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MORTALITY FROM ROAD CRASHES IN THE INDIVIDUAL U.S. STATES: A COMPARISON WITH LEADING CAUSES OF DEATH IN 2015

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**SUSTAINABLE WORLDWIDE
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MORTALITY FROM ROAD CRASHES IN THE INDIVIDUAL U.S. STATES:
A COMPARISON WITH LEADING CAUSES OF DEATH IN 2015

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16. Abstract <p>This study compared, for each U.S. state, the fatalities per population from road crashes with fatalities per population from five leading causes of death (heart diseases, cancer, lung diseases, strokes, and Alzheimer's disease) and from all causes. The data, applicable to 2015, came from the Centers for Disease Control and Prevention, and the National Highway Traffic Safety Administration.</p> <p>The main findings are as follows:</p> <ol style="list-style-type: none"> (1) In the United States, there were 10.9 fatalities from road crashes per 100,000 population, as compared with 197.2 from heart diseases, 185.4 from cancer, 48.2 from lung diseases, 43.7 from strokes, and 34.4 from Alzheimer's disease. The highest fatality rate from road crashes was in Wyoming (24.7) and the lowest in the District of Columbia (3.4). (2) In the United States, fatalities from road crashes represented 1.3% of fatalities from all causes. The highest percentage was in Wyoming (3.0%) and the lowest in Rhode Island (0.4%). (3) In the United States, fatalities from road crashes corresponded to 5.5% of fatalities from heart diseases, 5.9% of fatalities from cancer, 22.6% of fatalities from lung diseases, 25.0% of fatalities from strokes, and 31.7% of fatalities from Alzheimer's disease. (4) Fatalities from road crashes as a percentage of fatalities from other causes of death varied greatly among the states. For example, fatalities from road crashes as a percentage of fatalities from Alzheimer's disease ranged from 96.0% in Wyoming to 9.9% in Rhode Island. 					
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Introduction

In 2015, we published a study that compared fatalities from road crashes to fatalities from leading causes of death in the individual U.S. states (Sivak and Schoettle, 2015), in order to evaluate road safety in the context of public health. Specifically, that study compared mortality from road crashes with mortality from heart diseases, cancer, lung diseases, strokes, and Alzheimer's disease. The data were for 2013. The present study uses the same approach to evaluate the status in 2015 (the latest data available).

Method

Data concerning fatalities from road crashes in the individual U.S. states came from NHTSA (2018), while data concerning fatalities from heart diseases (I00-I09, I11, I13, I20-I51), malignant neoplasm (C00-C97; "cancer"), chronic lower respiratory diseases (J40-J47; "lung diseases"), cerebrovascular diseases (I60-I69; "strokes"), and Alzheimer's disease (G30) came from the CDC (2017). (Each disease listed above is followed by the corresponding International Classification of Diseases codes in parentheses [WHO, 2018].) All data were for 2015.

Results

Fatality rates per population

Tables 1 through 7, and Figures 1 through 7 present the following fatality rates per population for each state: overall, road crashes, cancer, heart diseases, lung diseases, strokes, and Alzheimer's disease. (The rates were not age adjusted.) In these tables and figures, the states are divided into three groups of 17 each according to the magnitude of these rates (low, medium, or high).

Overall fatality rate

In the United States, there were 844.0 fatalities from all causes per 100,000 population (Table 1). The highest rate (1,233.8 in West Virginia) was 2.1 times the lowest rate (578.6 in Utah).

The five states with the highest rates were West Virginia, Maine, Alabama, Mississippi, and Arkansas. The five states with the lowest rates were Utah, Alaska, California, Colorado, and Texas.

Table 1
 Fatality rate from all causes per 100,000 population, 2015.

State	Rate
Utah	578.6
Alaska	584.5
California	662.2
Colorado	666.2
Texas	690.4
District of Columbia	724.6
Washington	761.4
Hawaii	772.1
New York	776.1
Minnesota	779.7
Virginia	782.3
Georgia	782.6
Maryland	786.6
Idaho	787.1
Nevada	791.4
Arizona	795.2
New Jersey	806.8
Wyoming	815.2
North Dakota	822.1
Illinois	831.0
New Mexico	848.2
Connecticut	850.3
Massachusetts	850.8
Nebraska	882.8
Oregon	886.2
North Carolina	887.5
Wisconsin	888.3
New Hampshire	900.6
South Dakota	900.6
Delaware	907.3
Kansas	915.8
Louisiana	936.0
Vermont	945.5
Florida	945.9
Indiana	947.4
Iowa	947.5
Michigan	958.8
Rhode Island	962.1
Montana	962.5
South Carolina	964.0
Missouri	984.1
Oklahoma	1,007.9
Tennessee	1,008.6
Ohio	1,017.7
Pennsylvania	1,035.7
Kentucky	1,052.3
Arkansas	1,061.6
Mississippi	1,062.1
Alabama	1,068.3
Maine	1,089.2
West Virginia	1,233.8
<i>U.S.A.</i>	<i>844.0</i>

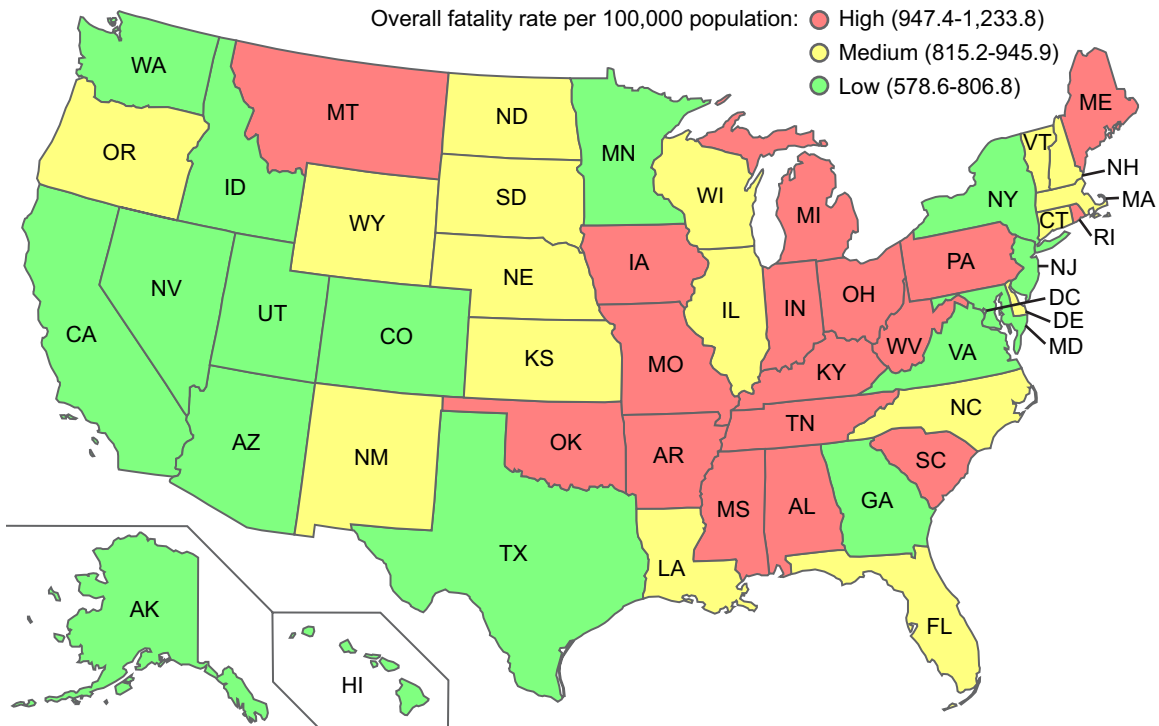


Figure 1. Fatality rate from all causes per population, 2015.

Fatality rate from road crashes

In the United States, there were 10.9 fatalities from road crashes per 100,000 population (Table 2). The highest rate (24.7 in Wyoming) was 7.3 times the lowest rate (3.4 in the District of Columbia).

The five states with the highest rates were Wyoming, Mississippi, Montana, South Carolina, and Arkansas. The five states with the lowest rates were the District of Columbia, Rhode Island, Massachusetts, New York, and New Jersey.

Table 2
 Fatality rate from road crashes per 100,000 population, 2015.

