

2010-2014

Idaho Residents

FALL DEATHS

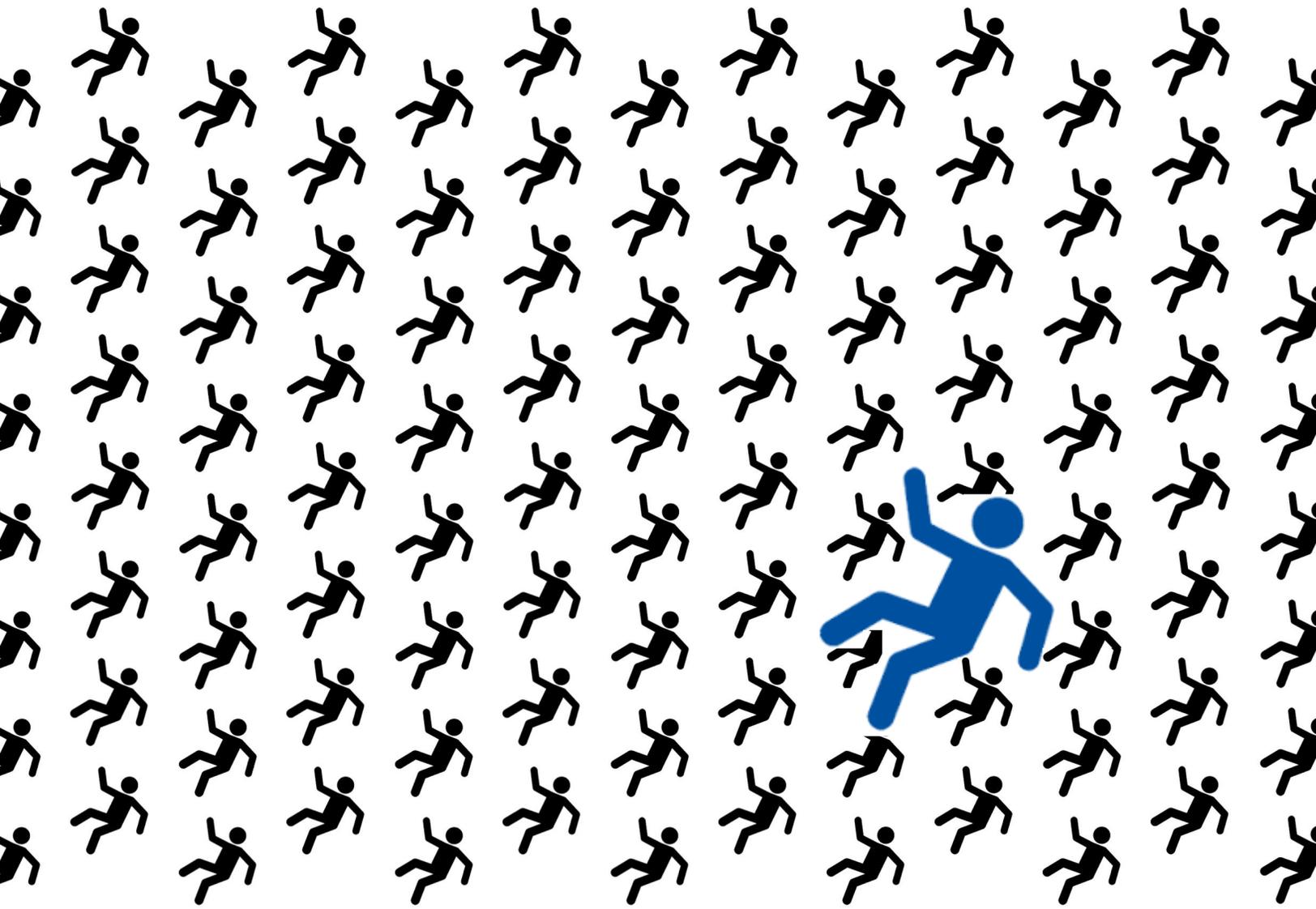


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Highlights

Trend 2005-2014

- From 2005 to 2014, Idaho's age-adjusted rate for fall deaths increased by 81.1 percent, while the national rate increased by 33.3 percent.
- Idaho's age-adjusted rate for fall deaths has been statistically significantly higher than the national rate since 2011.
- The number of deaths and (crude) death rate from falls increased in every age-group from 2005 to 2014.
- From 2005 to 2014, the (crude) death rate for Idaho residents 85 and older witnessed the largest increase (124.8 percent).

