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# Mortality

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As Oregon's population both ages and increases, the annual number of deaths trends upwards. During 2011, the number of deaths increased to 32,731, up from 31,899.<sup>1</sup> The crude death rate increased from 829.8 per 100,000 population in 2010 to 848.5 in 2011. [Figure 6-1, Table 6-3]. (Unless otherwise specified, references to death rates mean crude death rates; see the Appendix for further discussion of crude and age-adjusted rates.) The age-adjusted death rate decreased from 735.0 to 730.0. Overall, the death rate has seen a somewhat uneven, but statistically significant, long-term downward trend since 1990.<sup>2</sup>

In 2010 (the most recent year for which final U.S. data are available)<sup>3</sup>, Oregon's age-adjusted death rate was 3.2 percent lower than the U.S. rate, and ranked 31st among the states and District of Columbia. [Table 6-54]. During the past 25 years, the greatest difference between the U.S. and Oregon rates occurred in 1986 when Oregon's rate was 7.3 percent lower than the U.S. rate (907.4 versus 978.4) and 38th among the states and District of Columbia.

Oregon's age-adjusted cause-specific death rates ranked among the top 10 highest rates in the states and District of Columbia for six causes: Amyotrophic Lateral Sclerosis (4th), viral hepatitis (4th), Parkinson's disease (6th), hypertension (6th), alcohol-induced deaths (8th) and suicide (9th). At the same time, Oregon was among the states with the 10 lowest rates for eight causes, excluding states with unreliable data for each cause: septicemia (4th lowest), heart disease (4th lowest), influenza and pneumonia (4th lowest), HIV/AIDS (6th lowest), atherosclerosis (6th lowest), nephritis and nephrosis (7th lowest), perinatal conditions (10th lowest) and homicide (10th lowest).

## Life expectancy

The longest living Oregonian ever recorded was a Siberian-born man who died in 1999 at 117 years of age. Most of the state's residents have far shorter lives, but the long-term trend is for an increasing life expectancy. Since 1960, the life expectancy of Oregonians has increased from 70.9 years at birth to 79.5 in 2011.

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***The age-adjusted death rate is at one of its lowest levels.<sup>2</sup>***

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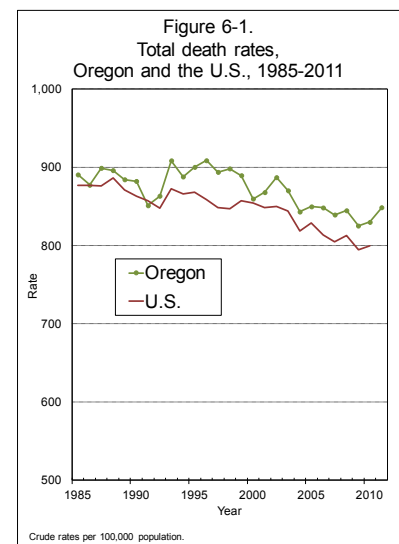
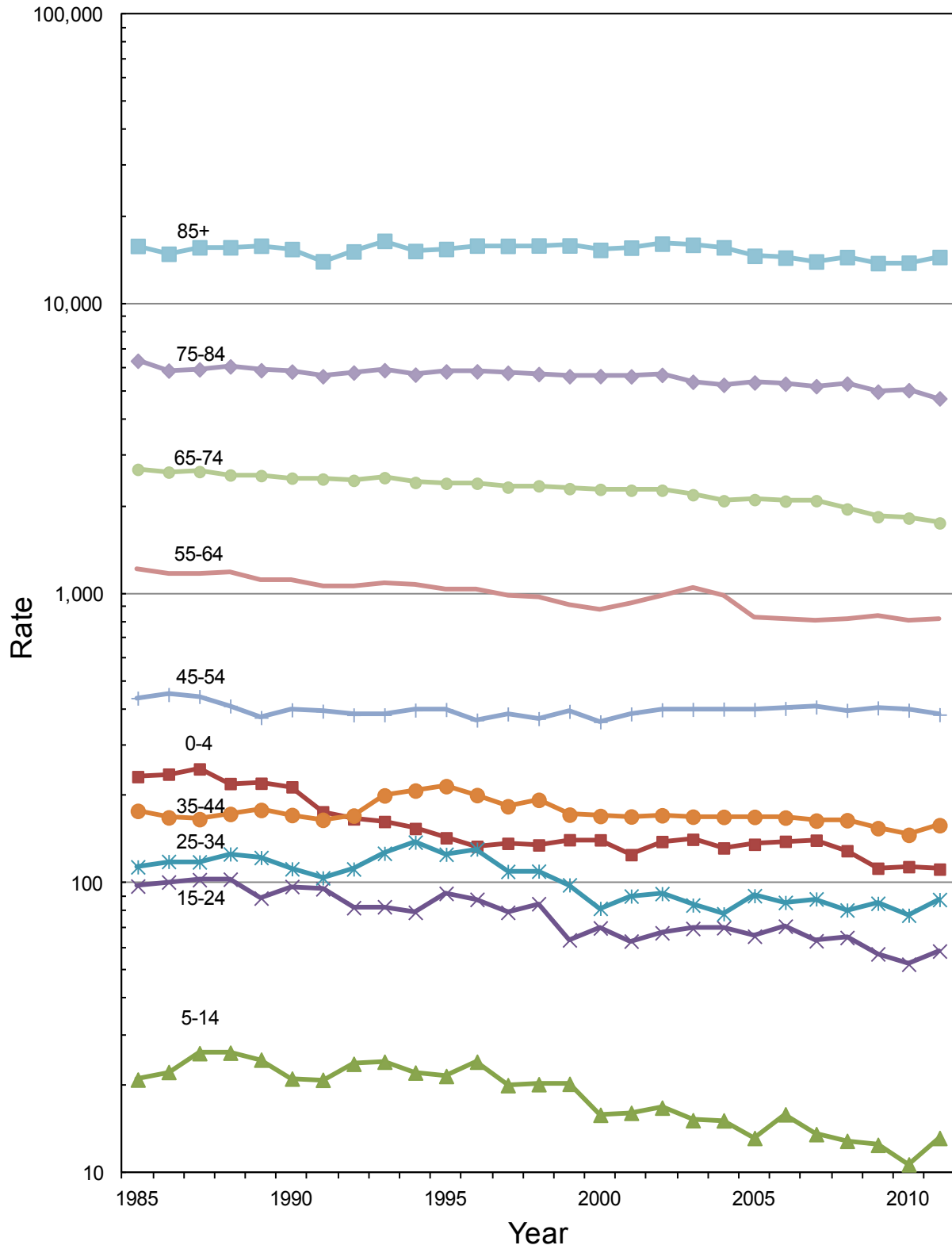


Figure 6-2.  
Age-specific death rates,  
Oregon residents, 1985-2011



Rates per 100,000 population.  
Note: A logarithmic scale is used for the vertical axis.

<b>Table A - Life expectancy, Oregon and the United States, 1960-2011</b>						
<b>Year</b>	<b>Oregon</b>			<b>United States</b>		
	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>1960</b>	70.9	N.A.	N.A.	69.7	66.6	73.1
<b>1970</b>	72.1	68.4	76.2	70.8	67.1	74.7
<b>1980</b>	75.0	71.4	78.8	73.7	70.0	77.4
<b>1990</b>	76.7	73.3	80.1	75.4	71.8	78.8
<b>2000</b>	78.0	75.6	80.4	76.8	74.1	79.3
<b>2005</b>	78.5	76.3	80.7	77.4	74.9	79.9
<b>2010</b>	79.5	77.4	81.6	78.7	76.2	81.0
<b>2011</b>	79.5	77.3	81.7	N/A	N/A	N/A

2010 is the most recent year for which final U.S. data are available. US data sources: National Center for Health Statistics. Hyattsville, MD. 2013. Murphy SL, Xu J, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports, Vol 61 no 4. ([http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61\\_04.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_04.pdf))

Life expectancy is a theoretical construct representing the average number of years a group of infants will live if they were to experience, throughout their lives, the age-specific death rates present at the time of their birth. It is affected by such factors as the environment, the economy, health behaviors and changing 110 medical technology.

Oregon's life expectancy remained unchanged from the previous year, at 79.5 years, a record high. Life expectancy increased slightly among females between 2010 and 2011 (from 81.6 to 81.7) and decreased slightly for males (from 77.4 to 77.3).

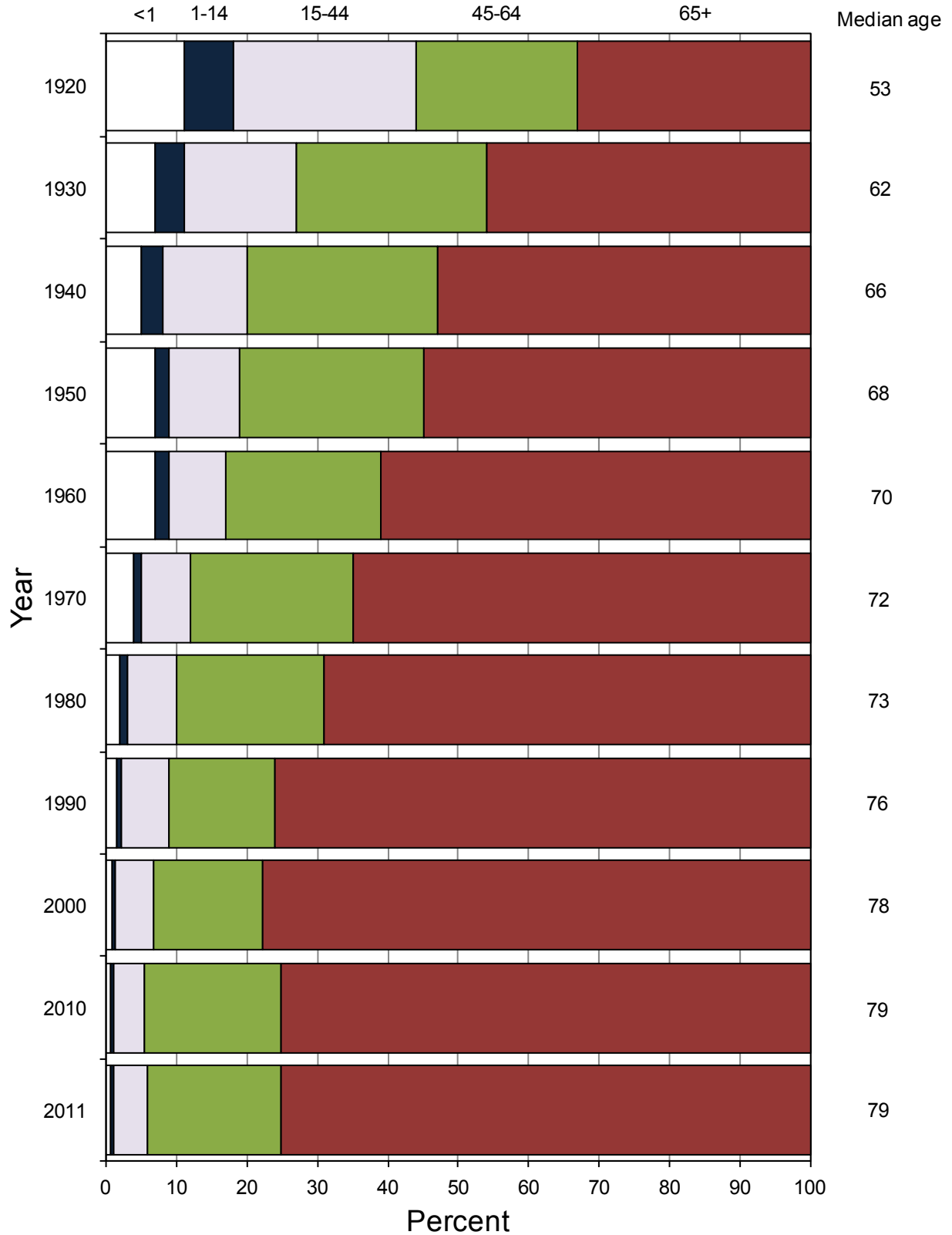
Life expectancy varied by 7.1 years among Oregon's counties, using a five-year average (2007 through 2011). [Table 6-56]. The eight counties where life expectancy was statistically significantly longer than the state average in 2007–2011 (79.2) were: Benton (82.3), Clackamas (79.7), Crook (80.3), Deschutes (81.2), Hood River (80.6), Polk (79.9), Washington (81.7) and Wheeler (82.8). The 13 counties with significantly shorter life expectancy were: Baker (77.9), Coos (76.8), Curry (76.8), Douglas (77.2), Jefferson (75.7), Josephine (77.0), Klamath (76.1), Lincoln (77.7), Linn (77.8), Marion (78.6), Multnomah (78.8), Umatilla (78.0) and Wasco (77.4).