State	Rate
District of Columbia	3.4
Rhode Island	4.3
Massachusetts	4.5
New York	5.7
New Jersey	6.3
Hawaii	6.6
Connecticut	7.4
Minnesota	7.5
Illinois	7.8
Washington	7.9
California	8.1
Maryland	8.5
New Hampshire	8.6
Alaska	8.8
Virginia	9.0
Vermont	9.1
Utah	9.2
Pennsylvania	9.4
Ohio	9.6
Michigan	9.7
Wisconsin	9.8
Colorado	10.0
Iowa	10.2
Oregon	11.1
Nevada	11.2
Maine	11.7
Kansas	12.2
Indiana	12.4
Texas	12.8
Nebraska	13.0
Idaho	13.1
Arizona	13.1
Delaware	13.3
North Carolina	13.7
Georgia	14.0
Missouri	14.3
New Mexico	14.3
Florida	14.5
Tennessee	14.5
West Virginia	14.5
South Dakota	15.5
Louisiana	15.5
Oklahoma	16.4
Kentucky	17.2
North Dakota	17.3
Alabama	17.5
Arkansas	17.8
South Carolina	20.0
Montana	21.7
Mississippi	22.6
Wyoming	24.7
<i>U.S.A.</i>	<i>10.9</i>

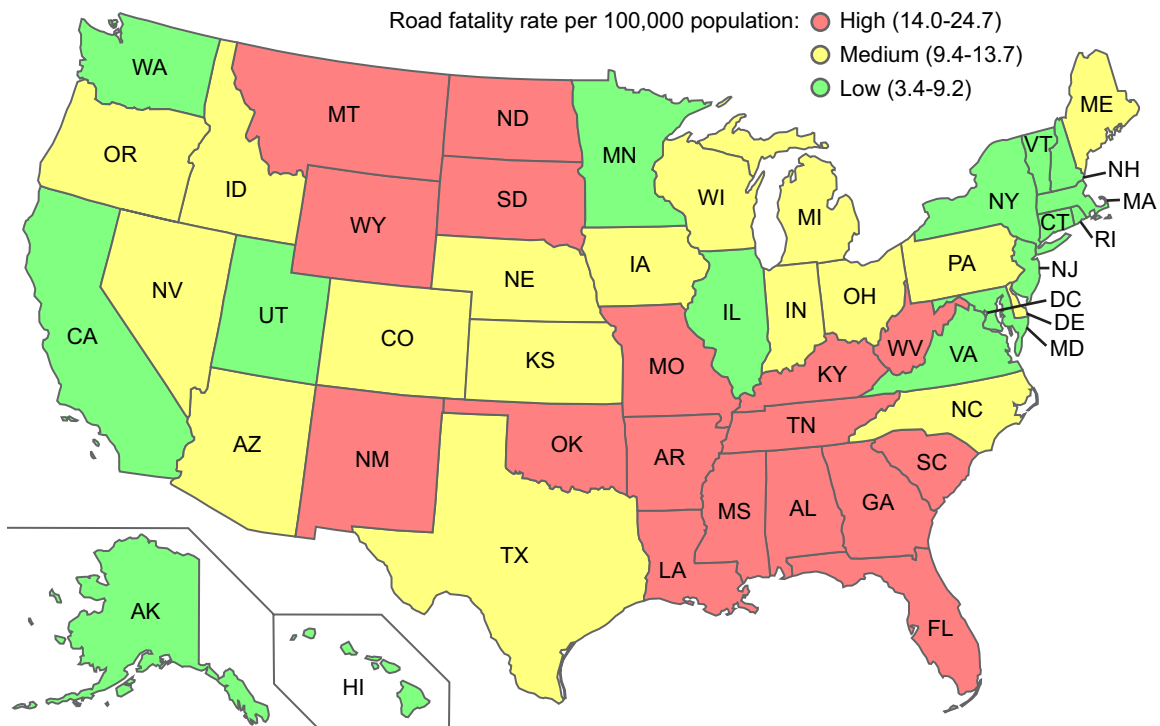


Figure 2. Fatality rate from road crashes per population, 2015.

Fatality rate from heart diseases

In the United States, there were 197.2 fatalities from heart diseases per 100,000 population (Table 3). The highest rate (267.2 in Alabama) was 2.3 times the lowest rate (114.6 in Alaska).

The five states with the highest rates were Alabama, Arkansas, Mississippi, Oklahoma, and West Virginia. The five states with the lowest rates were Alaska, Utah, Colorado, Minnesota, and Washington.

Table 3
 Fatality rate from heart diseases per 100,000 population, 2015.

State	Rate
Alaska	114.6
Utah	120.1
Colorado	128.5
Minnesota	142.9
Washington	153.8
California	156.6
Texas	157.6
Arizona	167.8
Virginia	167.9
New Mexico	168.2
Oregon	170.2
Idaho	170.7
Georgia	174.0
North Dakota	174.8
Wyoming	175.7
Massachusetts	178.5
District of Columbia	181.0
Hawaii	182.0
North Carolina	184.0
Nebraska	189.4
Maryland	191.1
New Hampshire	193.2
Kansas	193.2
Wisconsin	198.8
South Dakota	199.3
Illinois	199.5
Connecticut	200.6
Montana	203.7
Delaware	205.1
South Carolina	206.1
New Jersey	208.2
Vermont	209.4
Indiana	210.7
Nevada	211.5
Iowa	218.1
Florida	224.2
Rhode Island	224.5
New York	224.5
Maine	226.4
Kentucky	227.7
Louisiana	228.3
Tennessee	238.3
Ohio	241.7
Missouri	243.4
Michigan	249.9
Pennsylvania	250.3
West Virginia	256.3
Oklahoma	263.6
Mississippi	266.3
Arkansas	266.5
Alabama	267.2
<i>U.S.A.</i>	<i>197.2</i>

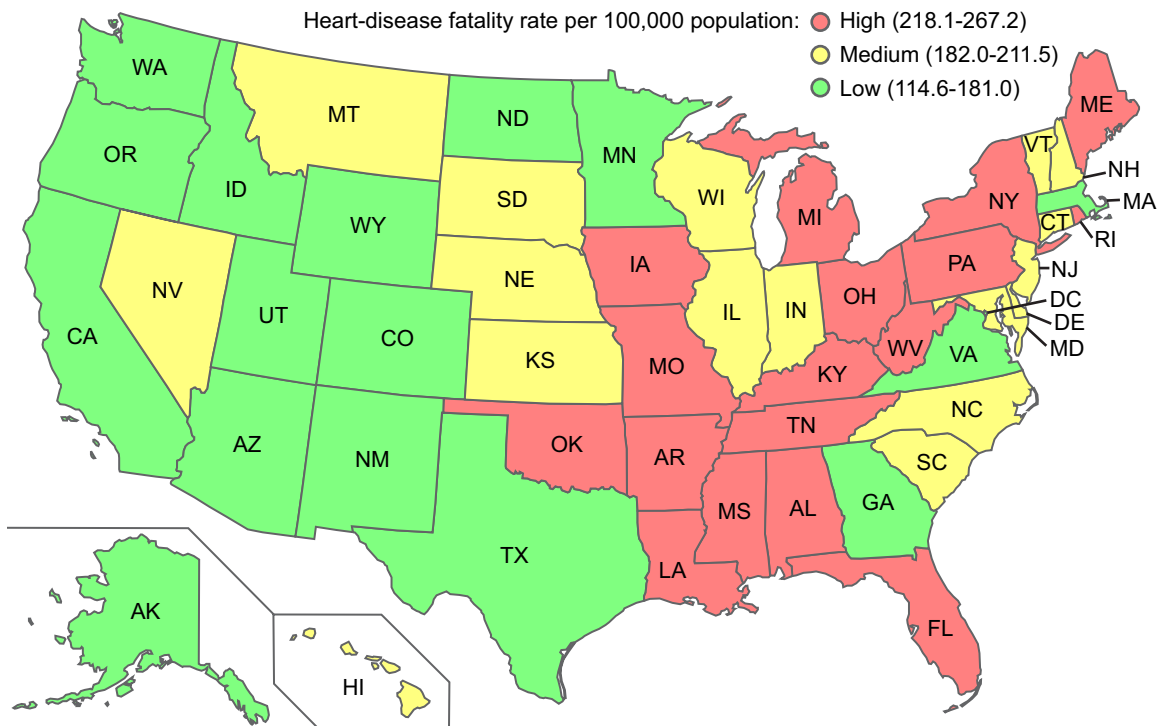


Figure 3. Fatality rate from heart diseases per population, 2015.

Fatality rate from cancer

In the United States, there were 185.4 fatalities from cancer per 100,000 population (Table 4). The highest rate (262.4 in West Virginia) was 2.5 times the lowest rate (103.2 in Utah).