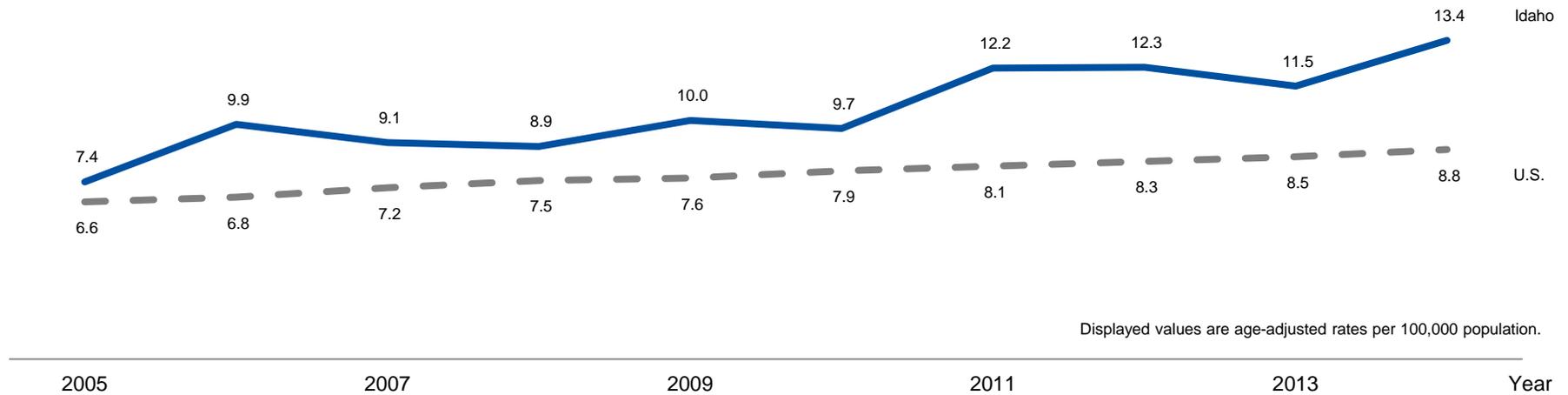
Five-Year Aggregate 2010-2014

- 51.7 percent of Idaho residents that died from a fall are aged 85+.
- The total number of fall deaths for females is higher than for males. This can be attributed to the larger population of females aged 85+.
- 60.2 percent of falls that led to death occurred at home or in a private residence.
- 68.9 percent of death certificates provided incomplete information on the type of fall, or the type of fall was unspecified. (other fall on same level: 51.6%, unspecified fall: 17.3%).
- Head injuries (39.9%) followed by hip and thigh injuries (33.3%) were mentioned most frequently on the death certificate.
- The age-adjusted death rate for falls in Public Health District 3 (8.6 deaths per 100,000) was statistically significantly lower than the state average (11.9).
- The age-adjusted death rate for falls in Public Health District 5 (15.7 deaths per 100,000) was statistically significantly higher the state average (11.9).
- From 2010 to 2014, the death rate for falls was generally higher in counties with a low density of residents (frontier counties).
- More than one out of three Idaho residents aged 65 and older who died from a fall, had heart disease listed as a contributing cause on the death certificate.

Idaho Resident Fall Deaths Death Rate by Year Trend 2005-2014

		Total	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Idaho	Number	1,643	101	141	135	136	153	154	198	202	194	229
	Crude rate ¹	10.6	7.1	9.6	9.0	8.9	9.9	9.8	12.5	12.7	12.0	14.0
	Age-adjusted rate ²	10.5	7.4	9.9	9.1	8.9	10.0	9.7	12.2	12.3	11.5	13.4
U.S.	Number	256,327	19,656	20,823	22,631	24,013	24,792	26,009	27,483	28,753	30,208	31,959
	Crude rate	8.3	6.7	7.0	7.5	7.9	8.1	8.4	8.8	9.2	9.6	10.0
	Age-adjusted rate	7.8	6.6	6.8	7.2	7.5	7.6	7.9	8.1	8.3	8.5	8.8

From 2005 to 2014, Idaho's age-adjusted death rate increased by 81.1 percent, while the national rate increased by 33.3 percent. Idaho's age-adjusted rate for fall deaths has been statistically significantly higher than the national rate since 2011.



¹ Rates are number of deaths per 100,000 population.