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***The oldest Oregonian to die in 2011 was a 110-year-old female.***

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Figure 6-3.  
Proportion of deaths by selected age groups,  
Oregon residents, 1920-2011



## Demographic characteristics

### Gender

Between 2010 and 2011, mortality rates for both males and females increased, resulting in an increase in Oregon's crude rate. [Table 6-1]. The male rate increased 4.0 percent (828.5 per 100,000 population in 2010 compared to 862.0 in 2011), and the female rate increased 0.5 percent (831.1 compared to 835.3).

During 2011, the female crude death rate was lower than the male rate. While this was typical during the 20th century, the female rate has occasionally been higher than the male rate in recent years. [Table 6-1]. Increases in female crude death rates vis-à-vis male rates seen during the past decade are largely due to the changing age distribution within these two groups, rather than a decline in the health status of females. Proportionately, there are simply larger numbers of elderly women than men, and the elderly, even under the best of circumstances, are more likely to die than their younger counterparts. Despite recent fluctuations in crude death rates, the age-adjusted death rates for males have consistently been higher than those for females. In the 2009–2011 time period, the male age-adjusted death rate was 34.9 percent higher than the female rate, 854.7 compared to 633.7. [Table 6-47m and Table 6-47f]. (See Appendix B for further information about age-specific and age-adjusted death rates.)

### Age

Compared with rates in 2000, age-specific death rates have declined for five of the six age groups shown in Table 6-1; the exception is Oregonians ages 45 through 64 where the rate increased. The greatest decline (20.8 %) was seen among those ages 0-4.

Table 6-1 shows the disparity in age-specific death rates by gender: male rates are higher than female rates across five of the six age categories. The age-specific death rate for males in the 15–24 year age group is 3.9 times higher than the rate for women in the same age group, 91.6 per 100,000 versus 23.7, a statistically significant difference. For both sexes combined, the median age at death remained unchanged in

**Table B - Age-adjusted death rates by county of residence, 2011**

County	RATE
<b>Oregon Total</b>	<b>730.0</b>
Baker	735.0
Benton**	613.5
Clackamas**	671.4
Clatsop	762.1
Columbia	772.1
Coos*	881.2
Crook	759.1
Curry	790.9
Deschutes	687.3
Douglas*	821.5
Gilliam	603.3
Grant	642.8
Harney	792.9
Hood River	724.7
Jackson	732.1
Jefferson	826.8
Josephine*	898.0
Klamath*	828.9
Lake	667.0
Lane	744.7
Lincoln*	832.0
Linn*	795.8
Malheur*	828.4
Marion	729.3
Morrow	738.1
Multnomah*	762.6
Polk**	659.3
Sherman	460.2
Tillamook	735.5
Umatilla	789.1
Union	763.7
Wallowa	733.0
Wasco*	840.5
Washington**	599.4
Wheeler	702.4
Yamhill	759.6

Rates per 100,000 population.

\* Statistically significantly higher than the state rate.

\*\* Statistically significantly lower than the state rate.

2011 at 79 years. The male and female median ages at death also remained unchanged at 75 years and 82 years, respectively.

### County of residence

In 2011, the state age-adjusted death rate was 730.0 per 100,000 population. Nine counties had statistically higher age-adjusted rates, while four counties were significantly lower. [Table B]. Simply residing in a particular county will not necessarily increase or decrease one's chance of dying in a given year. Mortality is a consequence of many factors, including: availability and quality of medical care, environmental exposure, smoking, and other personal health behaviors, socioeconomic status and heredity. Elevated age-adjusted death rates do not necessarily indicate that residing within one county will cause a reduction in longevity. For example, persons with chronic debilitating disease may move, in disproportionate numbers, to an area with a lower cost of living or to an area with specialized medical facilities.

### Hispanic ethnicity and race

Beginning in 2006, the state of Oregon changed its method of collecting race and Hispanic ethnicity information. Previously, the informant on the death certificate could report only one race for the decedent. Since most informants are immediate family members (parents, spouse or children of the decedent), it is assumed the informant would know best which race or ethnicity the decedent would have reported. The informant can report multiple race categories for the decedent on the death certificate.

There are three Hispanic ethnicity choices based on the country or countries of origin: Mexican, Cuban and Puerto Rican. A person of Hispanic ethnicity may belong to any race category. There are six major race categories: White, Black or African American, American Indian/ Alaska Native, Asian, Hawaiian or Pacific Islander and Other Specified.

The data collected for the Asian categories allow for differentiation by Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese and other Asian. Among Pacific Islanders the data collected allow for differentiation among Hawaiian, Guamanian, Samoan and other Pacific Islander. However, the counts in these more specific race categories are too small for reliable statistical reporting.

Most (93.6 %) decedents are reported as non-Hispanic White only. Multiple race categories were marked on the death certificates for 202 decedents in 2011. [Table 6-9]. A majority of those with multiple race categories (94.1 %) identified, in part, as White (in combination with one or two other races), and 71.8 percent of those selecting multiple race categories identified, in part, as American Indian. Allowing multiple race selections raises the mortality counts and rates for all race categories. For instance, when looking at single-mention race categories, the count of American Indian decedents in 2011 was 298. [Table 6-9]. This count increased by 48.7 percent to 443 when also including multiple race decedents identifying in part as American Indian, in combination with other races. [Table 6-10]. Other databases, such as birth, youth surveys, and adult telephone surveys, are now also collecting multiple race categories. The younger participants in those databases more frequently report multiple races.

## Leading causes of death<sup>4,5</sup>

### Overview

During the 20th century, with the notable exception of the great influenza pandemic of 1918–1919, heart disease was the leading cause of death among Oregonians. The 21st century, however, has been marked by the emergence of cancer as the leading cause of death. In 2001, for the first time, more Oregonians died from malignant neoplasms than diseases of the heart. During 2011, 7,768 Oregonians died from cancer while 6,215 died from heart disease.

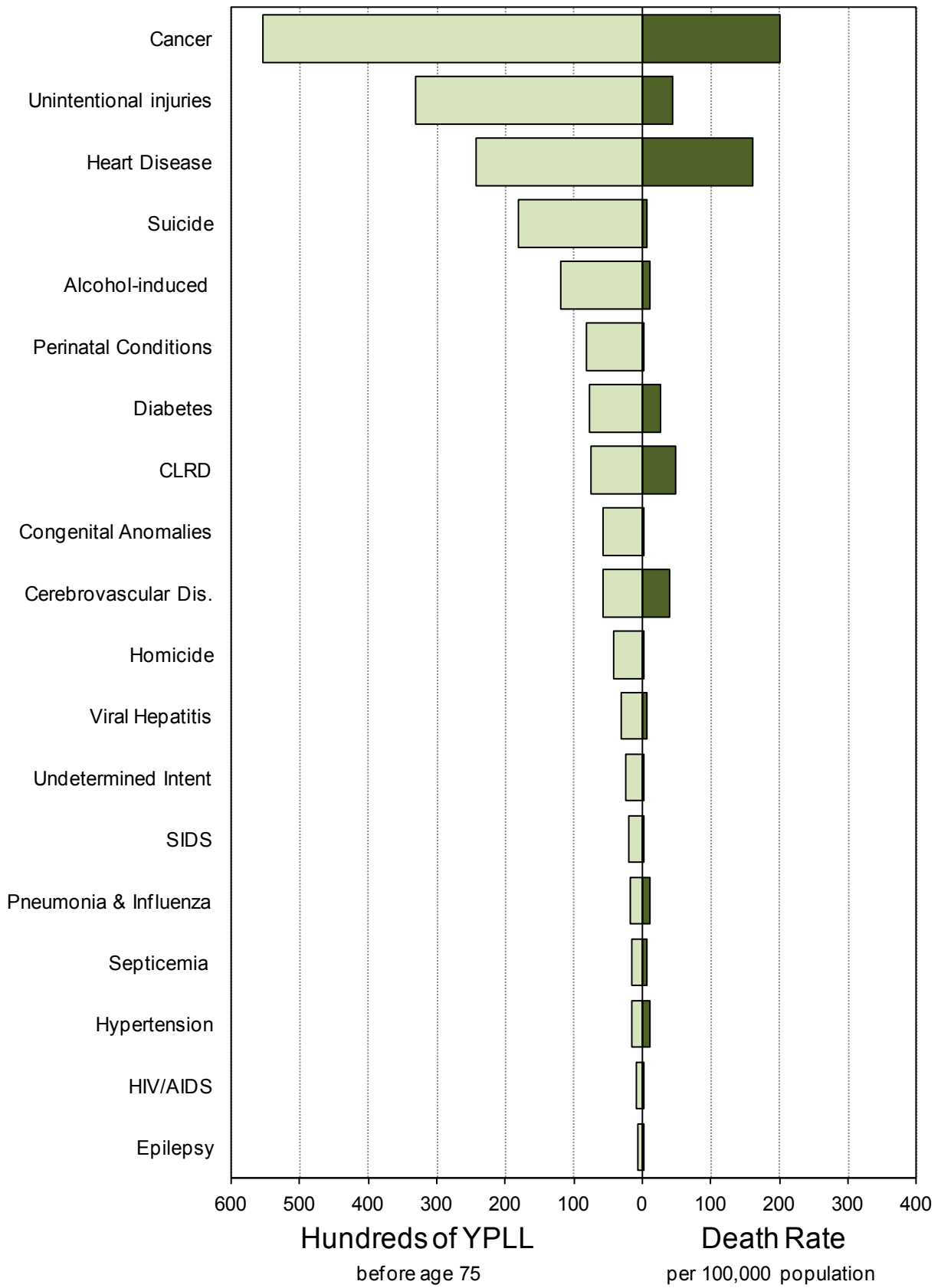
Together, malignant neoplasms and heart disease accounted for 42.7 percent of all deaths during 2011. Although the numbers of deaths resulting from these causes were similar, malignant neoplasms resulted in the loss of 2.3 times as many years of potential life as heart disease, a reflection of the younger ages of cancer's victims. [Figure 6-4 and Table 6-14]. The apparent increasing risk of cancer vis-à-vis heart disease during the 21st century is not the result of an increasing cancer death rate, but rather a declining heart disease death rate. In fact, the malignant neoplasm death rate has trended downwards in the past decade, but the heart disease death rate has fallen more rapidly.