The five states with the highest rates were West Virginia, Maine, Kentucky, Arkansas, and Pennsylvania. The five states with the lowest rates were Utah, Alaska, Colorado, Texas, and California.

Table 4
 Fatality rate from cancer per 100,000 population, 2015.

State	Rate
Utah	103.2
Alaska	132.4
Colorado	139.4
Texas	142.4
California	152.3
Wyoming	158.8
District of Columbia	159.5
Georgia	165.9
Hawaii	172.0
New Mexico	172.2
Idaho	172.2
Arizona	172.5
Nevada	173.5
North Dakota	174.4
Maryland	175.9
Washington	176.9
New York	177.3
Virginia	178.3
Minnesota	180.8
New Jersey	181.6
Nebraska	185.3
Connecticut	185.6
Massachusetts	187.7
South Dakota	191.0
Illinois	192.2
North Carolina	192.4
Kansas	192.5
Wisconsin	197.9
Oregon	200.9
Louisiana	201.2
South Carolina	203.2
Indiana	204.1
Montana	206.2
New Hampshire	208.4
Iowa	208.5
Michigan	208.9
Rhode Island	210.7
Oklahoma	211.7
Delaware	212.5
Missouri	213.1
Alabama	213.1
Tennessee	215.4
Mississippi	216.7
Florida	217.2
Ohio	218.7
Vermont	223.5
Pennsylvania	224.2
Arkansas	225.9
Kentucky	233.0
Maine	255.6
West Virginia	262.4
<i>U.S.A.</i>	<i>185.4</i>

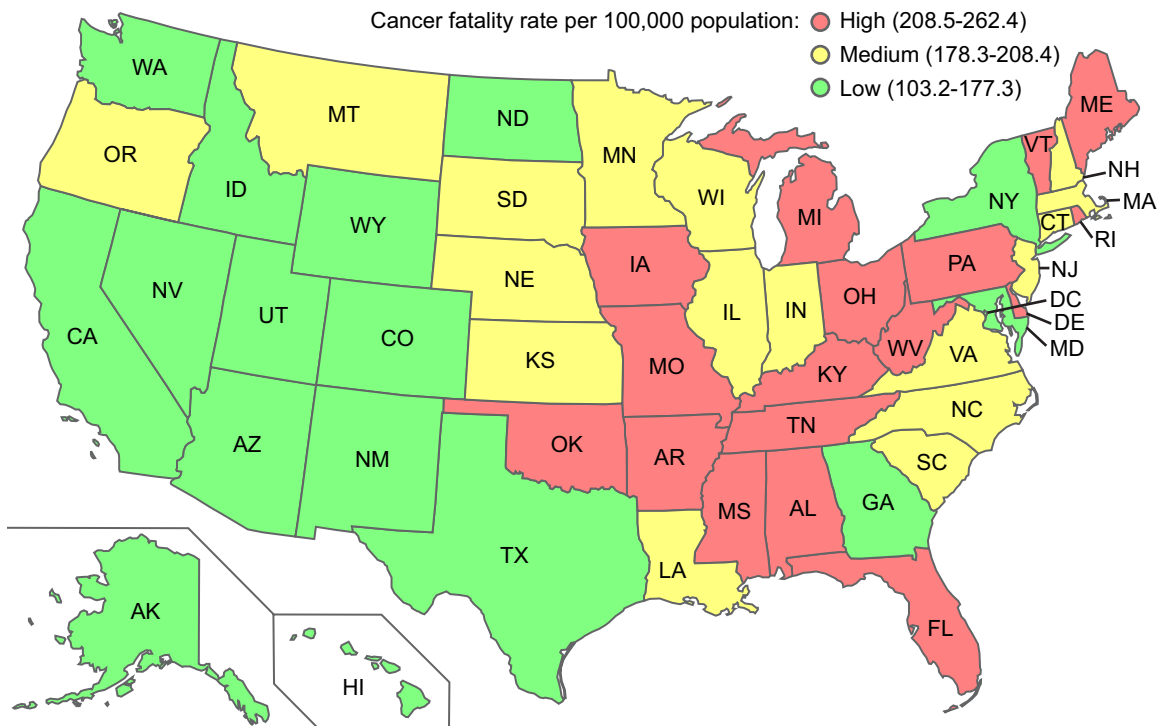


Figure 4. Fatality rate from cancer per population, 2015.

Fatality rate from lung diseases

In the United States, there were 48.2 fatalities from lung diseases per 100,000 population (Table 5). The highest rate (88.3 in West Virginia) was 4.0 times the lowest rate (21.9 in the District of Columbia).

The five states with the highest rates were West Virginia, Maine, Arkansas, Kentucky, and Oklahoma. The five states with the lowest rates were the District of Columbia, Hawaii, Utah, Alaska, and Maryland.

Table 5
 Fatality rate from lung diseases per 100,000 population, 2015.

State	Rate
District of Columbia	21.9
Hawaii	23.2
Utah	27.1
Alaska	27.6
Maryland	34.0
California	34.8
New Jersey	35.7
New York	35.9
Texas	37.2
Connecticut	38.1
Virginia	40.2
Massachusetts	41.0
Minnesota	42.8
Illinois	43.1
Washington	44.0
Georgia	45.1
North Dakota	46.4
Louisiana	46.6
Colorado	47.2
Rhode Island	48.3
Wisconsin	49.3
Idaho	50.9
North Carolina	52.0
Pennsylvania	52.1
Oregon	52.6
New Hampshire	53.0
New Mexico	53.2
Arizona	53.9
Delaware	53.9
Nevada	55.9
Vermont	57.0
Florida	57.7
South Dakota	58.5
Kansas	58.5
Michigan	58.9
South Carolina	59.4
Nebraska	61.9
Ohio	62.1
Wyoming	62.8
Indiana	63.6
Tennessee	64.2
Mississippi	64.3
Iowa	64.4
Missouri	64.7
Montana	65.7
Alabama	67.5
Oklahoma	74.8
Kentucky	75.3
Arkansas	76.2
Maine	77.1
West Virginia	88.3
<i>U.S.A.</i>	<i>48.2</i>

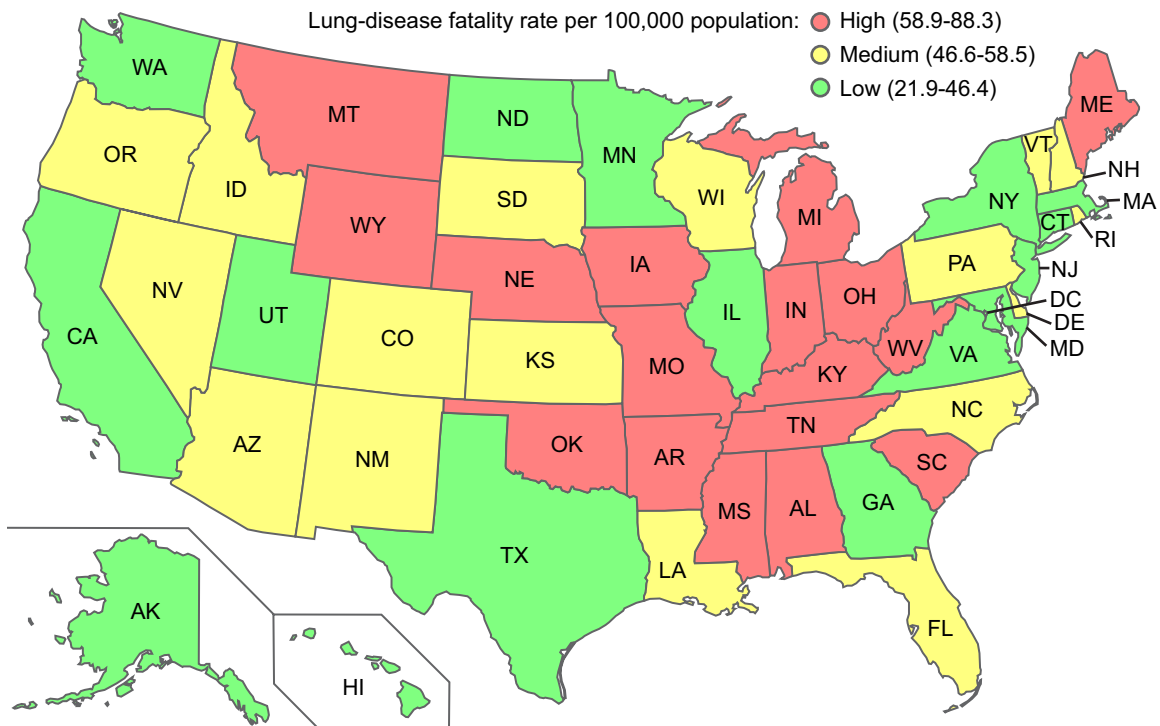


Figure 5. Fatality rate from lung diseases per population, 2015.