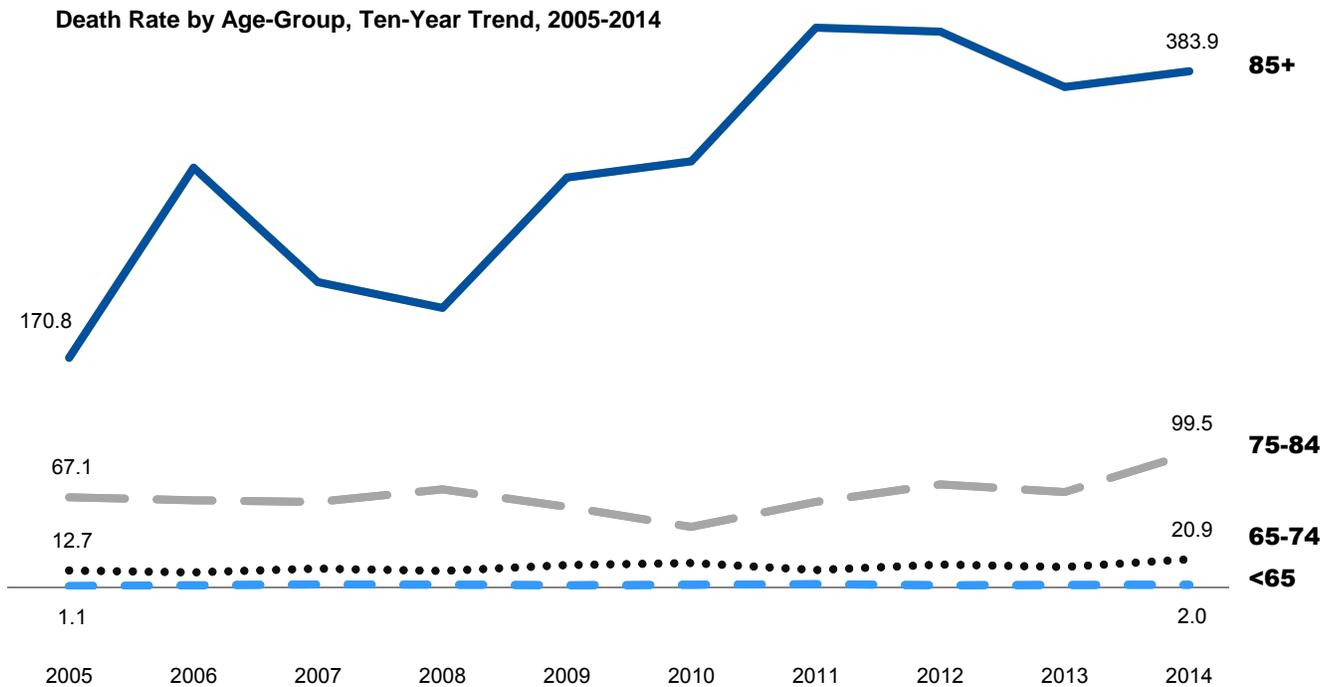
² Age-adjusted rates are artificial measures developed to eliminate the bias inherent in differing age compositions, thus allowing comparisons between geographic regions. Idaho and U.S. age-adjusted rates were calculated using the 2000 U.S. population estimate as the standard population.

Idaho Resident Fall Deaths Number of Deaths and Rate¹ by Age-Group Trend 2005-2014

Number of Deaths											
Age-group	Total	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<65	255	14	21	29	28	23	27	35	23	27	28
65-74	168	11	10	13	12	17	20	15	21	20	29
75-84	416	36	37	37	43	36	27	39	48	46	67
85+	804	40	73	56	53	77	80	109	110	101	105
Total	1,643	101	141	135	136	153	154	198	202	194	229

Death Rate											
Age-group	Total	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<65	1.9	1.1	1.6	2.2	2.1	1.7	2.0	2.5	1.7	1.9	2.0
65-74	15.5	12.7	11.3	14.1	12.3	16.7	18.3	13.0	17.0	15.2	20.9
75-84	68.9	67.1	64.8	63.7	73.0	59.9	45.1	63.7	76.6	71.0	99.5
85+	315.6	170.8	312.2	227.0	207.8	304.8	316.9	416.3	413.4	372.2	383.9
Total	10.6	7.1	9.6	9.0	8.9	9.9	9.8	12.5	12.7	12.0	14.0

The number of deaths and death rate from falls increased in every age-group from 2005 to 2014. The death rate for Idaho residents 85 and older witnessed the largest increase (124.8%) from 2005 to 2014.