Causes of death varied by age group. Among infants, perinatal conditions were most common. Unintentional injuries ranked first for Oregonians ages 1 through 44. From ages 45 through

Race Group*	Percent
White	<1
African American	5.2
American Indian	32.7
Asian <sup>1</sup>	8.3
Hawaiian & Pac. Isl. <sup>2</sup>	18.2

\* Decedents of Hispanic ethnicity may belong to any race.  
<sup>1</sup> Includes Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asian.  
<sup>2</sup> Includes Native Hawaiian, Guamanian, Samoan, and other Pacific Islander.

**Figure 6-4.**  
**Leading causes of years of potential life lost and**  
**corresponding death rates, Oregon residents, 2011**

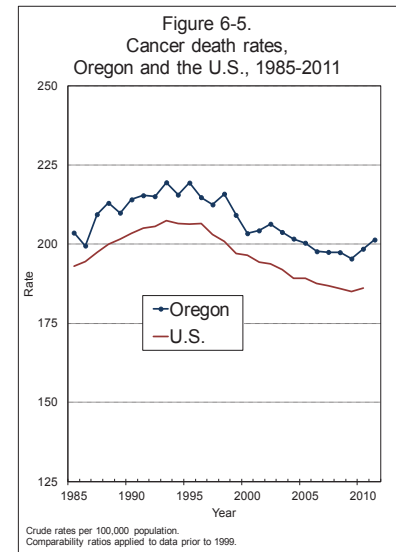




84, cancer was the leading cause of death. Among residents 85 or older heart disease ranked first. [Table 6-4].

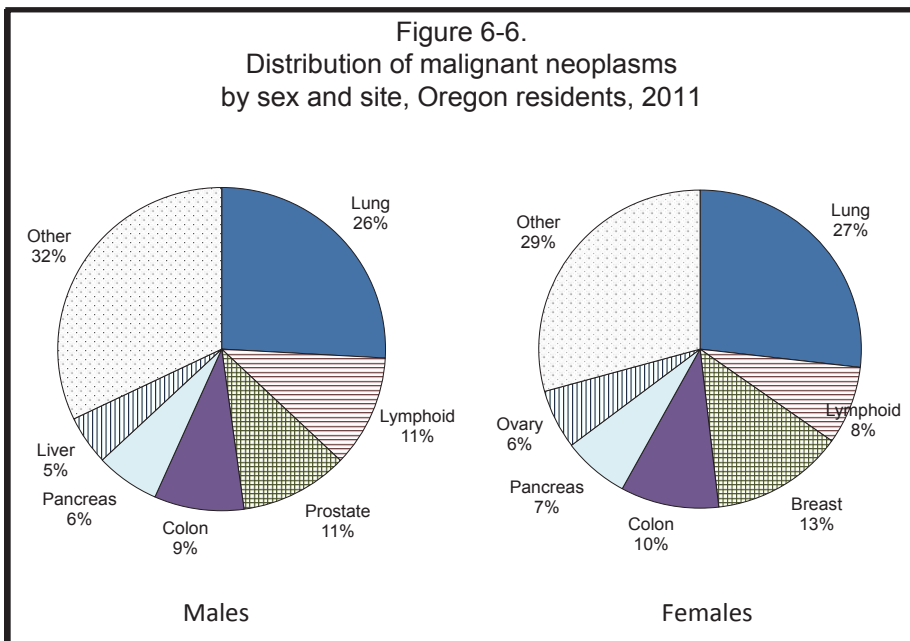
**Years of potential life lost**

Mortality rates alone do not show the full impact upon society of certain causes of death. The deaths of young people are a greater cost to society than the deaths of older people in terms of years of potential life lost (YPLL). The YPLL yardstick quantifies premature mortality occurring in younger age groups by measuring the number of years between age at death and a set standard age. With the standard set at 75 years, a death at age 21 results in 54 years lost. The numbers of YPLL for all decedents are then totaled. Figure 6-4 shows the disparity between death rates and the years of potential life lost. In all references to YPLL in this report, the standard is 75 years, unless otherwise noted. Use of YPLL measures in Figure 6-4 highlights the impact of death due to unintentional injuries. Injuries surpass any other cause for potential years of life lost before age 65 as younger people are more likely to die from injuries. Cancer is the leading cause of YPLL before age 75 [Tables 6-13 and 6-14].



**Cancer**

During 2011, cancer was the leading cause of death among Oregonians, claiming the lives of 7,768 Oregonians. Malignant neoplasms were also a contributing factor, but not the underlying cause, in another 939 deaths. For many decades, the cancer crude death rate increased inexorably, but in the



1965	5.5
1975	3.6
1985	2.0
1995	1.2
2005	1.2
2011	1.0

decade of the 1990s it hit a plateau; since then, the rate has trended downward. In 2011, the crude death rate increased to 201.4 per 100,000 population compared to 198.5 in 2010. [Table 6-3]. Age-adjusted death rates decreased lowering from 177.9 in 2010 to 172.7 in 2011. [Table 6-46t].

Malignant neoplasms were the leading cause of death for both sexes, but the difference in death rates between males and females has narrowed greatly during the past two decades. During 2011, the crude death rate for cancer was 11.0 percent higher for males than females, 212.0 versus 190.9. [Table 6-2]. Nonetheless, the disparity was far greater when age-adjusted death rates were compared, 203.0 versus 151.1, a 34.3 percent difference. [Table 6-46m and Table 6-46f].

Cancer was one of the top four leading causes of death among Oregonians of all ages, except infants, and was the leading cause of death for residents ages 45 through 84. The median age at death remained unchanged at 73 years. Malignant neoplasms were the leading cause of premature death and accounted for 55,353 years of potential life lost.

During the three-year period 2009–2011, five Oregon counties had age-adjusted rates statistically significantly higher than the state rate (175.7): Lincoln (213.7), Josephine (204.6), Coos (201.7), Douglas (199.7) and Linn (198.3). Three counties recorded statistically significantly lower rates: Washington (151.5), Deschutes (151.4) and Crook (142.0).

In the past, Oregon's age-adjusted cancer death rate was typically a little lower than the U.S. rate. However, since 2001, Oregon's rate has been slightly higher. In 2010, the rate was 0.6 percent higher than that of the nation and ranked 26th among the states and District of Columbia.<sup>3</sup> [Table 6-54].

The most common fatal cancer for both sexes is bronchus and lung cancer, a cause that would be rare in the absence of smoking. [Figure 6-6]. The increasing prevalence of smoking drove the decades-long increase in the overall malignant neoplasm death rate, especially among women. In 1960, there were 5.7 male deaths due to lung cancer for every female death, but by 2011 there was 1.0 male death for every female death. Although breast cancer is more often in the public eye, lung cancer claimed the lives of two times as many women as did breast cancer: 998 versus 497, respectively.

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***Lung cancer claimed the lives of 2.0 times as many women as did breast cancer.***

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## Heart disease

Despite brief occasional breaks in the long-term downward trend in its crude death rate, heart disease was the leading cause of death in Oregon during most of the 20th century. In 2001, for the first time, more deaths (five) resulted from cancer than from heart disease. During 2011, heart disease was the second leading cause of death, and 6,215 Oregonians succumbed to heart disease, 1,553 fewer than from malignant neoplasms. The crude death rate increased slightly from 161.0 in 2010 to 161.1 in 2011, while the age-adjusted death rate decreased from 139.7 per 100,000 population to 136.2, a record low. By comparison, the age-adjusted death rate was 264.2 in 1990, 94.0 percent higher than the 2011 rate. Heart disease was listed on 6,090 death certificates as a contributing factor in the decedent's death, but not the underlying cause.

The 2011 crude death rate for heart disease was 20.2 percent higher for males than females (176.1 versus 146.5). The 2011 age-adjusted death rate for heart disease was 72.7 percent higher for males than females (178.2 versus 103.2). [Table 6-46m and Table 6-46f].

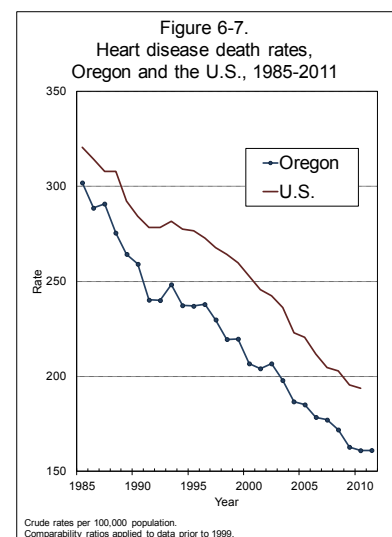
Heart disease was the leading cause of death for Oregonians age 85 or older and one of the top-five causes among all Oregonians, except infants and 5–14 year olds. It was the second leading cause of death for residents ages 45–84. [Table 6-4]. The median age at death remained unchanged at 83 years in 2011. [Table 6-15]. The relatively older ages at which Oregonians died from heart disease suppress this cause's rank among the causes of premature death; 24,368 years of potential life were lost, making it the third leading cause of premature death following cancer and unintentional injuries. [Table 6-13].

The age-adjusted death rates for 11 Oregon counties during 2009–2011 were statistically significantly higher than the state rate (139.5): Malheur (181.5), Wasco (177.8), Curry (168.5), Coos (167.3), Douglas (166.6), Lincoln (166.2), Columbia (164.6), Linn (162.4), Clatsop (162.0), Josephine (160.5) and Klamath (160.5). Statistically significantly lower rates were recorded for five counties: Deschutes (126.6), Lane (125.7), Polk (121.2), Washington (117.4) and Benton (114.5).

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### ***The heart disease death rate continues to fall.***

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***Oregon's 2010 age-adjusted heart disease death rate was the 4th lowest nationally.***

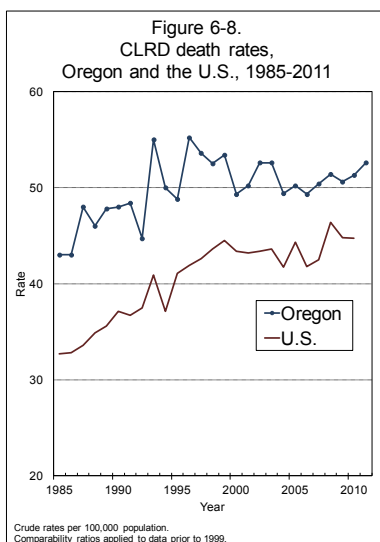
In 2010, the state's age-adjusted death rate was 23.0 percent lower than the U.S. rate, and Oregon ranked 48th (4th lowest) among the states, including the District of Columbia.<sup>3</sup> [Table 6-54]. Oregon's heart disease death rate has long been lower than the U.S. rate; however, the U.S. has seen a striking downward trend in the overall age-adjusted heart disease death rate. In 2008 the U.S. age-adjusted rate was 192.1 compared to 199.1 in 2010. [Table 6-57].