Fatality rate from strokes

In the United States, there were 43.7 fatalities from strokes per 100,000 population (Table 6). The highest rate (60.4 in Alabama) was 2.5 times the lowest rate (24.6 in Alaska).

The five states with the highest rates were Alabama, West Virginia, Mississippi, Florida, and Arkansas. The five states with the lowest rates were Alaska, Utah, New York, Wyoming, and Colorado.

Table 6
 Fatality rate from strokes per 100,000 population, 2015.

State	Rate
Alaska	24.6
Utah	29.6
New York	31.8
Wyoming	33.8
Colorado	34.0
New Hampshire	34.3
District of Columbia	36.0
Massachusetts	36.4
Arizona	36.9
Rhode Island	37.3
Nevada	37.3
Washington	37.7
New Mexico	37.7
New Jersey	38.1
Texas	38.2
California	38.5
Connecticut	38.7
Idaho	38.7
Virginia	40.5
North Dakota	40.7
Minnesota	40.8
Nebraska	40.9
Maryland	42.3
Georgia	42.4
Montana	44.3
Illinois	44.4
South Dakota	44.6
Indiana	44.7
Wisconsin	45.4
Iowa	45.4
Kentucky	46.3
Maine	46.3
Oregon	46.5
Kansas	46.8
Michigan	47.0
Oklahoma	48.1
Louisiana	48.8
Vermont	49.0
Delaware	49.3
Missouri	49.9
North Carolina	50.1
Ohio	51.2
Hawaii	51.3
Tennessee	52.2
South Carolina	53.1
Pennsylvania	54.6
Arkansas	55.5
Florida	56.4
Mississippi	57.9
West Virginia	58.5
Alabama	60.4
<i>U.S.A.</i>	<i>43.7</i>

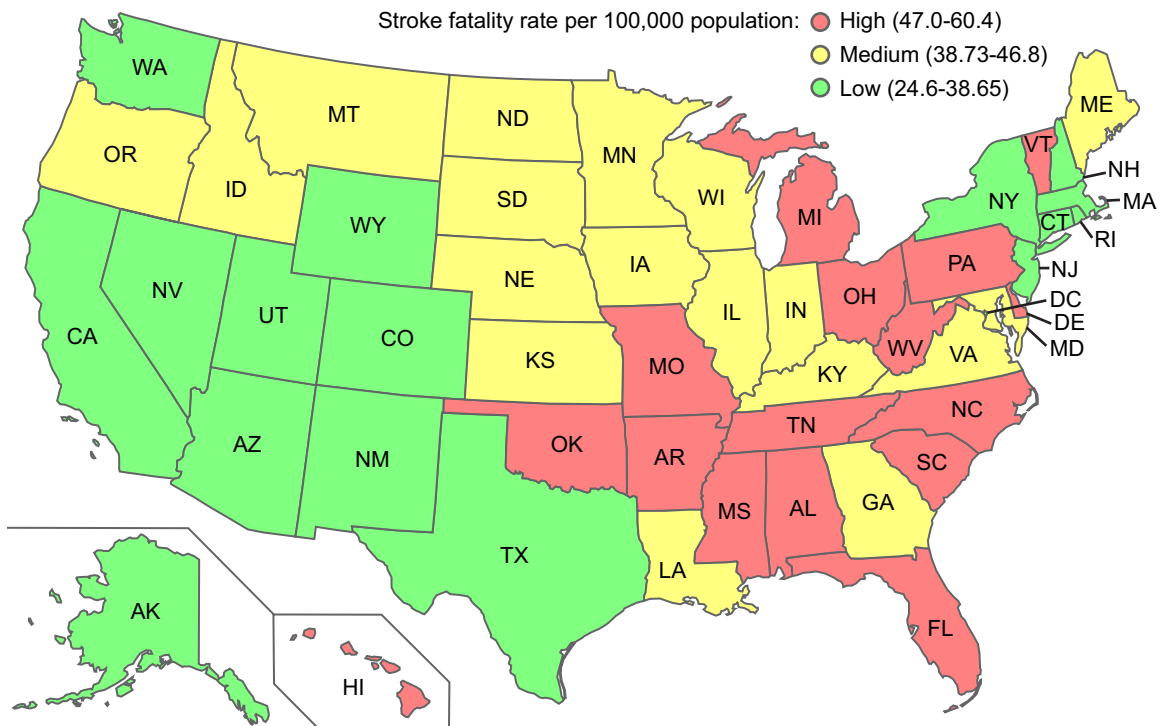


Figure 6. Fatality rate from strokes per population, 2015.

Fatality rate from Alzheimer's disease

In the United States, there were 34.4 fatalities from strokes per 100,000 population (Table 7). The highest rate (50.1 in South Carolina) was 5.4 times the lowest rate (9.2 in Alaska).

The five states with the highest rates were South Carolina, North Dakota, South Dakota, Arkansas, and Washington. The five states with the lowest rates were Alaska, New York, Maryland, the District of Columbia, and New Mexico.

Table 7
 Fatality rate from Alzheimer's disease per 100,000 population, 2015.

State	Rate
Alaska	9.2
New York	16.0
Maryland	18.2
District of Columbia	19.2
New Mexico	23.2
New Jersey	25.2
Wyoming	25.8
Massachusetts	26.7
Virginia	26.8
Montana	26.8
Connecticut	26.9
Delaware	27.9
Illinois	28.7
Colorado	29.5
Hawaii	29.5
Kansas	29.7
Nevada	30.2
Utah	30.2
Pennsylvania	31.3
Nebraska	31.5
Texas	32.4
New Hampshire	32.5
Minnesota	32.6
Idaho	33.4
Florida	34.7
Missouri	35.7
Wisconsin	36.2
Georgia	36.4
North Carolina	37.9
Indiana	38.0
Michigan	38.0
Kentucky	38.3
Oklahoma	38.3
California	38.5
Ohio	40.0
West Virginia	40.0
Maine	40.9
Oregon	41.0
Rhode Island	42.9
Iowa	42.9
Arizona	43.1
Louisiana	43.2
Mississippi	46.9
Alabama	47.0
Tennessee	47.3
Vermont	47.6
Washington	48.7
Arkansas	48.9
South Dakota	49.0
North Dakota	49.7
South Carolina	50.1
<i>U.S.A.</i>	<i>34.4</i>

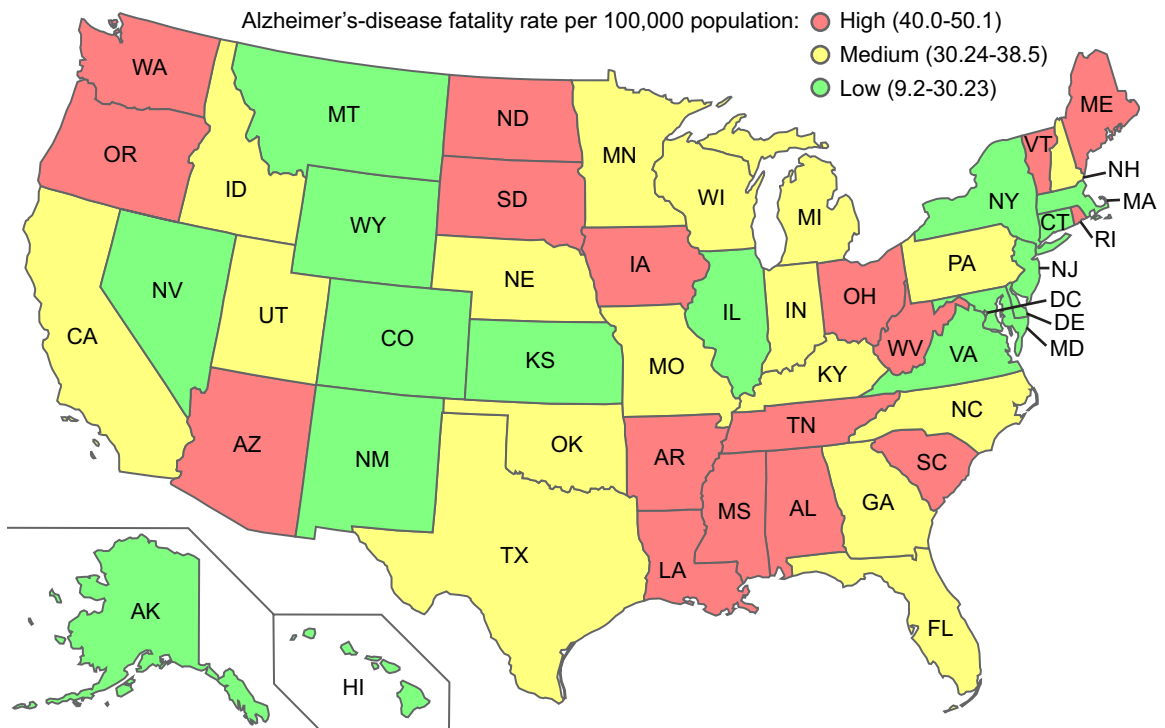


Figure 7. Fatality rate from Alzheimer's disease per population, 2015.