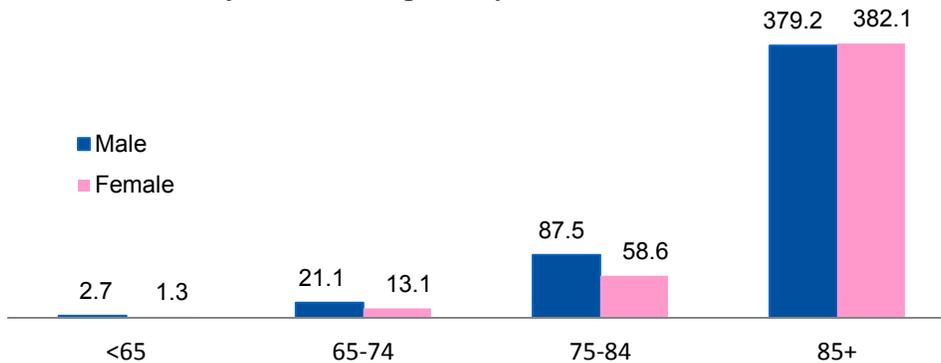
¹ Rates are number of deaths per 100,000 population in corresponding age-group.

**Idaho Resident Fall Deaths
Number of Deaths and Rate¹ by Sex and Age Group
Five-Year Aggregate 2010-2014**

51.7 percent of Idaho residents that died from a fall are aged 85+.

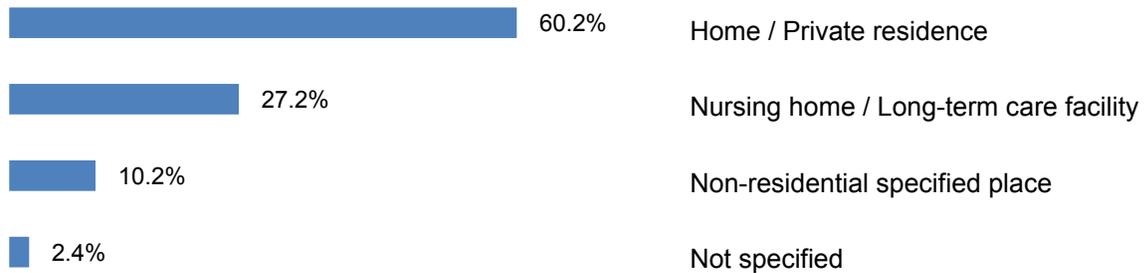
Age Group	Total		Male		Female	
	Number	Rate	Number	Rate	Number	Rate
<65	140	2.0	96	2.7	44	1.3
65-74	105	17.0	64	21.1	41	13.1
75-84	227	71.9	127	87.5	100	58.6
85+	505	381.1	183	379.2	322	382.1
Total	977	12.2	470	11.7	507	12.7

Death Rate¹ by Gender and Age-Group, 2010-2014



**Idaho Resident Fall Deaths
Percentage of Deaths by Place of Injury
Five-Year Aggregate 2010-2014**

60.2 percent of falls that led to death occurred at home or in private residence.



¹ Rates: number of deaths per 100,000 population in corresponding specified group.

**Idaho Resident Fall Deaths
Number of Deaths by Type of Fall and Age-Group
Five-Year Aggregate 2010-2014**

68.9 percent of death certificates provided incomplete information on the type of fall, or the type of fall was unspecified (other fall on same level: 51.6%, unspecified fall: 17.3%).

ICD-10 Code	Description	<65		65-74		75-84		85+		Total	
		Number	%								
W00	Fall on same level involving ice and snow	2	1.4	6	5.7	2	0.9	4	0.8	14	1.4
W01	Fall on same level from tripping, slipping and stumbling	9	6.4	2	1.9	17	7.5	43	8.5	71	7.3
W02	Fall involving ice-skates, skis, roller skates or skateboards	3	2.1	-	-	2	0.9	-	-	5	0.5
W03	Other fall on same level due to collision with, or pushing by, another person	-	-	-	-	-	-	-	-	-	-
W04	Fall while being carried or supported by another person	-	-	-	-	-	-	-	-	-	-
W05	Fall involving wheelchair	3	2.1	5	4.8	5	2.2	12	2.4	25	2.6
W06	Fall involving bed	5	3.6	2	1.9	15	6.6	20	4.0	42	4.3
W07	Fall involving chair	-	-	1	1.0	3	1.3	15	3.0	19	1.9
W08	Fall involving other furniture	-	-	2	1.9	3	1.3	4	0.8	9	0.9
W09	Fall involving playground equipment	-	-	-	-	-	-	-	-	-	-
W10	Fall on and from stairs and steps	26	18.6	14	13.3	15	6.6	15	3.0	70	7.2
W11	Fall on and from ladder	3	2.1	6	5.7	2	0.9	1	0.2	12	1.2
W12	Fall on and from scaffolding	2	1.4	-	-	-	-	-	-	2	0.2
W13	Fall from, out of through building or structure	10	7.1	2	1.9	-	-	1	0.2	13	1.3
W14	Fall from tree	1	0.7	-	-	-	-	-	-	1	0.1
W15	Fall from cliff	8	5.7	-	-	-	-	-	-	8	0.8
W16	Diving or jumping into water causing injury other than drowning	1	0.7	-	-	-	-	-	-	1	0.1
W17	Other fall from one level to another	5	3.6	1	1.0	4	1.8	2	0.4	12	1.2
W18	Other fall on same level	49	35.0	54	51.4	122	53.7	279	55.2	504	51.6
W19	Unspecified fall	13	9.3	10	9.5	37	16.3	109	21.6	169	17.3
Total		140	100.0	105	100.0	227	100.0	505	100.0	977	100.0