### **Chronic lower respiratory disease**

Chronic lower respiratory disease (CLRD) crude death rates increased steadily for several decades, reaching a record high of 54.9 per 100,000 population in 1996. Increased smoking, particularly by women, drove the rising death rate. CLRD is now the third leading cause of death, with 125 more deaths than cerebrovascular disease. Since 2000, the rate has varied little, ranging between 49.3 and 52.6. [Table 6-3, Figure 6-8]. The crude death rate for CLRD increased from 51.3 per 100,000 in 2010 to 52.7 in 2011. The age-adjusted death rate decreased from 46.5 to 45.6 [Table 6-46t]. CLRD was the underlying cause of death for 2,031 of Oregon's residents, but it contributed to an even larger number of deaths where it was not the underlying cause: 2,275.

In 2011, more females than males died from CLRD (1,080 versus 951), and the crude death rate was also higher for females than for males (55.4 versus 49.8). However, the age-adjusted death rate was higher for males: 50.3 per 100,000 population versus 42.9 for females. [Tables 6-46m and 6-46f]. For most of the 20th century, far more males succumbed to CLRD than did females, but since 1999 this pattern has generally been reversed (with the exceptions of 2002 and 2008). The increasing number of women dying from CLRD is a reflection of the age distribution of Oregon's population. Even in years where more females than males died of CLRD, the age-adjusted death rates were still higher for males than females.

CLRD is the third leading cause of death for Oregonians ages 55 to 84, and the age group with the largest number of CLRD deaths (708) was residents ages 75 to 84. [Table 6-4]. Although the third most common cause of death overall, chronic lower respiratory disease ranked eighth in the number of years of potential life lost (7,604). The median age at death was 78, unchanged from the previous year.



During the three-year period 2009–2011, seven counties had age-adjusted death rates statistically significantly higher than the state’s (46.1): Crook (73.2), Curry (68.1), Wasco (63.8), Douglas (61.7), Lincoln (60.5), Josephine (54.6) and Jackson (52.5). Four counties had significantly lower rates: Clackamas (38.4), Polk (35.4), Washington (31.5) and Benton (27.5).

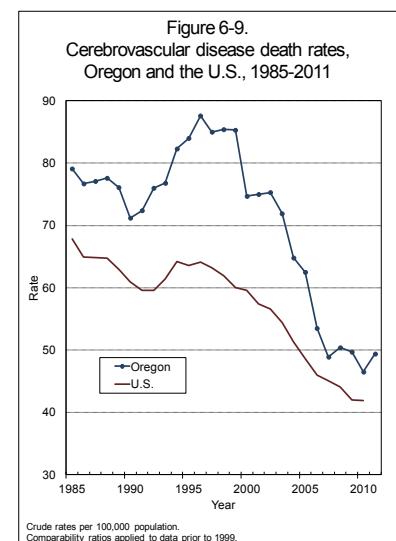
Oregon’s age-adjusted CLRD death rate has long been higher than that of the nation, but the disparity has abated somewhat in recent years. The greatest disparity occurred in 1987 when Oregon’s rate was 26.8 percent higher and ranked 11th among the states, including the District of Columbia. During 2010, the state’s rate was 7.3 percent higher than the nation’s rate and ranked 25th.<sup>3</sup> [Table 6-54]. Chronic lower respiratory disease includes a variety of conditions including emphysema, COPD, bronchitis and asthma.

### Cerebrovascular disease

Accounting for 5.8 percent of all deaths, cerebrovascular disease was the fourth leading cause of mortality among Oregonians. The number of deaths attributed to cerebrovascular disease increased from 1,787 in 2010 to 1,906 in 2011. The number of deaths where this disease was a contributing factor increased slightly from 1,373 to 1,393. For the past decade, the crude death rate for this cause has trended downward, but in 2011 increased to 49.4 per 100,000 population, up from a record low of 46.5 in 2010. [Figure 6-9]. The age-adjusted death rate also increased, from 40.5 in 2010 to 42.0 in 2011. [Table 6-46t].

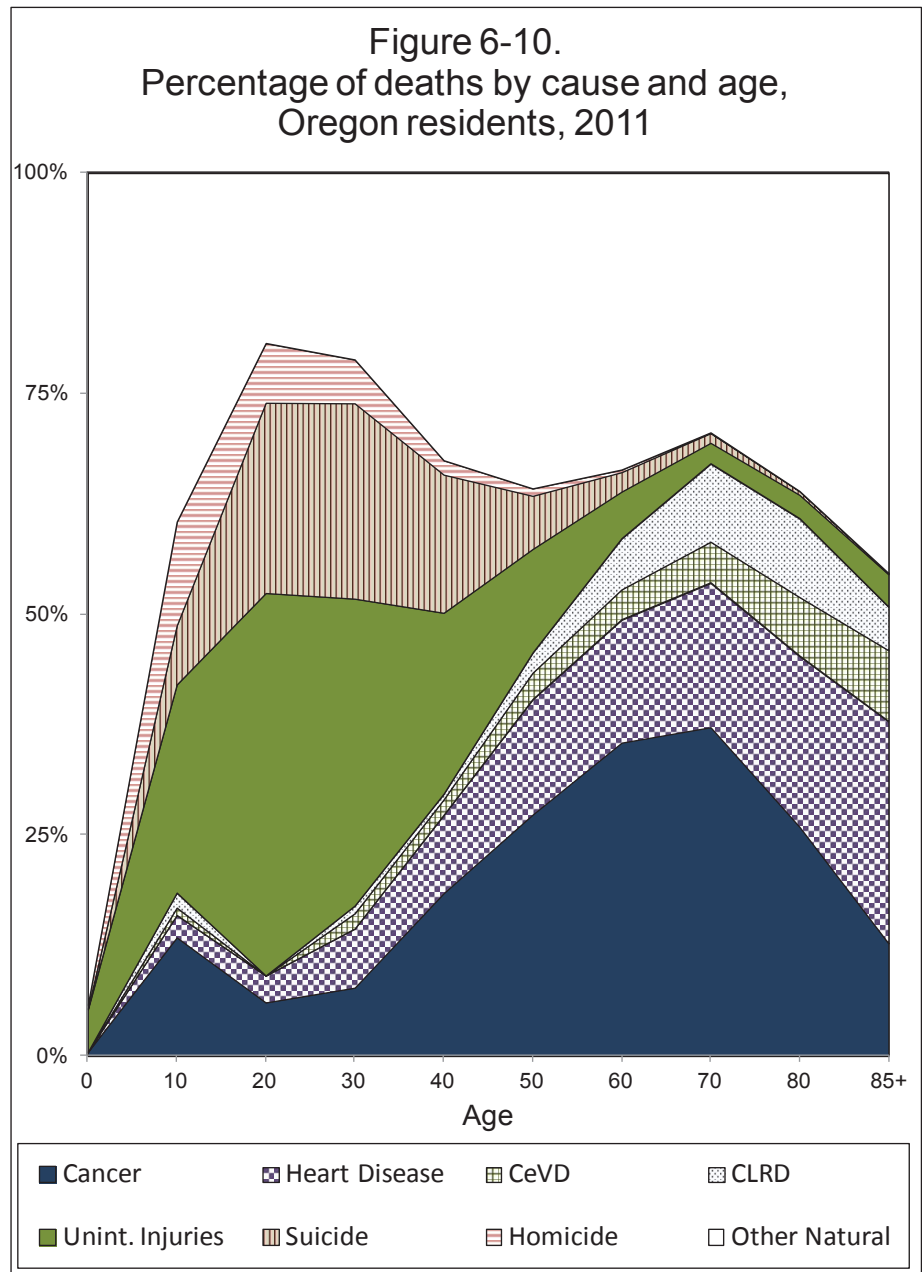
For trend analysis, researchers should be aware of a coding change that occurred between 2004 and 2005 when the National Center for Health Statistics altered the cause of death classification methodology. In prior years, “multi-infarct dementia” was coded to I63.9 (cerebral infarction, unspecified) and “vascular dementia” as I67.9 (cerebrovascular disease, unspecified). Beginning in 2005, “multi-infarct dementia” was assigned to code F01.1 and “vascular dementia” to F01.9. Therefore, certain deaths are no longer counted as forms of organic dementia, reducing the number and rate of deaths attributed to this cause following 2005.

More females than males died from cerebrovascular disease, and the male crude death rate was 30.0 percent lower



than the rate for females (40.6 versus 58.0). While the age-adjusted rate for males was 0.7 percent higher than the rate for females (41.8 versus 41.5), the difference was not statistically significant. [Tables 6-46m and 6-46f].

Fatal cerebrovascular disease was uncommon before age 45, but by age 65 it was the fourth most common cause of death among Oregon residents. At age 85 it was the third most common cause of death among Oregon residents. [Table 6-4]. Despite the frequency with which it occurred, it ranked 10th by years of potential life lost (5,709), a consequence of the older ages of decedents (compared to relatively younger ages at death for many other causes). [Table 6-13]. Over



three-fourths (75.2 %) of the deaths occurred after age 74, and the median age at death remained unchanged from the previous year at 84 years.

During the three-year period 2009–2011, three counties had an age-adjusted death rate statistically significantly higher than the state rate (42.2): Linn (52.2), Josephine (51.3) and Marion (47.5). One county had a significantly lower rate: Washington County (33.9).

The cerebrovascular disease death rate has long been higher in Oregon than in the U.S. as a whole. In 2010, the age-adjusted death rate was 2.6 percent higher than the nation's rate and ranked 24th among the states, including the District of Columbia.<sup>3</sup> [Table 6-54].

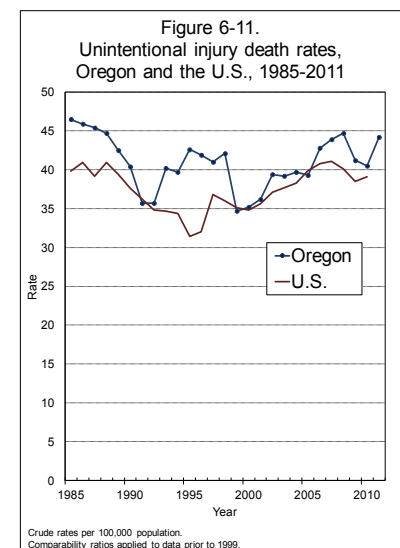
Intracerebral hemorrhages and cerebral infarctions are examples of two forms of cerebrovascular disease, but the more general term “stroke” appears most commonly on death certificates.

### Unintentional injuries

The unintentional injury<sup>6</sup> crude death rate increased from 40.5 in 2010 to 44.2 in 2011. [Table 6-3 and Figure 6-11]. Fatal unintentional injuries claimed the lives of 1,705 Oregonians, and contributed to the deaths of another 651 residents. The age-adjusted death rate increased from 37.8 a year earlier to 40.4 in 2011. Unintentional injuries were the fifth leading cause of death of Oregonians.