Fatalities from road crashes as a percentage of fatalities from other causes of death

Tables 8 through 13, and Figures 8 through 13 present fatalities from road crashes as a percentage of the following leading causes of death for each state: overall, road crashes, cancer, heart diseases, lung diseases, strokes, and Alzheimer's disease. In these tables and figures, the states are divided into three groups of 17 each according to the magnitude of these percentages (low, medium, or high).

Fatalities from road crashes as a percentage of fatalities from all causes of death

In the United States, fatalities from road crashes represented 1.3% of fatalities from all causes (Table 8). The highest percentage (3.0% in Wyoming) was 7.5 times the lowest percentage (0.4% Rhode Island).

The five states with the highest percentages were Wyoming, Montana, Mississippi, North Dakota, and South Carolina. The five states with the lowest percentages were Rhode Island, the District of Columbia, Massachusetts, New York, and New Jersey.

Table 8
Road fatalities as a percentage of all fatalities, 2015.

State	Percent
Rhode Island	0.4
District of Columbia	0.5
Massachusetts	0.5
New York	0.7
New Jersey	0.8
Hawaii	0.9
Connecticut	0.9
Pennsylvania	0.9
Illinois	0.9
Ohio	0.9
New Hampshire	1.0
Minnesota	1.0
Vermont	1.0
Michigan	1.0
Washington	1.0
Maine	1.1
Iowa	1.1
Maryland	1.1
Wisconsin	1.1
Virginia	1.1
West Virginia	1.2
California	1.2
Oregon	1.3
Indiana	1.3
Kansas	1.3
Nevada	1.4
Tennessee	1.4
Missouri	1.5
Delaware	1.5
Nebraska	1.5
Colorado	1.5
Alaska	1.5
Florida	1.5
North Carolina	1.5
Utah	1.6
Oklahoma	1.6
Kentucky	1.6
Alabama	1.6
Arizona	1.6
Idaho	1.7
Louisiana	1.7
Arkansas	1.7
New Mexico	1.7
South Dakota	1.7
Georgia	1.8
Texas	1.9
South Carolina	2.1
North Dakota	2.1
Mississippi	2.1
Montana	2.3
Wyoming	3.0
<i>U.S.A.</i>	<i>1.3</i>

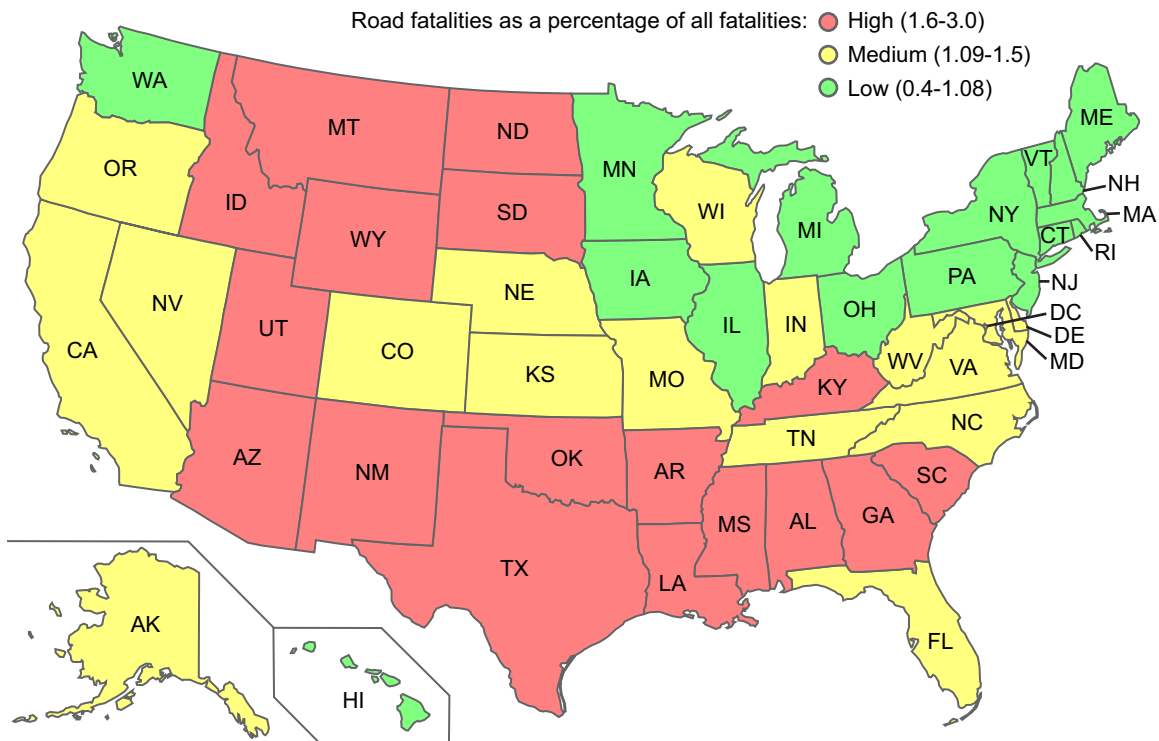


Figure 8. Road fatalities as a percentage of all fatalities, 2015.

Fatalities from road crashes as a percentage of fatalities from heart diseases

In the United States, fatalities from road crashes corresponded to 5.5% of fatalities from heart diseases (Table 9). The highest percentage (14.1% in Wyoming) was 7.4 times the lowest percentage (1.9% in the District of Columbia).

The five states with the highest percentages were Wyoming, Montana, North Dakota, South Carolina, and Mississippi. The five states with the lowest percentages were the District of Columbia, Rhode Island, New York, Massachusetts, and New Jersey.

Table 9
Road fatalities as a percentage of fatalities from heart diseases, 2015.

State	Percent
District of Columbia	1.9
Rhode Island	1.9
New York	2.5
Massachusetts	2.5
New Jersey	3.0
Hawaii	3.6
Connecticut	3.7
Pennsylvania	3.7
Michigan	3.9
Illinois	3.9
Ohio	4.0
Vermont	4.3
New Hampshire	4.4
Maryland	4.5
Iowa	4.7
Wisconsin	4.9
Washington	5.2
California	5.2
Maine	5.2
Minnesota	5.2
Nevada	5.3
Virginia	5.3
West Virginia	5.7
Missouri	5.9
Indiana	5.9
Tennessee	6.1
Oklahoma	6.2
Kansas	6.3
Florida	6.5
Delaware	6.5
Oregon	6.5
Alabama	6.5
Arkansas	6.7
Louisiana	6.8
Nebraska	6.9
North Carolina	7.5
Kentucky	7.6
Idaho	7.6
Utah	7.7
Alaska	7.7
South Dakota	7.8
Colorado	7.8
Arizona	7.8
Georgia	8.0
Texas	8.1
New Mexico	8.5
Mississippi	8.5
South Carolina	9.7
North Dakota	9.9
Montana	10.6
Wyoming	14.1
<i>U.S.A.</i>	5.5

