado facility and cases for which no residential address could be obtained.						
Total Unspecified	2	6.00%	670	100%	672	--
CDOC	2	6.00%	635	94.80%	637	--
FCI	--	--	2	0.30%	2	--
Unknown	--	--	33	4.90%	33	--

\*\*Rates were calculated using the 2008-based population projections 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.

FIGURE 1



Rates were calculated per 100,000 population using 2008 population figures from the 2008-based population projections 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.