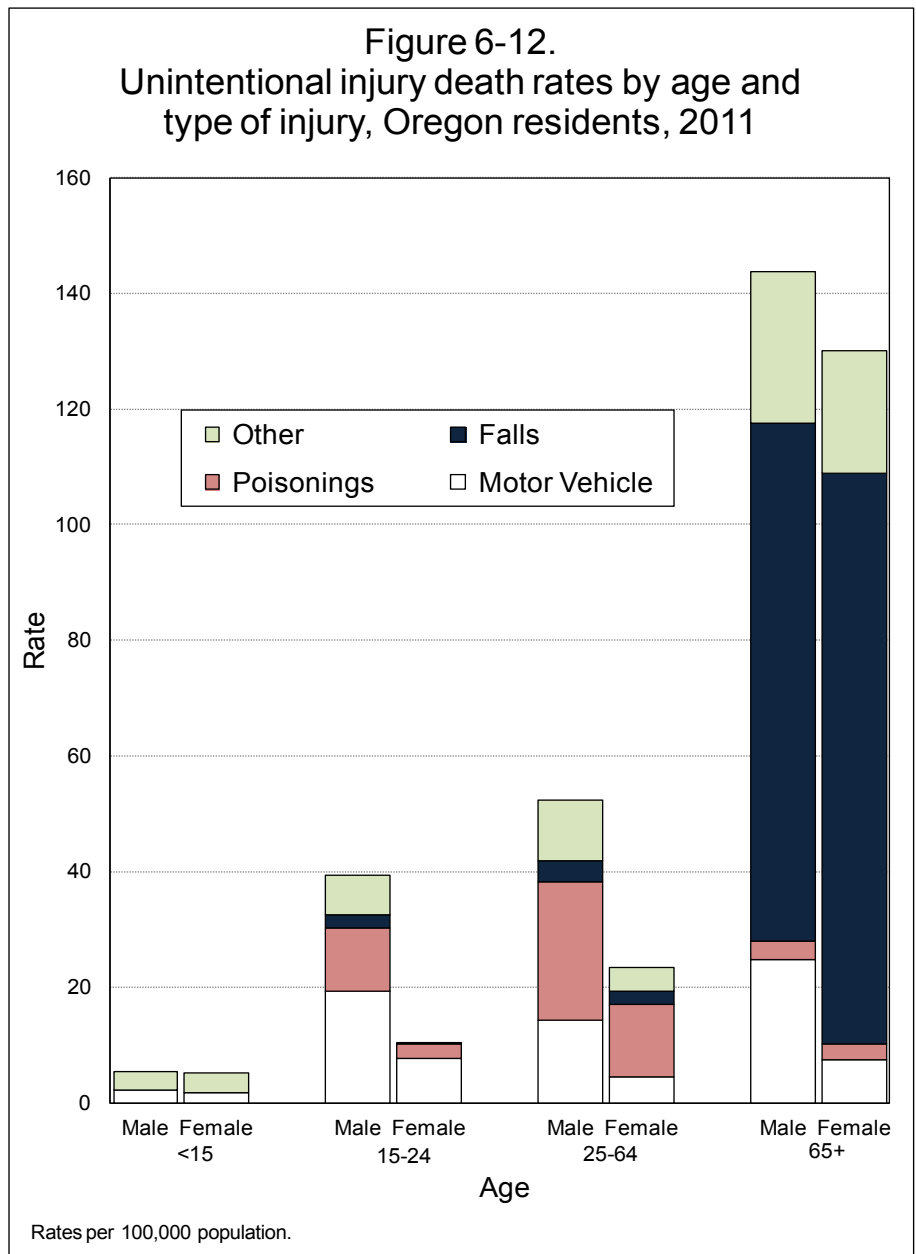
A strong gender dichotomy exists in unintentional injury deaths. The crude death rate was higher for males than for females (53.4 versus 35.2). The disparity in age-adjusted death rates was even greater; the male rate was 1.8 times the female rate: 52.9 versus 28.8. [Tables 6-46m and 6-46f].

Unintentional injuries were the leading cause of death among children and adults ages 1–44 years. [Table 6-4]. While age-specific rates are relatively invariant from the mid-teens until middle age, the oldest age groups have a greatly increased unintentional injury death rate largely due to increased risk of falling. [Table 6-7t and Figure 6-12]. Although the fifth leading cause of death, unintentional injuries ranked second in years of potential life lost (33,117), reflecting its role as the most common killer of young Oregonians. The median age at death decreased from 60 in 2010 to 59 in 2011. By comparison, the median age at death in 1996 was 43.

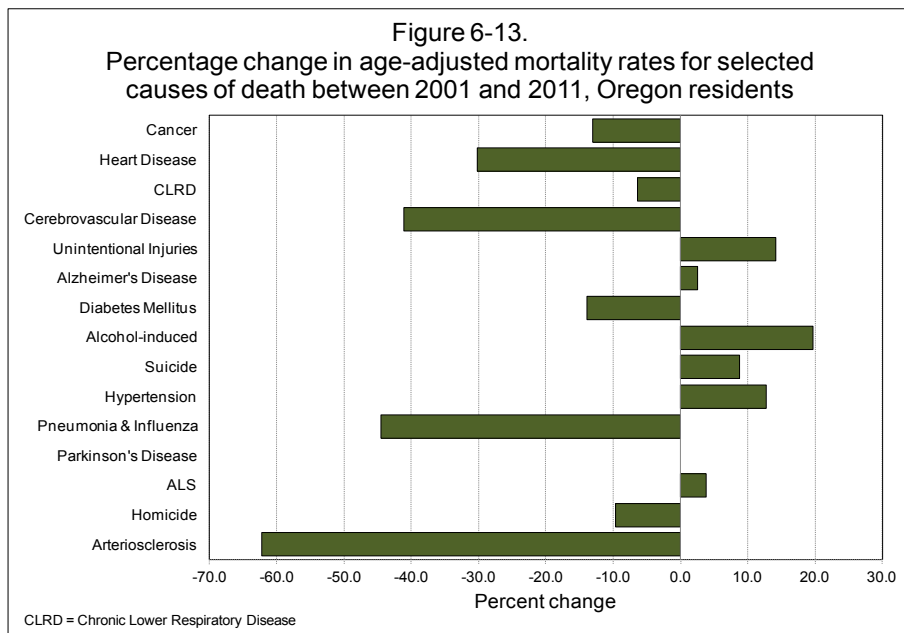


Excluding counties with fewer than 20 deaths in the unintentional injury category during the 2009–2011 period, seven counties had age-adjusted death rates statistically significantly higher than the state rate (39.0): Harney (79.2), Jefferson (79.1), Baker (62.7), Clatsop (56.6), Coos (50.7), Josephine (49.0) and Lane (44.1). Two counties had significantly lower rates: Washington (26.1) and Benton (25.2).

During most of the past several decades, Oregon’s unintentional injury death rate has, with few exceptions, been higher than that of the nation. In 2010, the state’s age-adjusted death rate decreased below the national rate by 0.5 percent and ranked 34th among the states and District of Columbia.<sup>3</sup>







Forty-eight work-related deaths occurred in Oregon in 2011 (including both Oregon and non-Oregon residents). The victims were overwhelmingly male (45 males versus three females), with motor vehicle crashes being the most common cause of accidental death. [Table 6-49].

Just as the leading cause of death varies within different age groups, so does the type of fatal unintentional injury. [Figure 6-12]. Unintentional injury deaths occurring to children under 5 years of age most commonly resulted from suffocation or obstruction. Transportation-related injuries were most common among decedents ages 5–24 and 65–74. Among those ages 25–64, poisoning (usually of drugs used in an illicit manner) was the most common cause of unintentional injury death. Falls were the most common type of unintentional injury death among Oregonians 75 or older. [Table 6-26].

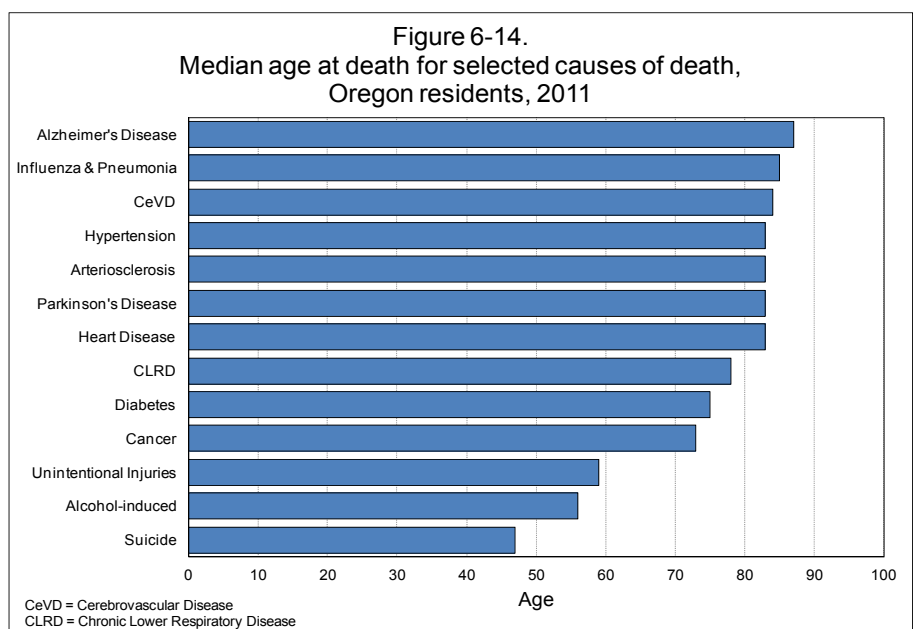
**Falls.** Falls were the most common type of fatal unintentional injury in 2011, claiming 590 Oregonians, most of whom (88.5%) were 65 or older. [Table 6-26]. Falls commonly occurred on the same level (57.5%), most often from slipping or tripping. Twenty-eight involved falls from beds, 27 involved stairs and steps, and falls from wheelchairs caused 16 deaths. [Table 6-27]. The age-adjusted death rates for fatal falls revealed that the male rate was 27.0 percent higher than the female rate (14.6 versus 11.5). [Table 6-46m and Table 6-46f]. The age-adjusted death rate

for falls increased 60.0 percent since 2001, from 8.0 per 100,000 population to 12.8 in 2011, a statistically significant difference.

**Overdoses and poisonings.** Unintentional poisonings involving drugs/medications, most often by narcotics and hallucinogens, ranked second among the types of fatal unintentional injuries, claiming 378 Oregonians in 2011. The 2011 age-adjusted death rate for poisonings is 2.7 times higher than the age-adjusted rate in 2001 (10.9 in 2011 versus 4.1 in 2001), a statistically significant difference. As with most other types of unintentional injuries, age-adjusted poisoning death rates were far higher for males than females (14.4 versus 7.3). [Table 6-46m and Table 6-46f]. The death rate peaked among residents ages 45–54 (21.7 per 100,000). [Table 6-7t].

Although 378 deaths were attributed to this category, it alone does not account for all deaths resulting from overdoses/poisonings. Depending on how the fatality was reported on the death certificate, a death could be attributed to an unintentional injury or to a mental/behavioral disorder (see the first footnote of Table 6-34).

**Transportation and related fatalities.** Transportation-related injuries accounted for the third largest number of unintentional injury deaths (404) among Oregon residents, with motor vehicle traffic accidents accounting for 83.9 percent of all transportation injury deaths. [Table 6-26].



Of the 339 motor vehicle traffic accidents, 72.9 percent occurred among males. The age-adjusted motor vehicle traffic accident death rate for males was 2.7 times higher than the rate for females (12.4 per 100,000 population versus 4.6). [Tables 6-46m and 6-46f]. Although teens and young adults ages 15–24 accounted for 17.6 percent of all transportation fatalities, age-specific death rates were highest among the elderly. In rank order, the motor vehicle traffic accident death rates were highest for residents ages 75–84 (20.7), 15–24 (13.0), 85+ (12.8), 65–74 (11.2) and 45–54 (11.0). [Table 6-7t].