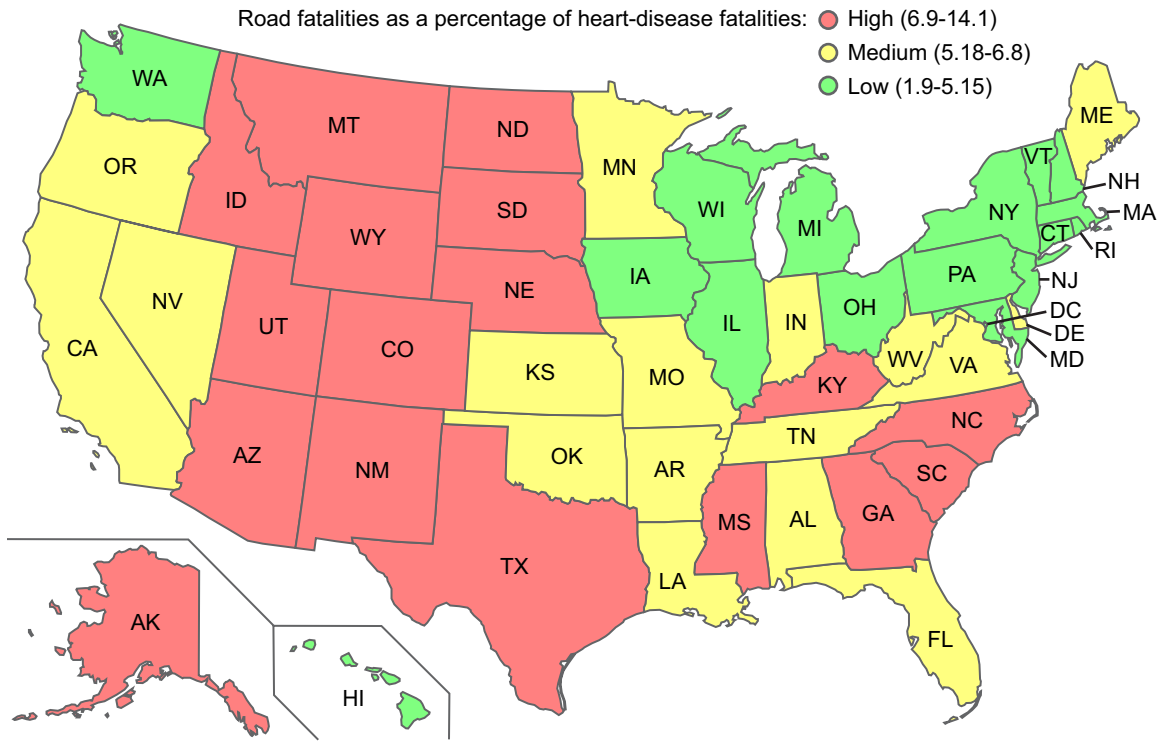


Figure 9. Road fatalities as a percentage of fatalities from heart diseases, 2015.

Fatalities from road crashes as a percentage of fatalities from cancer

In the United States, fatalities from road crashes corresponded to 5.9% of fatalities from cancer (Table 10). The highest percentage (15.6% in Wyoming) was 7.8 times the lowest percentage (2.0% in Rhode Island).

The five states with the highest percentages were Wyoming, Montana, Mississippi, North Dakota, and South Carolina. The five states with the lowest percentages were Rhode Island, the District of Columbia, Massachusetts, New York, and New Jersey.

Table 10
 Road fatalities as a percentage of fatalities from cancer, 2015.

State	Percent
Rhode Island	2.0
District of Columbia	2.1
Massachusetts	2.4
New York	3.2
New Jersey	3.5
Hawaii	3.8
Connecticut	4.0
Illinois	4.0
Vermont	4.1
New Hampshire	4.1
Minnesota	4.1
Pennsylvania	4.2
Ohio	4.4
Washington	4.5
Maine	4.6
Michigan	4.6
Maryland	4.9
Iowa	4.9
Wisconsin	5.0
Virginia	5.0
California	5.3
Oregon	5.5
West Virginia	5.5
Indiana	6.1
Delaware	6.3
Kansas	6.3
Nevada	6.5
Alaska	6.6
Florida	6.7
Missouri	6.7
Tennessee	6.7
Nebraska	7.0
North Carolina	7.1
Colorado	7.2
Kentucky	7.4
Idaho	7.6
Arizona	7.6
Louisiana	7.7
Oklahoma	7.8
Arkansas	7.9
South Dakota	8.1
Alabama	8.2
New Mexico	8.3
Georgia	8.4
Utah	8.9
Texas	9.0
South Carolina	9.8
North Dakota	9.9
Mississippi	10.4
Montana	10.5
Wyoming	15.6
<i>U.S.A.</i>	<i>5.9</i>

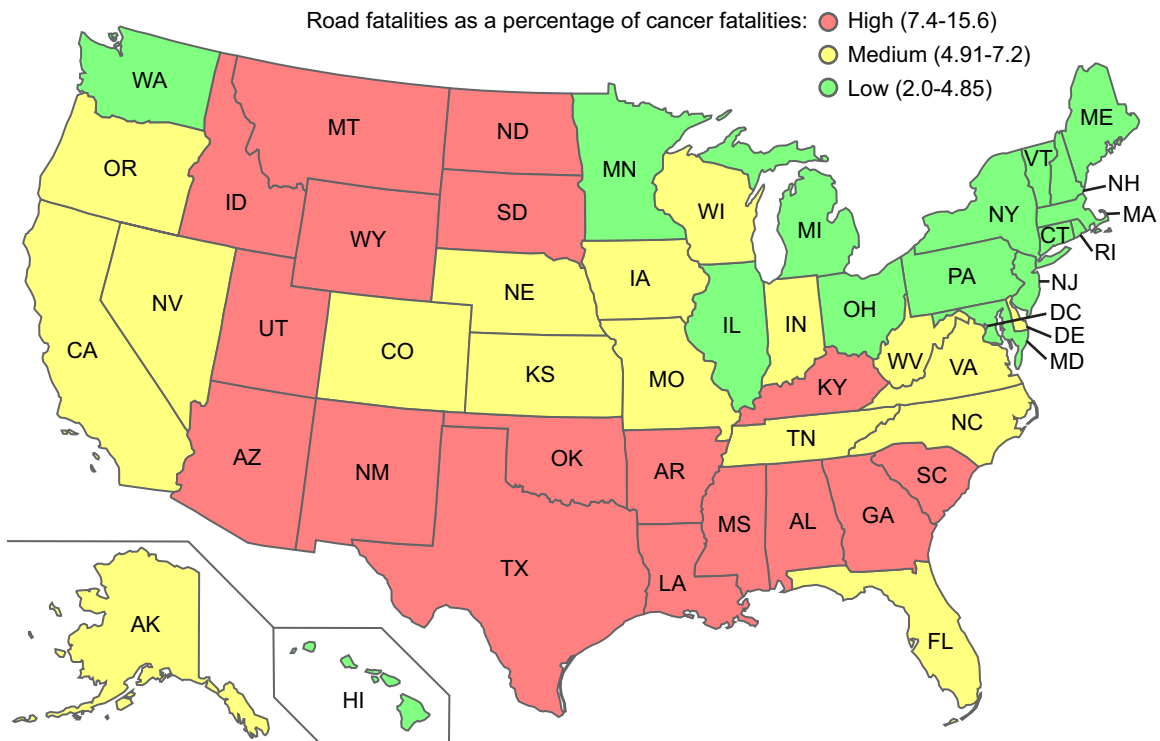


Figure 10. Road fatalities as a percentage of fatalities from cancer, 2015.

Fatalities from road crashes as a percentage of fatalities from lung diseases

In the United States, fatalities from road crashes corresponded to 22.6% of fatalities from lung diseases (Table 11). The highest percentage (39.4% in Wyoming) was 4.5 times the lowest percentage (8.8% in Rhode Island).

The five states with the highest percentages were Wyoming, North Dakota, Mississippi, Texas, and Utah. The five states with the lowest percentages were Rhode Island, Massachusetts, Maine, Ohio, and the District of Columbia.

Table 11
 Road fatalities as a percentage of fatalities from lung diseases, 2015.

