

Chronic Hepatitis C-Related Mortality: Idaho Residents, 2011-2015

In the United States, all death certificates must report a single underlying cause of death (UCD), defined as the disease, injury, or condition that directly led to the death. Traditional mortality reporting is based on the UCD alone. However, this method fails to account for additional comorbidities reported on the death certificate. In the case of Chronic Hepatitis C, a viral infection which can lead to serious medical issues over time, considering the UCD alone underestimates the total mortality burden of this disease on Idaho residents. This report examines Chronic Hepatitis C as the underlying and as a contributing cause of death for Idaho residents during 2011 to 2015.

Summary: The most frequent hepatitis-related deaths were due to Chronic Hepatitis C, which accounted for 95% of the hepatitis-related deaths for Idaho residents during 2011 to 2015. Chronic Hepatitis C was reported as a contributing cause of death at 1.24 times the rate it was reported as the UCD. In other words, for every four deaths that reported Chronic Hepatitis C as the UCD, another five deaths reported it as a contributing cause of death. From 2011 to 2015, the Chronic Hepatitis C-related mortality rate increased 23%, from 3.9 deaths per 100,000 population in 2011 to 4.8 in 2015. Chronic Hepatitis C-related mortality differed significantly by sex (the rate for males was 2.85 times the rate for females), ethnicity (the rate for Hispanics was 1.5 times the rate for Non-Hispanics), and age (the rate for decedents age 55-64 was 2.8 and 3.0 times the rates for decedents age 45-54 and 65-74, respectively). Chronic Hepatitis C-related mortality differed significantly for two Districts compared with the rate for Idaho. The rate in District 7 was 44% lower than the rate for Idaho, while the rate in District 1 was 31% higher than the rate for Idaho.

FIGURE 1. Percent distribution of deaths with Chronic Hepatitis C reported as the underlying or a contributing cause of death: Idaho residents, 2011-2015.

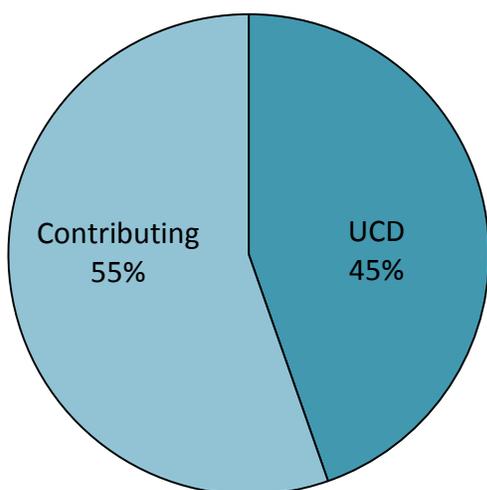


FIGURE 2. Number of deaths with Chronic Hepatitis C reported as the underlying or a contributing cause of death: Idaho residents, 2011-2015.

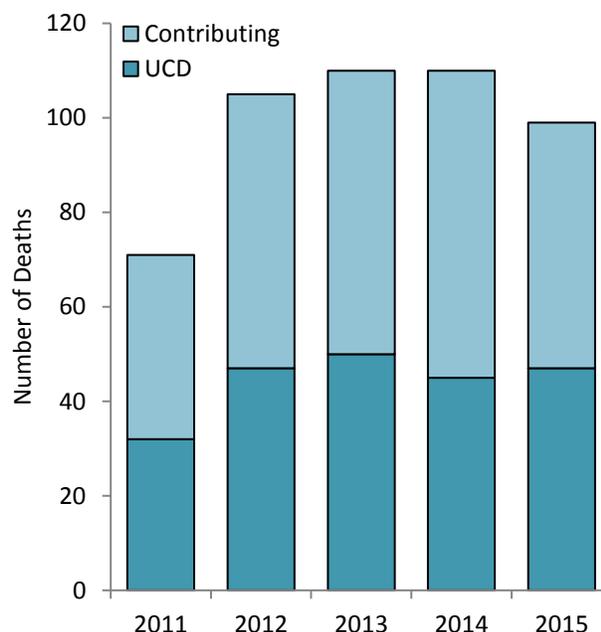


TABLE 1. Number of deaths with hepatitis reported as the underlying or a contributing cause of death by type of hepatitis (specified by ICD-10 code): Idaho residents, 2011-2015.