In most motor vehicle land transport deaths occurring in Oregon, the fatalities occurred among persons traveling by car (128), unspecified vehicle (87), foot (56), motorcycle (41), or pickup or van (28). Less common were the deaths of those traveling by pedal cycle (19), all-terrain vehicle (12), animal-drawn vehicle (5), agricultural vehicle (3), bus/coach (1) and train (1). Of all fatalities occurring among persons in cars, 16.4 percent resulted from non-collisions (i.e., rollovers following loss of control), 28.6 percent of fatalities occurring among persons in pickups or vans involved non-collisions. [Table 6-28].

**Suffocation or obstruction.** Ranking fourth, suffocation or obstruction (including hanging and strangulation) accounted for the deaths of 69 residents. [Table 6-26]. Of these 69 deaths, most (31, or 44.9 %) involved inhalation or ingestion of objects or substances other than food or gastric contents. Oregonians age 85 and older accounted for the highest number of deaths (18, or 26.0 %), and those ages 75 to 84 accounted for the second highest number of deaths (14, or 20.3 %).

**Drownings.** Ranking fifth, drownings (including those involving watercraft) accounted for the deaths of 56 residents. [Table 6-26]. There were 68 drowning deaths that occurred in Oregon (including non-resident deaths), and most of these deaths did not involve watercraft. Thirty-seven deaths occurred in natural water. Seven deaths occurred in bathtubs/hot tubs and four occurred in swimming pools. Eleven deaths involved watercraft. [Table 6-31].

### **Alzheimer's disease**

Historically, the number of deaths from Alzheimer's disease has mirrored the aging of Oregon's population, but deaths

from Alzheimer's disease have fluctuated little in recent years. The number of deaths increased from 1,297 in 2010 to 1,325 in 2011. The crude death rate also increased, from 33.7 per 100,000 in 2010 to 34.3 in 2011. The highest Alzheimer's disease death rate was seen in 2004 (35.3).

The age-adjusted death rate also increased, from 28.7 in 2009 to 28.8 in 2011. While the age-adjusted death rate has fluctuated little in recent years, it has increased over time. The 2011 age-adjusted rate is 78.9 percent higher than the 1990 rate (16.1). This is the largest increase seen among the top 10 leading causes of death. Alzheimer's disease also contributed to the deaths of 345 residents (where it was not the underlying cause).

Women have long been at greater risk of dying from this disease, in part because they are less likely to die from causes that most commonly lead to death at younger ages. The age-adjusted death rate for women was 42.5 percent higher than that for men (32.5 versus 22.8). [Tables 6-46m and 6-46f]. Alzheimer's disease was the ninth leading cause of death among men but fifth among women. [Table 6-2].

This devastating disorder takes years to claim its victim's lives; 94.3 percent of Alzheimer's deaths in 2011 occurred after the decedent's 75th birthday. [Table 6-6]. The median age at death decreased to 87 years in 2011. Alzheimer's disease was the sixth leading cause of death overall.

Excluding those with fewer than 20 deaths in this category, four counties had statistically significantly higher age-adjusted death rates than the state (28.4) during the three-year period 2009–2011: Coos (37.0), Douglas (35.7), Jackson (33.9) and Clackamas (33.9). Three counties had significantly lower rates: Marion (20.9), Polk (19.8) and Columbia (18.2).

Oregonians have long had higher rates of death from Alzheimers disease than U.S. residents. In 2010, the state's age-adjusted death rate was 13.5 percent higher than the nation's (28.5 and 25.1, respectively) and ranked 19th among the states and District of Columbia.<sup>3</sup> [Table 6-54].

Although deaths resulting from Alzheimer's disease and Alzheimer's dementia are counted here, deaths attributed to dementia, organic dementia, presenile dementia, multi-infarct dementia and vascular dementia are included in ICD-10 codes F01 (vascular dementia) and F03 (unspecified dementia).

Beginning in 2005, the National Center for Health Statistics changed the way certain types of dementia were classified, resulting in an increase in the number of deaths attributed to vascular dementia (F01), and a decline in the number of deaths counted in the cerebrovascular disease category (see Table 6-6, footnote 10, for additional information).

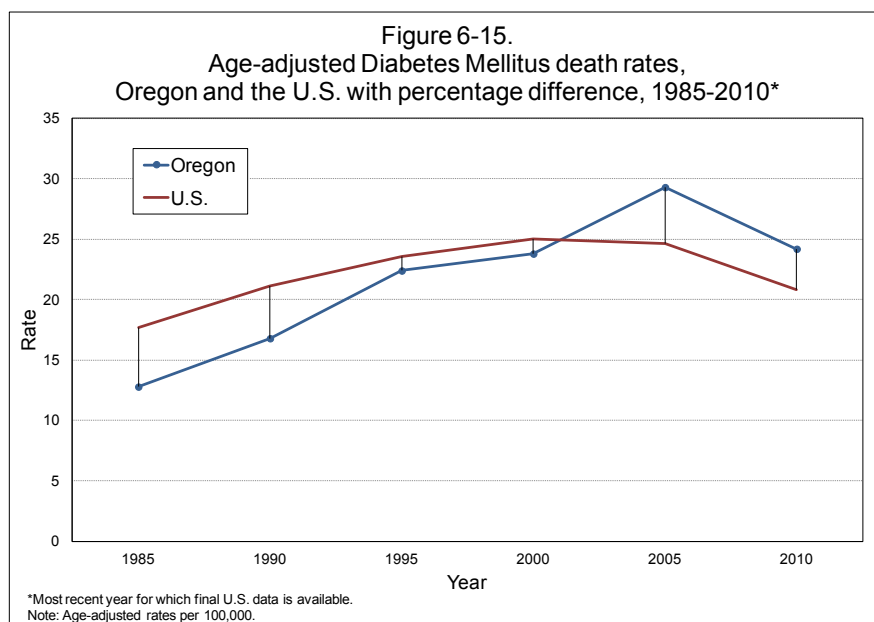
During 2011, the deaths of 2,022 Oregonians were attributed under the rubric “organic dementia” (ICD codes F01 and F03). Together, organic dementia and Alzheimer’s disease/dementia accounted for 3,347 deaths, surpassing the third leading cause of death, chronic lower respiratory disease (2,031).

### Diabetes mellitus

During 2011, diabetes mellitus was the seventh leading cause of mortality. Although the death rate for diabetes increased nearly every year during 1985–2001, it changed little during 2001–2004. Then, in 2005 the rate increased 4.0 percent over the 2004 rate to a high of 31.1 per 100,000 population. The rate has since decreased. The rate in 2011 was higher than the rate in 2010 (28.9 versus 27.4). [Table 6-3]. The age-adjusted rate in 2011 (24.8) was 44.2 percent higher than the rate in 1990 (17.2) and 15.4 percent lower than 2005’s record high (29.3). Diabetes was a contributing factor more often than it was the underlying cause of death: 2,732 versus 2,031.

The crude death rate for males was 20.5 percent higher than the rate for females (31.6 versus 26.2). [Table 6-2].

Table E - Diabetes death rates and state ranking		
Year	U.S.	Oregon
1982	17.2	12.2
Percent difference: -29.1		
Rank: Lowest		
2010	20.8	23.7
Percent difference: +13.9		
Rank: 14th highest		



The difference between male and female rates was even larger when looking at age-adjusted rates. The age-adjusted death rate for males was 48.5 percent higher than the rate for females (30.3 versus 20.4). [Tables 6-46m and 6-46f].

The majority of deaths (89.0 %) occurred after age 54. Two Oregonians younger than 25 years old died from diabetes in 2011. It was the fifth leading cause of death among Oregonians ages 65–74. The median age at death remained unchanged at 75, and was one of the lower median ages recorded among the natural causes of death. [Table 6-15]. Diabetes resulted in a loss of 7,831 years of potential life.

During the three-year period 2009–2011 five counties had statistically significantly higher age-adjusted death rates compared to the state's (24.8): Jefferson (44.7), Umatilla (36.1), Klamath (34.3), Marion (32.3) and Douglas (31.1). One county had a significantly lower rate: Washington County (19.5).

Prior to 1987, Oregon's age-adjusted diabetes death rate was consistently 25 percent to 30 percent lower than the nation's. The Oregon advantage gradually diminished thereafter, and in 1997, for the first time, Oregon's rate exceeded the U.S. In 2010, Oregon's age-adjusted rate was 13.9 percent higher than the U.S. rate, ranking 14th among the states and District of Columbia.<sup>3</sup>

### **Suicide**

Suicide claimed the lives of 639 Oregonians during 2011, decreasing from 685 deaths in the previous year. The crude death rate decreased from 17.8 per 100,000 population in 2010 to 16.6 in 2011. [Table 6-3]. The age-adjusted death rate was 16.2 during 2011, down from 17.1 the year before, lower than the record high of 17.2 in 1998. [Table 6-46t].

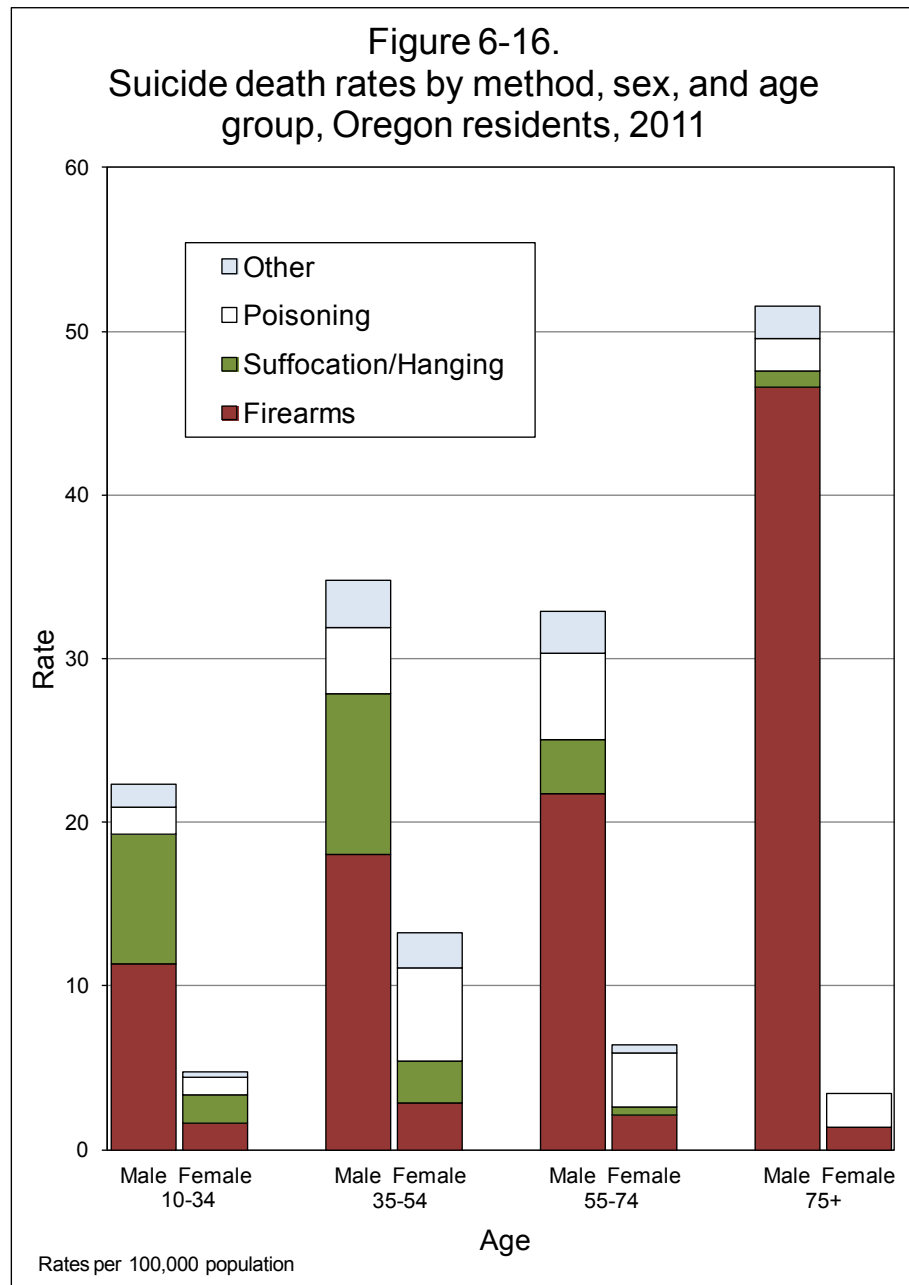
Males have long been at far greater risk than females, with age-adjusted death rates of 26.2 and 6.7, respectively. [Tables 6-46m and 6-46f]. Gender-specific rate differences were greatest among the elderly. [Tables 6-7m, and 6-7f].