State	Percent
Rhode Island	8.8
Massachusetts	11.0
Maine	15.2
Ohio	15.4
District of Columbia	15.6
New York	15.8
Iowa	15.9
Vermont	16.0
New Hampshire	16.2
West Virginia	16.5
Michigan	16.5
Minnesota	17.5
New Jersey	17.6
Illinois	18.0
Pennsylvania	18.0
Washington	18.0
Connecticut	19.4
Indiana	19.5
Wisconsin	19.9
Nevada	20.1
Kansas	20.8
Nebraska	21.0
Oregon	21.1
Colorado	21.2
Oklahoma	22.0
Missouri	22.1
Virginia	22.3
Tennessee	22.6
Kentucky	22.8
California	23.3
Arkansas	23.4
Arizona	24.3
Delaware	24.7
Florida	25.1
Maryland	25.1
Idaho	25.6
Alabama	25.9
North Carolina	26.4
South Dakota	26.5
New Mexico	26.9
Hawaii	28.3
Georgia	31.0
Alaska	31.9
Montana	33.0
Louisiana	33.3
South Carolina	33.6
Utah	34.0
Texas	34.4
Mississippi	35.2
North Dakota	37.3
Wyoming	39.4
<i>U.S.A.</i>	22.6

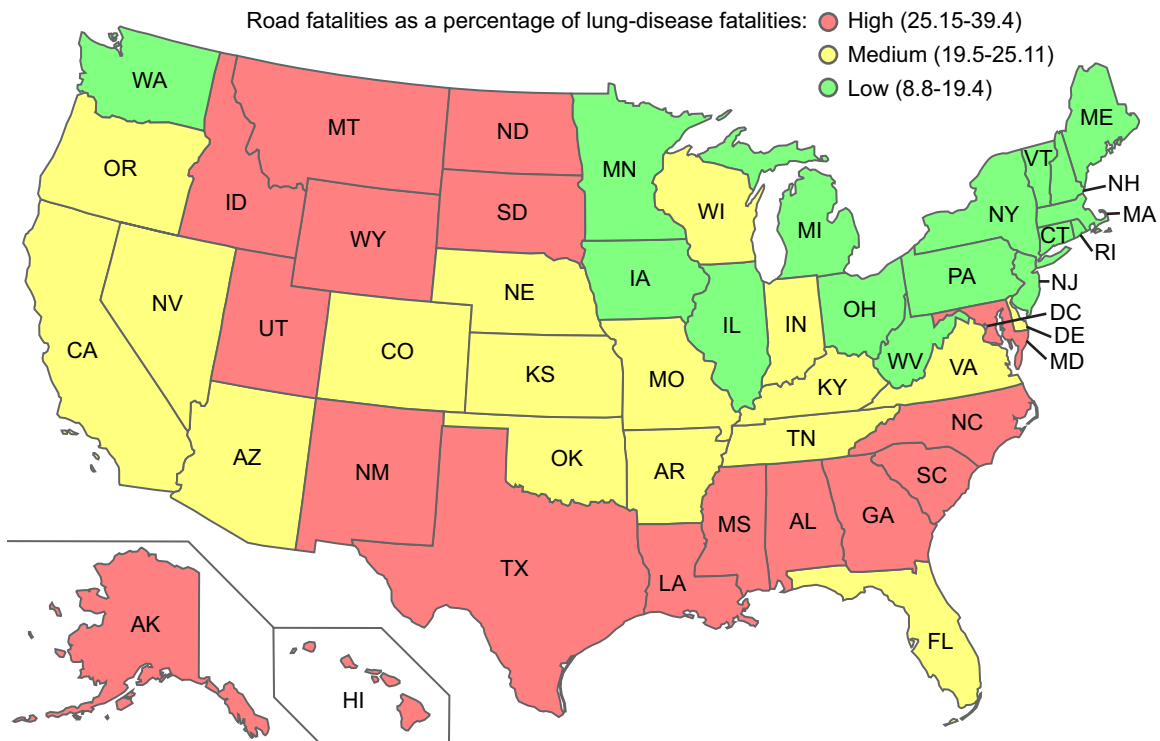


Figure 11. Road fatalities as a percentage of fatalities from lung diseases, 2015.

Fatalities from road crashes as a percentage of fatalities from strokes

In the United States, fatalities from road crashes corresponded to 25.0% of fatalities from strokes (Table 12). The highest percentage (73.2% in Wyoming) was 7.7 times the lowest percentage (9.5% in the District of Columbia).

The five states with the highest percentages were Wyoming, Montana, North Dakota, Mississippi, and New Mexico. The five states with the lowest percentages were the District of Columbia, Rhode Island, Massachusetts, Hawaii, and New Jersey.

Table 12
 Road fatalities as a percentage of fatalities from strokes, 2015.

State	Percent
District of Columbia	9.5
Rhode Island	11.4
Massachusetts	12.4
Hawaii	12.8
New Jersey	16.5
Pennsylvania	17.2
Illinois	17.5
New York	17.8
Minnesota	18.4
Vermont	18.6
Ohio	18.7
Connecticut	19.2
Maryland	20.2
Michigan	20.6
Washington	21.0
California	21.1
Wisconsin	21.6
Virginia	22.2
Iowa	22.6
Oregon	23.9
West Virginia	24.8
New Hampshire	24.9
Maine	25.3
Florida	25.7
Kansas	26.0
Delaware	27.0
North Carolina	27.4
Indiana	27.7
Tennessee	27.8
Missouri	28.6
Alabama	28.9
Colorado	29.4
Nevada	30.1
Utah	31.1
Nebraska	31.7
Louisiana	31.8
Arkansas	32.1
Georgia	33.0
Texas	33.5
Idaho	33.7
Oklahoma	34.2
South Dakota	34.7
Arizona	35.4
Alaska	35.7
Kentucky	37.1
South Carolina	37.6
New Mexico	37.9
Mississippi	39.0
North Dakota	42.5
Montana	48.9
Wyoming	73.2
<i>U.S.A.</i>	<i>25.0</i>

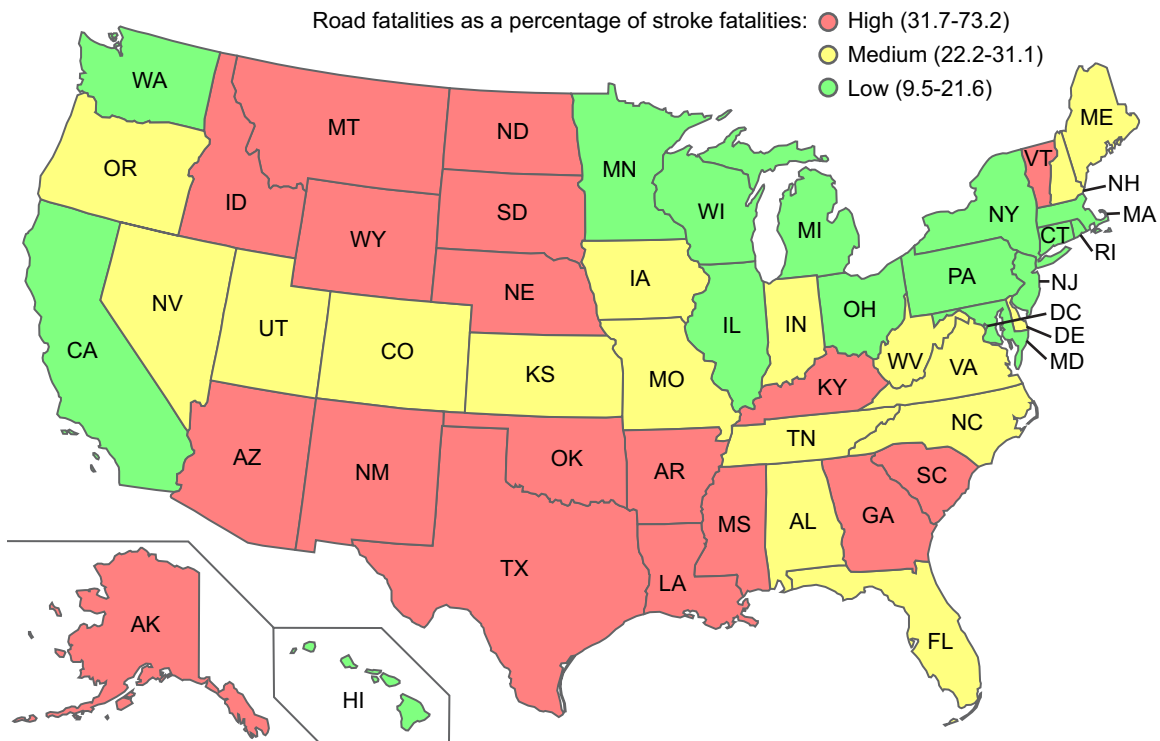


Figure 12. Road fatalities as a percentage of fatalities from strokes, 2015.

Fatalities from road crashes as a percentage of fatalities from Alzheimer's disease

In the United States, fatalities from road crashes corresponded to 31.7% of fatalities from Alzheimer's disease (Table 13). The highest percentage (96.0% in Wyoming) was 9.7 times the lowest percentage (9.9% in Rhode Island).

The five states with the highest percentages were Wyoming, Alaska, Montana, New Mexico, and Mississippi. The five states with the lowest percentages were Rhode Island, Washington, Massachusetts, the District of Columbia, and Vermont.

Table 13
 Road fatalities as a percentage of fatalities from Alzheimer's disease, 2015.

