

Hepatitis B in Colorado 2009 Surveillance Report

Cases of Acute and Chronic Hepatitis B 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 B cases newly reported to CDPHE in 2009



**Colorado Department
of Public Health
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Hepatitis B

Hepatitis B (HBV) is a disease that results from infection with the blood borne hepatitis B virus. It can range in severity from a mild illness lasting a few weeks to a serious, lifelong illness. Though the number of new infections is on the decline, data from the National Health and Nutrition Examination Survey indicate that the prevalence of HBV infection has remained steady at around five percent over the past two decades.¹ In Colorado, as many as 240,000 residents have ever been infected with hepatitis B. HBV 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 hepatitis B within seven days, and it requires laboratories to report positive HBV 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 a diagnosis and case status for each patient.

Acute Hepatitis B

Acute hepatitis B is a short-term illness that occurs within the first six months of infection with the hepatitis B virus. It is usually mildly symptomatic, with abdominal pain, jaundice and abnormal liver function tests being the most severe features. Older children and adults are more likely to develop symptoms than younger children.

Chronic Hepatitis B

Chronic hepatitis B results when the hepatitis B virus remains in the body after the acute phase of illness. Approximately 5 percent of older children and adults, 25 to 50 percent of younger children, and up to 90 percent of infants will fail to resolve hepatitis B infection and will develop chronic hepatitis B. Over time, chronic hepatitis B can produce liver disease, cirrhosis, or cancer. Each year approximately 2,000 to 4,000 people die from diseases related to hepatitis B in the U.S.

Surveillance Summary

Men were more likely to be reported with an acute or chronic hepatitis B infection than women despite the increased amount of testing among women seeking prenatal care.

Table 1 represents the age distribution of acute and chronic hepatitis B cases. For both acute and chronic cases, persons 20-39 years of age are more likely to be reported with hepatitis B 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.

Hepatitis B infection is disproportionately reported among Asian/Pacific Islanders and Black Non-Hispanic people. This is consistent with national data. Work in Colorado’s

perinatal hepatitis B program indicates that foreign-born persons are significantly more likely to be reported with hepatitis B infection than people born in the U.S.

Acute hepatitis B was reported in 15 counties. Reported chronic cases resided in 34 of the 64 Colorado counties. Those counties without reported cases were more likely to be 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 B 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.

¹ [McQuillan GM, Kruszon-Moran D, Denniston MM, and Hirsch R. Viral Hepatitis. NCHS Data Brief No 27. Hyattsville, MD: National Center for Health Statistics. 2010.](#)

Table 1
Reported Hepatitis B Cases, Colorado, 2009
Colorado Electronic Disease Reporting System (CEDRS)

Category	Acute HBV Cases		Chronic HBV Cases		Total Number	Rate** Rate Per 100,000
	Number	Percent	Number	Percent		
Total	34	100%	593	100%	627	12.5
Case Status						
Confirmed	27	79.4%	203	34.23%	230	4.6
Probable	7	20.6%	389	65.60%	396	7.9
Suspect	0	0.00%	1	0.17%	1	0.0
Sex						
Male	21	61.8%	324	54.6%	345	13.7
Female	13	38.2%	269	45.4%	282	11.3
Unknown	0	0.00%	0	0.00%	0	0.0
Age						
0 – 4	0	0.00%	2	0.34%	2	0.5
5 – 9	0	0.00%	3	0.50%	3	0.9
10 – 19	1	2.90%	28	4.70%	29	4.2
20 – 29	4	11.8%	138	23.3%	142	20.1
30 – 39	7	20.6%	162	27.3%	169	23.2
40 – 49	12	35.3%	105	17.7%	117	15.5
50 – 59	3	8.80%	74	12.5%	77	11.1
60+	7	20.6%	80	13.49%	87	11.9
Unknown	0	0.00%	1	0.17%	1	0.0
Race/Ethnicity						
Hispanic	7	20.6%	25	4.21%	32	4.4
White non-Hispanic	15	44.1%	91	15.34%	106	3.3
Black non-Hispanic	2	6.0%	91	15.34%	93	58.7
American Indian	0	0.00%	3	0.50%	3	10.4
Asian/Pacific Islander	6	17.6%	239	40.3%	245	252.3
Other/Multiple/Unknown	4	11.8%	144	24.31%	148	115.9
County of Residence						
Adams	7	20.6%	74	12.5%	81	18.6
Alamosa	0	0.00%	1	0.17%	1	6.3
Arapahoe	2	6.00%	107	18.09%	109	25.1
Archuleta	0	0.00%	0	0.00%	0	0.0
Baca	0	0.00%	0	0.00%	0	0.0
Bent	0	0.00%	0	0.00%	0	0.0