Overall, suicide rates peak among the elderly, but this masks a gender-based dichotomy: females were more likely to die by suicide in middle age where the crude rate peaked at 15.1 among 45- to 54-year-olds, while rates among males generally increased with age, with the highest crude rate (63.3) recorded among those over age 84. [Tables 6-7t, 6-7m

and 6-7f]. Although suicide death rates are high among the elderly, 66.5 percent of deaths occurred before age 55, resulting in the fourth largest number of years of potential life lost (18,023) by cause. Suicide was the second-leading cause of death among residents ages 15–34, third among those ages 5–14 and 35–44 and fifth among those ages 45–54. The median age at death decreased to 47 years. The youngest person to die by suicide was an 11-year-old male and the oldest a 96-year-old male.

Excluding counties with fewer than 20 deaths in this category, three Oregon counties had age-adjusted death rates that were statistically significantly higher than the

Table F - Number of times a male Oregonian was more likely to die by suicide than females, by age, 2007-2011	
5-14	1.6
15-24	4.3
25-34	4.0
35-44	2.7
45-54	2.6
55-64	3.7
65-74	4.7
75-84	8.8
85+	25.8



Age	Metro <sup>1</sup>	Coastal <sup>2</sup>	Other
<25	9.8%	0.0%	13.2%
25-64	77.6%	61.3%	65.8%
65+	12.7%	38.7%	20.9%
Method	Metro <sup>1</sup>	Coastal <sup>2</sup>	Other
Poison	19.2%	12.9%	16.0%
Hanging/suff.	29.4%	9.7%	18.5%
Firearm	39.6%	74.2%	59.8%
Other	11.8%	3.2%	5.8%

<sup>1</sup> Metro counties: Clackamas, Multnomah, and Washington.  
<sup>2</sup> Coastal counties: Clatsop, Coos, Curry, Lincoln, and Tillamook.

state's rate (16.4) during the three-year period 2009–2011: Curry (32.2), Klamath (27.1) and Coos (26.6). One county had a significantly lower rate: Washington County (13.1).

Oregonians have long had higher suicide rates than residents of most other states. In 2010, Oregon's age-adjusted suicide rate was 41.3 percent higher than the nation's and ranked ninth among the states and District of Columbia.<sup>3</sup>

The method of suicide varied by age and gender, but overall most deaths (52.7 %) resulted from fatal gunshot injuries. [Table 6-32 and Figure 6-16]. Firearms were the most common method of suicide for males (59.3 %) and the second most common method for females (27.5 %). Handguns were utilized in 64.1 percent of firearm suicides.

Hanging/suffocation was the second most common method of suicide (22.2 %). A slightly higher proportion of males committed suicide in this manner than females (22.8 and 19.8 percent, respectively).

Poisoning was the third most common method of suicide (17.1 %). However, the proportion of females who poisoned themselves was nearly four times that of males (41.2 versus 10.8 %). Drugs and medications were the most common method of poisoning for both females (88.9) and males (72.7).

### **Alcohol-induced deaths<sup>7</sup>**

The alcohol-induced deaths category was created to summarize alcohol-related deaths, but excludes alcohol-related injury deaths. It is not typically reported as a leading cause of death within the National Center for Health Statistics leading causes of death taxonomy, but when alcohol conditions are combined it becomes the eighth leading cause of death in Oregon. This category is comprised of alcohol-related disorders from multiple organ systems, with alcoholic liver disease accounting for the greatest number of deaths (61.8 %). If intentional and unintentional injury deaths where alcohol was a factor (e.g., motor vehicle crashes and homicides) were included in this category, the count would be considerably higher. The role, if any, of alcohol in injury deaths is rarely reported on death certificates.

Alcohol-induced deaths claimed 644 Oregonians during 2011. Additionally, alcohol was a contributing factor, but not the direct cause, in no fewer than 519 deaths. [Table



6-50]. The crude death rate increased to 16.7 per 100,000 population in 2011 from 14.9 during 2011, and the age-adjusted death rate decreased from 13.0 in 2010 to 14.6 in 2011. [Table 6-46t].

Fatal alcohol abuse was the eighth leading cause of death among men and 10th leading cause among women, but the difference is greater than this would suggest: the age-adjusted death rate for males was 2.4 times the rate for females, 20.9 versus 8.7, respectively. [Tables 6-46m and 6-46f].

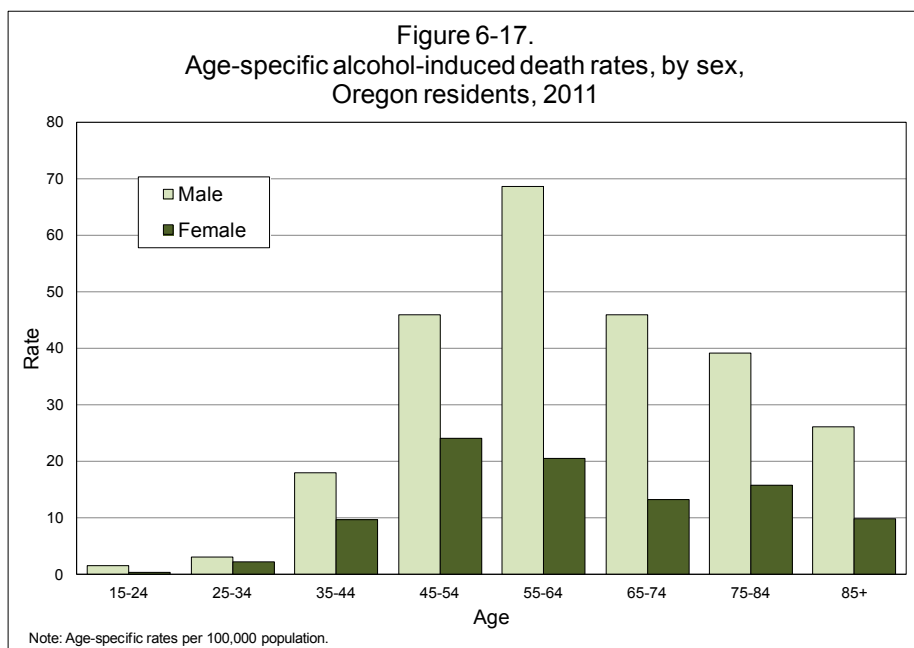
Age-specific alcohol induced death rates peaked among residents ages 55–64. [Table 6-7t and Figure 6-17]. This category was the fourth leading cause of death among residents ages 45–64 years and the fifth leading cause of death among those ages 35–44. The median age at death remained unchanged from the previous year at 56. Oregonians are dying at markedly younger ages than they were in 1988 when the median age of alcohol-induced death was 62. In 2011, alcohol-induced death was the fifth leading cause of premature death, accounting for 11,984 years of potential life lost.

During the period 2009–2011, four counties had age-adjusted rates statistically significantly higher than the state's rate (13.8), excluding counties with fewer than 20 deaths in this category: Jefferson (47.8), Klamath (26.3), Coos (23.6) and Josephine (19.5). Rates were significantly below the state rate in two counties: Clackamas (9.7) and Washington (9.0).

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***Oregon's 2010 age-adjusted alcohol-induced death rate was the 8th highest nationally.***

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**Table H - Alcohol-induced deaths by diagnoses, 2011**

Diagnosis	Count
Alcoholic liver disease	398
Mental/behavioral disorders	186
Poisoning, accidental	39
Acute or chronic pancreatitis	10
Cardiomyopathy	6
Nervous system degeneration	2
Poisoning, suicide	2

The Oregon alcohol-induced death rate has long been higher than that for the United States. In 2010, Oregon's age-adjusted rate was 69.7 percent higher than the nation's and ranked eighth among the states and the District of Columbia.<sup>3</sup> However, at least part of the difference between the state and the nation likely results from a reporting artifact: while Oregon queries physicians for additional information when causes listed on death certificates are suggestive of alcohol use, such as esophageal varices, many states do not.

### **Influenza and pneumonia**

During 2011, influenza/pneumonia claimed 396 Oregonians, down from 419 a year earlier. The crude death rate decreased from 10.9 per 100,000 population in 2010 to 10.3 in 2011. In addition, the age-adjusted rate decreased from 9.3 to 8.7. Influenza and pneumonia contributed to three times as many deaths as they directly caused: 1,136.

Although more women than men died from these two infectious diseases in 2011 (201 versus 195), age-adjusted death rates revealed that males were still at greater risk (10.8 per 100,000 population versus 7.6). [Tables 6-46m and 6-46f]. These two related types of pulmonary infections claimed Oregonians in every age group, but 76.5 percent of the deaths occurred after age 74. The median age at death remained at 85.

During the three-year period of 2009–2011, the age-adjusted death rate was statistically significantly higher than the state's rate (10.0) in Union County (27.0). Washington County had a significantly lower rate (7.6).

In recent years, Oregon's age-adjusted death rate for influenza and pneumonia has been markedly lower than the rates for most other states. In 2010, Oregon's age-adjusted death rate was 39.1 percent lower than the nation's and ranked 48th (4th lowest) among the states, including the District of Columbia.<sup>3</sup> [Table 6-54].

In 1918, influenza spread across America in less than a week and around the world in three months. The pandemic persisted into 1919, with influenza the leading cause of death in Oregon during both years. In 1918 alone, the pandemic claimed the lives of 2,105 Oregonians at a time when Oregon's population was much smaller than it is today.

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***Oregon's 2010 age-adjusted influenza and pneumonia death rate was the 4th lowest nationally.***

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## Hypertension

During 2011, 449 Oregonians died as a consequence of hypertension (including hypertensive renal disease), making it the 10th leading cause of death. However, the number of deaths attributed to hypertension does not include all deaths related to this cause because many have been classified to more specific manifestations of cardiovascular disease. The crude death rate increased from 11.5 in 2010 to a record high of 11.6 in 2011, which is 2.3 times higher than the 1990 rate of 5.0. [Table 6-3]. The age-adjusted death rate decreased slightly from 9.8 in 2010 to 9.7 in 2011. The highest age-adjusted rate was in 2005 (10.6).

The crude death rate for females was higher than the rate for males (13.1 versus 10.1). The age-adjusted death rate for males was slightly higher than the rate for females (10.0 versus 9.0).