State	Percent
Rhode Island	9.9
Washington	16.3
Massachusetts	16.9
District of Columbia	17.8
Vermont	19.1
California	21.1
Hawaii	22.3
Minnesota	23.0
Iowa	23.9
Ohio	23.9
New Jersey	24.9
Michigan	25.5
New Hampshire	26.4
Oregon	27.1
Illinois	27.1
Wisconsin	27.1
Connecticut	27.5
Maine	28.7
Pennsylvania	29.9
Arizona	30.3
Utah	30.5
Tennessee	30.7
South Dakota	31.6
Indiana	32.7
Virginia	33.5
Colorado	33.9
North Dakota	34.8
New York	35.3
Louisiana	36.0
North Carolina	36.3
West Virginia	36.3
Arkansas	36.4
Nevada	37.2
Alabama	37.2
Georgia	38.5
Idaho	39.1
Texas	39.5
South Carolina	39.8
Missouri	40.0
Kansas	41.0
Nebraska	41.1
Florida	41.8
Oklahoma	42.9
Kentucky	44.9
Maryland	46.8
Delaware	47.7
Mississippi	48.3
New Mexico	61.7
Montana	80.9
Alaska	95.6
Wyoming	96.0
<i>U.S.A.</i>	<i>31.7</i>

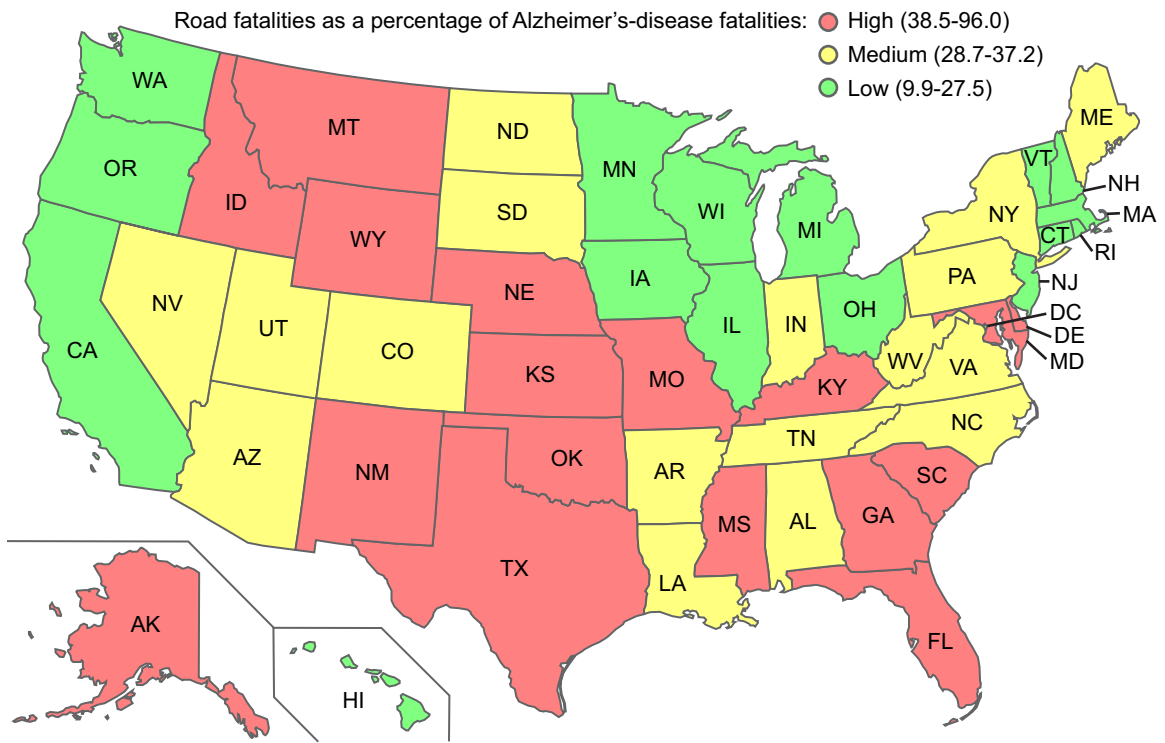


Figure 13. Road fatalities as a percentage of fatalities from Alzheimer's disease, 2015.

Discussion

Fatality rates per population

The key findings concerning the examined fatality rates per population are summarized in Table 14. Of particular note is the fact that the largest ratio of the maximum and minimum fatality rates was from road crashes (7.3).

Table 14
Key findings concerning fatality rates per 100,000 population by cause of death.

Cause of death	United States	Maximum	Minimum	Maximum/minimum
All causes	844.0	1,233.8 (West Virginia)	578.6 (Utah)	2.1
Road crash	10.9	24.7 (Wyoming)	3.4 (District of Columbia)	7.3
Heart disease	197.2	267.2 (Alabama)	114.6 (Alaska)	2.3
Cancer	185.4	262.4 (West Virginia)	103.2 (Utah)	2.5
Lung disease	48.2	88.3 (West Virginia)	21.9 (District of Columbia)	4.0
Stroke	43.7	60.4 (Alabama)	24.6 (Alaska)	2.5
Alzheimer's disease	34.4	50.1 (South Carolina)	9.2 (Alaska)	5.4

Fatalities from road crashes as a percentage of fatalities from all causes

In the United States, fatalities from road crashes represented 1.3% of fatalities from all causes. On one extreme, this percentage was more than 2% in five states (3.0% in Wyoming, 2.3% in Montana, and 2.1% in Mississippi, North Dakota, and South Carolina). On the other extreme, this percentage was 0.8% or less in five states (0.4% in Rhode Island, 0.5% in the District of Columbia and Massachusetts, 0.7% in New York, and 0.8% in New Jersey).

Fatalities from road crashes as a percentage of fatalities from leading causes of death

The key findings concerning fatalities from road crashes as a percentage of fatalities from heart diseases, cancer, lung diseases, strokes, and Alzheimer’s disease are presented in Table 15.

Table 15
Key findings concerning fatalities from road crashes as a percentage of fatalities from five leading causes of death.

Cause of death	United States	Maximum	Minimum	Maximum/minimum
Heart disease	5.5%	14.1% (Wyoming)	1.9% (District of Columbia)	7.4
Cancer	5.9%	15.6% (Wyoming)	2.0% (Rhode Island)	7.8
Lung disease	22.6%	39.4% (Wyoming)	8.8% (Rhode Island)	4.5
Stroke	25.0%	73.2% (Wyoming)	9.5% (District of Columbia)	7.7
Alzheimer’s disease	31.7%	96.0% (Wyoming)	9.9% (Rhode Island)	9.7

Table 16 lists the number of states where fatalities from road crashes exceeded 10%, 25%, 50%, and 75%, respectively, from each of the other examined causes of death. Of particular note is the fact that the fatalities from road crashes exceeded 25% of the fatalities from lung diseases in 18 states, from strokes in 29 states, and from Alzheimer’s disease in 40 states.

Table 16
 Number of states where fatalities from road crashes exceeded given percentages of
 fatalities from five leading causes of death.

Cause of death	Number of states in which fatalities from road crashes were:			
	>10%	>25%	>50%	>75%
Heart disease	2	0	0	0
Cancer	3	0	0	0
Lung disease	50	18	0	0
Stroke	50	29	1	0
Alzheimer's disease	50	40	4	3

Policy implications

For policy considerations, the most relevant information is in Table 2 (fatality rate from road crashes per population) and Table 8 (road fatalities as a percentage of all fatalities). The ranking of the states on these two measures are similar but not identical. (The correlation coefficient between these two ranks was 0.88.)

The three states with the lowest and highest values on each of these two measures are listed in Table 17. The three states with the lowest road fatalities per population were also the three states with the lowest road fatalities as a percentage of all fatalities (the District of Columbia, Rhode Island, and Massachusetts), although not in the same order.

On the other extreme, the three states with the highest road fatalities per population were also the three states with the highest road fatalities as a percentage of all fatalities (Wyoming, Mississippi, and Montana), although not in the same order.

Table 17

States with the lowest and highest fatality rate from road crashes per population and road fatalities as a percentage of fatalities from all causes (1 = lowest, 51 = highest).

Rank	Road fatalities per population	Road fatalities as a percentage of fatalities from all causes
1	District of Columbia	Rhode Island
2	Rhode Island	District of Columbia
3	Massachusetts	Massachusetts
...		
49	Montana	Mississippi
50	Mississippi	Montana
51	Wyoming	Wyoming

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