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

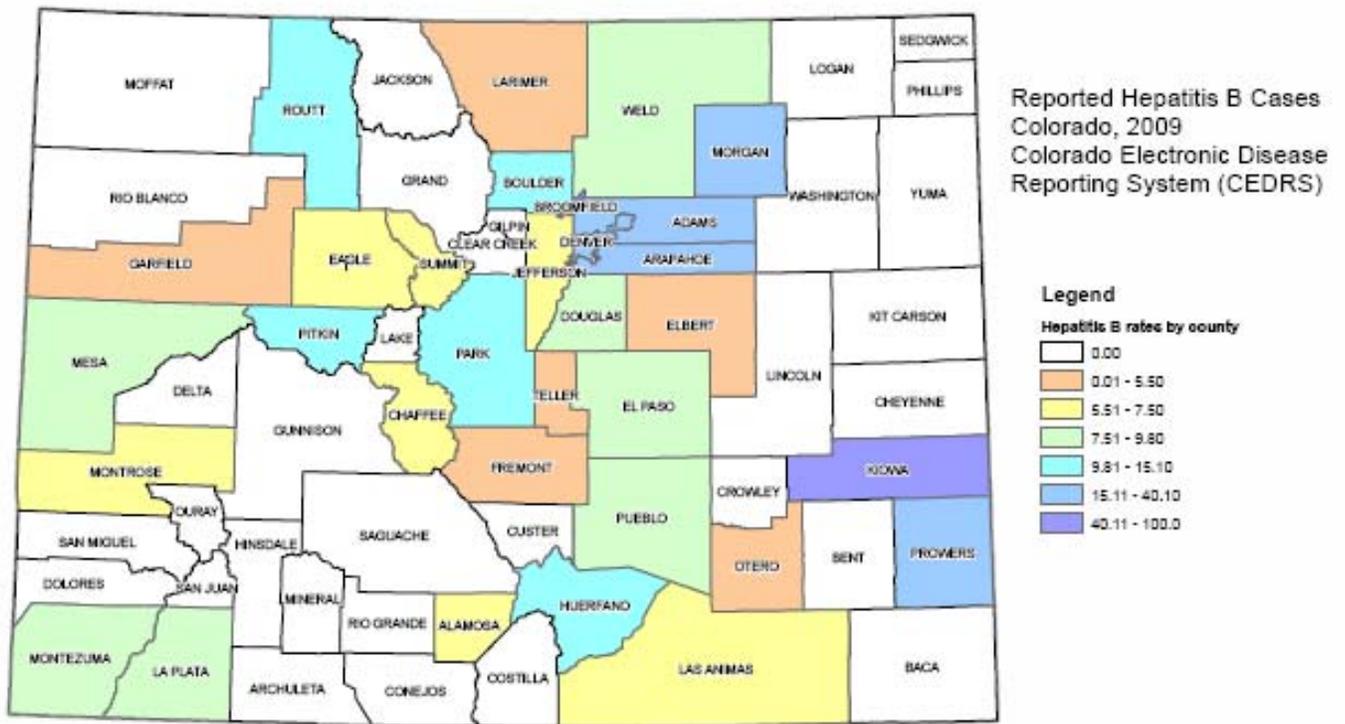
Category	Acute HBV Cases		Chronic HBV Cases		Total Number	Rate** Rate Per 100,000
	Number	Percent	Number	Percent		
Boulder	1	2.90%	29	4.89%	30	10.0
Broomfield	1	2.90%	6	1.0%	7	41.2
Chaffee	0	0.00%	1	0.17%	1	5.9
Cheyenne	0	0.00%	0	0.00%	0	0.0
Clear Creek	0	0.00%	0	0.00%	0	0.0
Conejos	0	0.00%	0	0.00%	0	0.0
Costilla	0	0.00%	0	0.00%	0	0.0
Crowley	0	0.00%	0	0.00%	0	0.0
Custer	0	0.00%	0	0.00%	0	0.0
Delta	0	0.00%	0	0.00%	0	0.0
Denver	7	20.6%	150	25.3%	157	25.7
Dolores	0	0.00%	0	0.00%	0	0.0
Douglas	0	0.00%	23	3.90%	23	8.1
Eagle	1	2.90%	3	0.50%	4	7.4
El Paso	1	2.90%	50	8.40%	51	8.5
Elbert	0	0.00%	1	0.17%	1	4.4
Fremont	0	0.00%	1	0.17%	1	2.1
Garfield	0	0.00%	3	0.50%	3	5.3
Gilpin	0	0.00%	0	0.00%	0	0.0
Grand	0	0.00%	0	0.00%	0	0.0
Gunnison	0	0.00%	0	0.00%	0	0.0
Hinsdale	0	0.00%	0	0.00%	0	0.0
Huerfano	1	2.90%	0	0.00%	1	12.5
Jackson	0	0.00%	0	0.00%	0	0.0
Jefferson	5	14.7%	32	5.40%	37	6.8
Kiowa	0	0.00%	1	0.17%	1	100.0
Kit Carson	0	0.00%	0	0.00%	0	0.0
La Plata	1	2.90%	3	0.50%	4	7.8
Lake	0	0.00%	0	0.00%	0	0.0
Larimer	2	6.00%	12	2.00%	14	4.8
Las Animas	0	0.00%	1	0.17%	1	5.9
Lincoln	0	0.00%	0	0.00%	0	0.0
Logan	0	0.00%	0	0.00%	0	0.0
Mesa	1	2.90%	11	1.90%	12	8.3
Mineral	0	0.00%	0	0.00%	0	0.0
Moffat	0	0.00%	0	0.00%	0	0.0
Montezuma	1	2.90%	1	0.17%	2	7.7
Montrose	0	0.00%	3	0.50%	3	7.3
Morgan	0	0.00%	6	1.0%	6	20.7
Otero	0	0.00%	1	0.17%	1	5.3
Ouray	0	0.00%	0	0.00%	0	0.0
Park	0	0.00%	2	0.34%	2	11.8
Phillips	0	0.00%	0	0.00%	0	0.0