Type of Hepatitis	UCD	Contributing ¹	Hepatitis-Related ¹
Chronic/Acute Hepatitis B	7	14	21
Chronic Hepatitis C	221	274	495
Other/Unspecified viral hepatitis	5	11	16
Total	233	299	532

¹Decedents may be counted more than once if more than one type of hepatitis was included on the death certificate. Multiple mentions of the same type were counted only once for that type. There were 522 decedents with one or more types of hepatitis reported on the death certificate.

TABLE 2. Mortality rates for Chronic Hepatitis C as the underlying or a contributing cause of death by year, sex, ethnicity, race, age group, and Public Health District of residence: Idaho residents, 2011-2015.

	UCD		Contributing		Hepatitis C-Related	
	n	Rate (95% CI)	n	Rate (95% CI)	n	Rate (95% CI)
Year						
2011	32	1.8 (1.2-2.5)	39	2.1 (1.5-2.8)	71	3.9 (3.0-4.9)
2012	47	2.7 (2.0-3.5)	58	3.2 (2.4-4.2)	105	5.9 (4.7-7.0)
2013	50	2.6 (2.0-3.5)	60	3.1 (2.4-4.0)	110	5.7 (4.7-6.8)
2014	45	2.3 (1.7-3.0)	65	3.2 (2.5-4.1)	110	5.4 (4.4-6.5)
2015	47	2.3 (1.7-3.1)	52	2.5 (1.9-3.3)	99	4.8 (3.9-5.8)
Sex						
Females	64	1.3 (1.0-1.7)	65	1.4 (1.1-1.7)	129	2.7 (2.2-3.2)
Males	157	3.4 (2.8-3.9)	209	4.3 (3.7-4.9)	366	7.7 (6.9-8.5)
Ethnicity						
Non-Hispanic	199	2.2 (1.9-2.6)	251	2.7 (2.4-3.1)	450	5.0 (4.5-5.4)
Hispanic	22	3.7 (2.3-5.6)	23	3.9 (2.5-5.8)	45	7.6 (5.5-10.1)
Race						
White	215	2.4 (2.0-2.7)	246	2.6 (2.3-2.9)	461	5.0 (4.5-5.4)
American Indian/Alaskan Native	4	*	12	*	16	*
Asian/Pacific Islander	0	-	5	*	5	*
Black	1	*	4	*	5	*
Other	1	-	7	-	8	-
Age Group[§]						
35-44	8	*	6	*	14	*
45-54	52	5.2 (3.9-6.8)	54	5.4 (4.0-7.0)	106	10.5 (8.5-12.5)
55-64	124	12.7 (10.4-14.9)	165	16.8 (14.3-19.4)	289	29.5 (26.1-32.9)
65-74	27	4.1 (2.7-6.0)	36	5.5 (3.9-7.6)	63	9.6 (7.4-12.3)
75-84	8	*	10	*	18	*
85+	2	*	3	*	5	*
Public Health District						
District 1	38	2.5 (1.8-3.5)	73	4.3 (3.4-5.4)	111	6.8 (5.5-8.2)
District 2	12	*	20	3.0 (1.8-4.6)	32	4.6 (3.2-6.5)
District 3	44	3.2 (2.3-4.3)	42	2.9 (2.1-3.9)	86	6.1 (4.9-7.5)
District 4	77	2.7 (2.1-3.4)	69	2.6 (2.0-3.3)	146	5.3 (4.4-6.2)
District 5	23	2.2 (1.4-3.2)	26	2.3 (1.5-3.4)	49	4.5 (3.3-5.9)
District 6	17	*	23	2.5 (1.6-3.8)	40	4.3 (3.1-5.9)
District 7	10	*	21	2.0 (1.2-3.0)	31	2.9 (2.0-4.2)
Total	221	2.3 (2.0-2.7)	274	2.8 (2.5-3.2)	495	5.2 (4.7-5.6)

All rates are per 100,000 population. Age-adjusted rates are given for each year and by sex, ethnicity, race, and Public Health District. Age-specific rates are given for each age group.

*Rates were unreliable when the rate was calculated with a numerator (number of deaths) of less than 20.

[§]No decedents under age 35 had Chronic Hepatitis C reported on their death certificate.

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