NOTE: A review of the literal information on the death certificate shows:

69 injuries occurred in the bathroom, shower or bathtub
19 injuries occurred in the kitchen
22 injuries occurred while using a 'walker'

Idaho Resident Fall Deaths Number of Injuries by Type Five-Year Aggregate 2010-2014

Type of injury (ICD-10 code)	Number	Percentage
Head Injury (S00-S09)	390	39.9
Neck (S10-S19)	55	5.6
Thorax (S20-S29)	70	7.2
Abdomen, lower back, lumbar spine and pelvis (S30-S39)	63	6.4
Shoulder and Upper arm (S40-S49)	15	1.5
Elbow and forearm (S50-S59)	2	0.2
Wrist and Hand (S60-S69)	4	0.4
Hip and Thigh (S70-S79)	325	33.3
Knee and Lower Leg (S80-S89)	16	1.6
Ankle and Foot (S90-S99)	2	0.2
Total records with one or more injuries listed ¹	884	90.5

93 records (9.5 percent) did not specify the type of injury or the information was incomplete²



Head injuries followed by hip and thigh injuries were mentioned most frequently on the death certificate.

¹ Some deaths listed multiple body regions for type of injury. Number of injuries and percentages do not sum to total number of deaths or 100%.

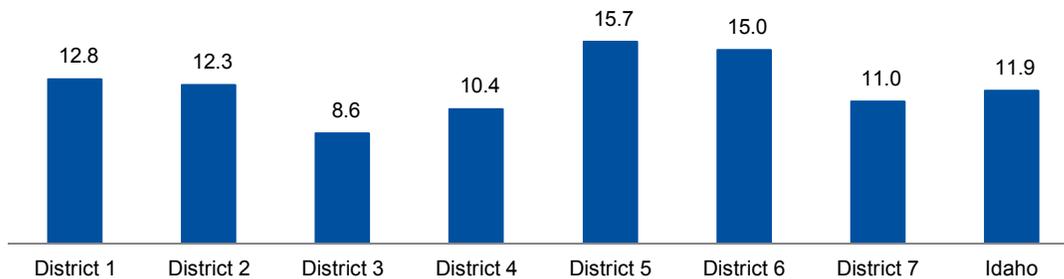
² This group includes all death certificates that had exclusively ICD-10 'T00'-'T149' on the record, or no code for injury specified.

**Idaho Resident Fall Deaths
Number of Deaths, Rate¹ and Age-adjusted Rate² by District
Five-Year Aggregate 2010-2014**

District	Number	Crude rate	Age-adjusted rate (CI ³)
1	167	15.4	12.8 (10.8-14.7)
2	89	16.7	12.3 (9.7-14.9)
3	112	8.6	8.6 (7.0-10.2)
4	223	9.9	10.4 (9.0-11.8)
5	161	17.1	15.7 (13.2-18.1)
6	125	14.8	15.0 (12.4-17.7)
7	100	9.7	11.0 (8.8-13.2)
Total	977	12.2	11.9 (11.1-12.6)

**The age-adjusted rate in District 3 was statistically significantly lower than the state average.
The age-adjusted rate in District 5 was statistically significantly higher than the state average.**