Reported Hepatitis B Cases, Colorado, 2009
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Category	Acute HBV Cases		Chronic HBV Cases		Total Number	Rate** Rate Per 100,000
	Number	Percent	Number	Percent		
Pitkin	0	0.00%	2	0.34%	2	11.8
Prowers	1	2.90%	1	0.17%	2	15.4
Pueblo	2	6.00%	13	2.20%	15	9.5
Rio Blanco	0	0.00%	0	0.00%	0	0.0
Rio Grande	0	0.00%	0	0.00%	0	0.0
Routt	0	0.00%	3	0.50%	3	13.0
Saguache	0	0.00%	0	0.00%	0	0.0
San Juan	0	0.00%	0	0.00%	0	0.0
San Miguel	0	0.00%	0	0.00%	0	0.0
Sedgwick	0	0.00%	0	0.00%	0	0.0
Summit	0	0.00%	2	0.34%	2	6.9
Teller	0	0.00%	1	0.17%	1	4.3
Washington	0	0.00%	0	0.00%	0	0.0
Weld	0	0.00%	21	3.50%	21	8.4
Yuma	0	0.00%	0	0.00%	0	0.0
*Unspecified	0	0.00%	28	4.70%	28	--
*Unspecified – For chronic Hepatitis B, unspecified includes federal and state inmates housed in a Colorado facility and cases for which no residential address could be obtained						
Total Unspecified	0		28			
CDOC	--	0.00%	25	89.3%	25	--
FCI	--	0.00%	0	0.00%	0	--
Unknown	--	0.00%	3	10.7%	3	--

**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.