Age-adjusted death rate by district, five-year aggregate, 2010-2014



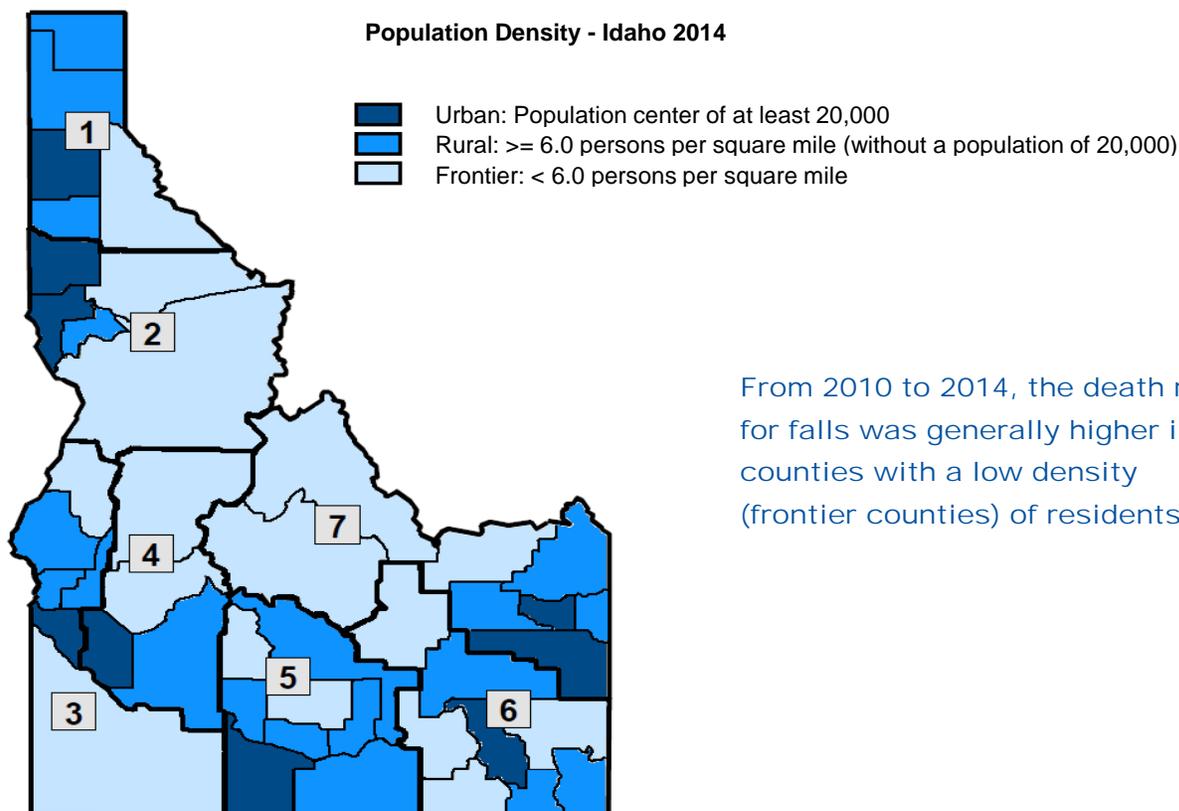
¹ Rates are number of deaths per 100,000 population.

² Age-adjusted rates are artificial measures developed to eliminate the bias inherent in differing age compositions, thus allowing comparisons between geographic regions. Idaho and U.S. age-adjusted rates were calculated using the 2000 U.S. population estimate as the standard population.

³ Lower and Upper CI: Lower and upper limits of the confidence interval based on 95% confidence. This interval can be interpreted to mean there is 95% certainty the true rate falls within the confidence interval.

Idaho Resident Fall Deaths Number of Deaths and Rate¹ by Population Density² Five-Year Aggregate 2010-2014

Year	Density	Number	Population	Crude rate (CI) ³
2010	Frontier	13	111,753	11.6 (6.2-19.9)
	Rural	40	357,699	11.2 (8.0-15.2)
	Urban	101	1,098,130	9.2 (7.4-11.0)
2011	Frontier	18	111,110	16.2 (9.6-25.6)
	Rural	37	357,628	10.3 (7.3-14.3)
	Urban	143	1,116,247	12.8 (10.7-14.9)
2012	Frontier	14	110,166	12.7 (6.9-21.3)
	Rural	44	356,006	12.4 (9.0-16.6)
	Urban	144	1,129,556	12.7 (10.7-14.8)
2013	Frontier	16	109,713	14.6 (8.3-23.7)
	Rural	44	356,657	12.3 (9.0-16.6)
	Urban	134	1,145,766	11.7 (9.7-13.7)
2014	Frontier	31	109,379	28.3 (19.3-40.2)
	Rural	62	359,040	17.3 (13.2-22.1)
	Urban	136	1,166,045	11.7 (9.7-13.6)
2010-2014	Frontier	92	552,121	16.7 (13.4-20.4)
	Rural	227	1,787,030	12.7 (11.1-14.4)
	Urban	658	5,655,744	11.6 (10.7-12.5)



From 2010 to 2014, the death rate for falls was generally higher in counties with a low density (frontier counties) of residents.

¹ Rates are number of deaths per 100,000 population.

² Urban, Rural, and Frontier County Designation (based on 2014 population estimates)

³ Lower and Upper CI: Lower and upper limits of the confidence interval based on 95% confidence. This interval can be interpreted to mean there is 95% certainty the true rate falls within the confidence interval.

**Idaho Resident Fall Deaths
Number of Deaths and Rate¹ by County
Five-Year Aggregate 2010-2014**

County	Number	Death rate	Population	
Total	977	12.2	7,994,895	▲▼●
Ada	193	9.4	2,044,968	▼
Adams	4	20.5	19,557	▲
Bannock	66	15.8	416,926	▲
Bear Lake	7	23.5	29,794	▲
Benewah	6	13.1	45,773	▲
Bingham	25	11.0	227,592	▼
Blaine	7	6.6	106,532	▼
Boise	2	5.8	34,507	▼
Bonner	25	12.2	204,445	●
Bonneville	61	11.4	532,830	▼
Boundary	8	14.7	54,416	▲
Butte	2	14.6	13,717	▲
Camas	-	-	5,399	N/A
Canyon	70	7.2	976,519	▼
Caribou	6	17.5	34,245	▲
Cassia	34	29.2	116,258	▲
Clark	1	22.1	4,534	▲
Clearwater	7	16.2	43,192	▲
Custer	4	18.7	21,421	▲
Elmore	18	13.6	131,871	▲
Franklin	8	12.4	64,297	▲
Fremont	10	15.4	65,121	▲
Gem	13	15.5	83,609	▲
Gooding	9	11.8	76,374	▼
Idaho	14	17.2	81,352	▲
Jefferson	4	3.0	133,060	▼
Jerome	13	11.5	112,887	▼
Kootenai	111	15.6	713,574	▲
Latah	20	10.5	189,621	▼
Lemhi	7	17.9	39,099	▲
Lewis	1	5.2	19,272	▼
Lincoln	3	11.4	26,302	▼
Madison	10	5.3	188,344	▼
Minidoka	15	14.9	100,876	▲
Nez Perce	47	23.7	198,261	▲
Oneida	6	28.3	21,175	▲
Owyhee	4	7.0	57,228	▼
Payette	11	9.7	113,332	▼
Power	5	12.9	38,697	▲
Shoshone	17	26.9	63,219	▲
Teton	3	5.9	51,004	▼
Twin Falls	80	20.3	394,701	▲
Valley	10	20.6	48,477	▲
Washington	10	19.8	50,517	▲

¹ Rates are number of deaths per 100,000 population.

- ▲ Higher than the state average
- ▼ Lower than the state average
- Equal to the state average

Idaho Resident Fall Deaths (Aged 65+)
Number of Deaths Where Other Condition is Listed on The Death Certificate
Five-Year Aggregate 2010-2014

From 2010 to 2014, more than one out of three Idaho residents aged 65 and older who died from a fall, had heart disease listed as a contributing cause on the death certificate.

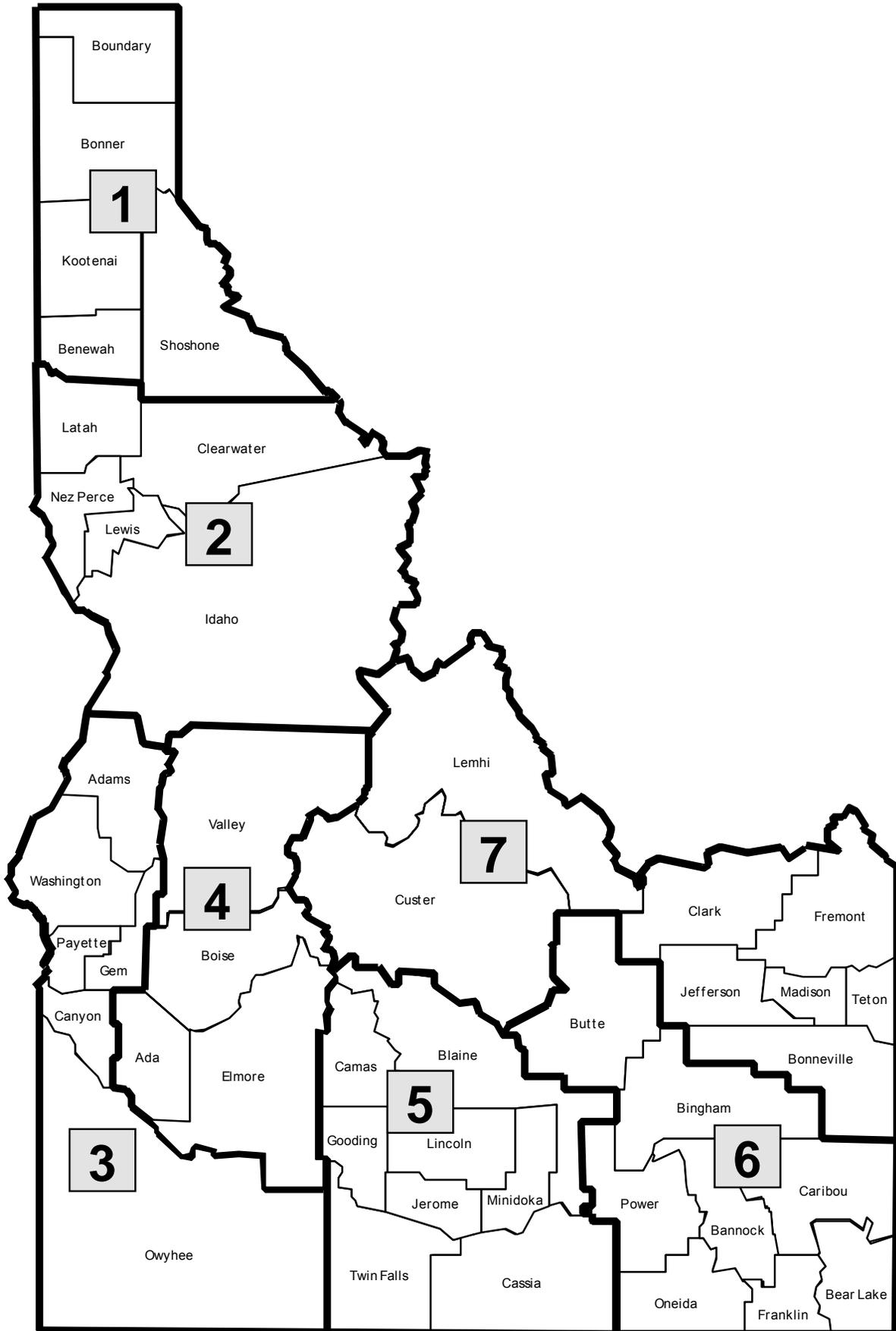
Conditions listed*	ICD-10 Code	Number	% of fall deaths with condition
Fall deaths	W00-W19	837	
Diseases of heart	I00-I09, I11, I13, I20-I51	290	34.6
Unspecified dementia	F03	147	17.6
Essential hypertension and hypertensive renal disease	I10, I12, I15	111	13.3
Diabetes mellitus	E10-E14	76	9.1
Nephritis, nephrotic syndrome, nephrosis	N00-N07, N17-N19, N25-N27	57	6.8
Chronic lower respiratory diseases	J40-J47	45	5.4
Cerebrovascular diseases	I60-I69	34	4.1
Malignant neoplasms	C00-C97	29	3.5
Parkinson's disease	G20-G21	29	3.5
Mental and behavioral disorders due to the use of tobacco	F17	28	3.3
Alzheimer's disease	G30	25	3.0
Other mental and behavioral disorders	F02, F04-F09, F20-F31, F33-F99	11	1.3
Depressive episode	F32	6	0.7
Vascular dementia	F01	4	0.5
Mental and behavioral disorders due to the use of alcohol	F10	4	0.5
Mental and behavioral disorders due to the use of other drugs and psychoactive substances	F11-F16, F18-F19	1	0.1

* Death certificates may list one, multiple or no other conditions. This table is a selection of other conditions listed frequently, and does not include all other conditions listed on the death certificate.

NOTE: After reviewing the literal information, 15 death certificates were found that indicated prescription-drug use. 11 death certificates listed Warfarin/Coumadin (blood thinner), 1 certificate listed antiplatelet medication, 1 listed anticoagulation medication, 1 listed aspirin and 1 listed narcotic dependence. There were a total of 21 death certificates that listed anticoagulation (blood thinning treatment).

NOTE: There is no checkbox for prescription or non-prescription drug use on the death certificate and the certifier is not required to list drugs used by the deceased. Therefore, the death certificate is an unreliable source to analyze the effect of (prescription) drug use for non-drug deaths.

Counties Comprising Idaho Public Health Districts



Notes

Accidental (unintentional) fall deaths were defined as those with an underlying cause of death classified using the *International Classification of Diseases, 10th Revision (ICD-10)* coded as: W00-W19.

2010-2014 Fall Deaths

Bureau of Vital Records and Health Statistics

Division of Public Health

Idaho Department of Health and Welfare

July 2016