Deaths from hypertension are rare among middle-aged and younger Oregonians, but by age 65 begin to increase sharply. Age-specific death rates are 12.5 times higher among residents 85 or older compared to those ages 65–74 (265.6 versus 21.3).

During the three-year period 2009–2011, the age-adjusted death rate was statistically significantly higher than the state's rate (9.7) in two counties: Umatilla County (15.0) and Douglas (14.2). No counties had a death rate statistically significantly lower than the state's rate.

Oregon's age-adjusted hypertension death rate was markedly lower than the U.S. rate through 1985, but this trend has since reversed. In 2010, Oregon's age-adjusted hypertension death rate was 22.5 percent higher than the U.S. rate (9.8 versus 8.0) and ranked sixth nationally.<sup>3</sup> [Table 6-54].

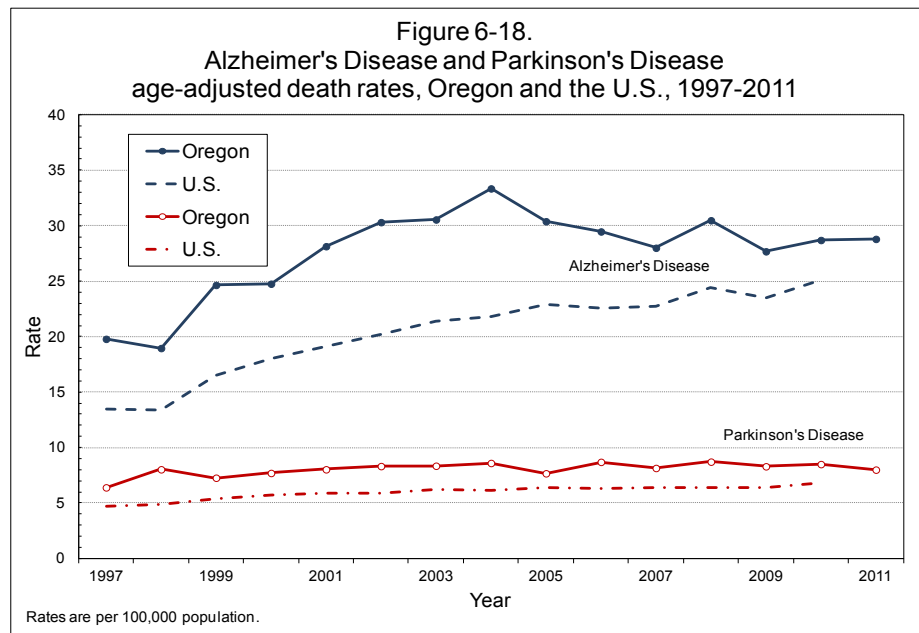
## Parkinson's disease

Ranking 12th among the leading causes of death during 2011, Parkinson's disease claimed 349 Oregon residents. The crude death rate decreased to 9.0 per 100,000 population in 2011 from 9.3 in 2010. The age-adjusted death rate decreased to 8.0 in 2011 from 8.5 in 2010. While the mortality rates for many causes have fallen in recent decades, the rate for this neurological disorder continues to trend upward, despite any short-term decreases. [Table 6-3]. The age-adjusted Parkinson's death rate for males was 2.2 times higher than that of females (11.8 versus 5.4). [Tables 6-46m and 6-46f].

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***Oregon's 2010 age-adjusted hypertension death rate was 6th highest nationally.***

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During 2009–2011, there were no counties with age-adjusted rates significantly higher or lower than the state rate (8.3).

Parkinson's disease most often claims persons 55 or older. [Table 6-6]. The median age at death has fluctuated little during the previous decade, ranging between 82 and 84. This year the median age of death remained at 83.

During 2009–2011, there were no counties with age-adjusted rates significantly higher or lower than the state rate (8.3).

Oregon's age-adjusted Parkinson's disease death rate has long been higher than the nation's, as have two other neurological disorders: Alzheimer's disease and amyotrophic lateral sclerosis. [Table 6-54, Figure 6-18]. During 2010, Oregon's age-adjusted death rate was 22.1 percent higher than the U.S. rate and ranked sixth among the states and District of Columbia.<sup>3</sup>

### Homicide

Oregon's homicide rate decreased from 3.0 per 100,000 population in 2010 to 2.8 in 2011. [Table 6-3]. With 107 victims, homicide was the 21st leading cause of death during 2011. Only Multnomah County had more than 10 residents die from homicide in 2011. [Table 6-35].

Every year, more males than females are murdered, and 2011 was no exception. The male age-adjusted death rate increased from 3.3 per 100,000 population in 2010 to 4.2 in 2011. The female age-adjusted rate was 1.3 in 2011, a decrease from 2.5 in 2010. The total (both sexes) age-adjusted rate was 2.8, a

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***Oregon's 2010 age-adjusted Parkinson's disease death rate was the 6th highest nationally.***

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decrease from 2.9 in 2010. [Tables 6-46t, 6-46m and 6-46f].

By age, infants had higher homicide death rates than Oregonians in any other age group. During 2007–2011, their homicide rate was 4.7 compared to 3.9 for 25- to 34-year-olds, the age group with the second highest crude homicide death rate (rates based on multiple years yield more representative values than those based on the relatively small numbers recorded for any single year). Adults ages 75 to 84 and children between the ages of 5 to 14 had the lowest homicide death rates during 2007–2011 (0.8 and 0.9, respectively).

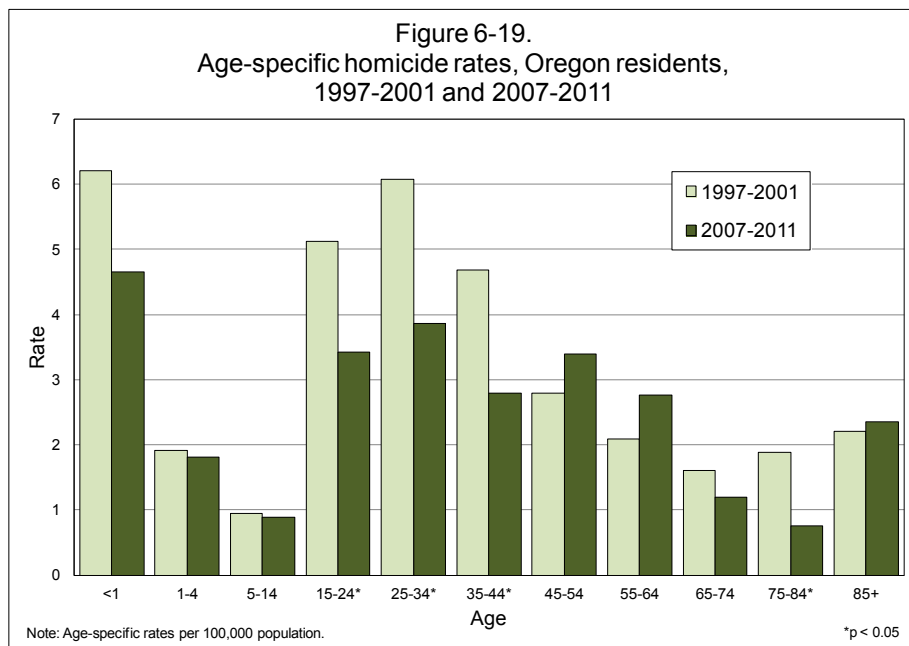
The median age at death for homicide victims in 2011 was 33 years, which was eight years of age lower than the previous year. However, homicide continues to have the lowest median age at death among the leading causes (except for causes associated with infancy). With 4,235 years of potential life lost, homicide was the 11th leading cause of premature death. During the period 2009–2011, no counties had homicide rates statistically significantly higher or lower than the state rate (2.7).

Historically, Oregon’s homicide death rate has been markedly lower than the nation’s. During 2010, the state’s rate was 45.3 percent lower and ranked 37th (11th lowest) among 47 states including the District of Columbia (states with unreliable rates excluded).<sup>3</sup> [Table 6-54].

Firearms were the most common implement of homicide, accounting for 61 (57.0%) homicide deaths in 2011.

Method	Count
Firearms	61
Sharp Objects	17
Hanging/strang/suff	5
Neglect & maltreatment	3
Smoke/Fire/Flames	2
Blunt Objects	2

**Oregon’s 2010 age-adjusted homicide death rate was the 5th lowest nationally.**

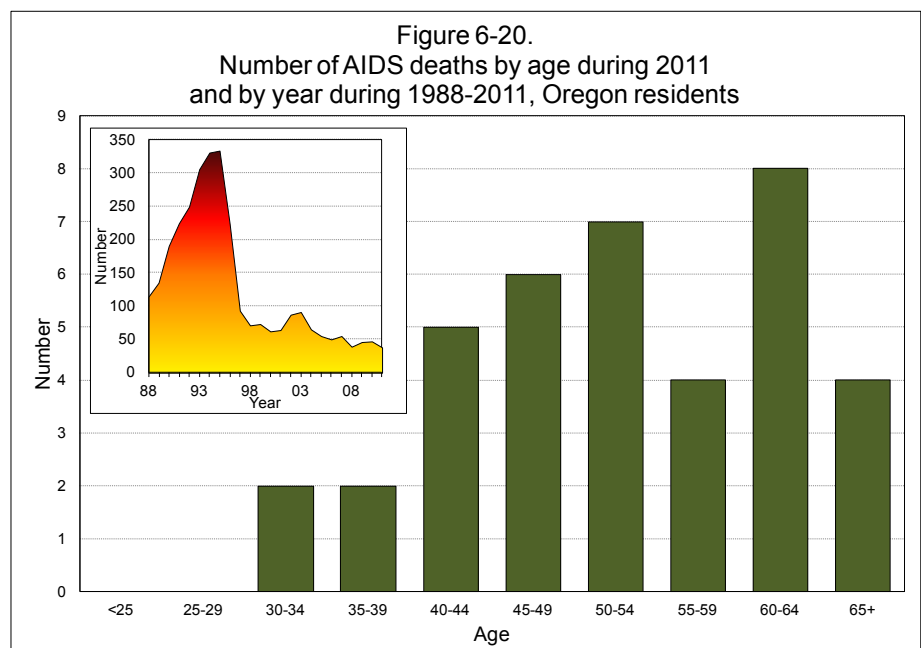


## AIDS/HIV

After peaking at 360 deaths in 1995, the number of AIDS/HIV deaths has declined. In 2011, the number of deaths decreased from 47 in 2010 to 38. The age-adjusted death rate has also greatly decreased since 1995, from 11.5 per 100,000 population to 0.9 in 2011.

In 2011, AIDS/HIV was the 26th leading cause of death among Oregonians. There is a large dichotomy by sex when looking at risk of death from AIDS/HIV. The male age-adjusted rate during the five-year period 2007–2011 was 7.0 times higher than the female rate (2.1 and 0.3, respectively). (Rates based on multiple years yield more representative values than those based on the relatively small numbers of females recorded for any single year.)

Unlike most causes of death, AIDS/HIV most often claims middle-aged adults. [Figure 6-20]. Age-specific death rates rose sharply in early adulthood with the highest rate among those ages 45–54 (2.4) and the second highest among those ages 55–64 (2.3). These rates are driven largely by deaths among males. [Tables 6-7t, 6-7m, and 6-7f]. The youngest person to die from this disease was a 30-year-old male and the oldest a 70-year-old male. The median age at death has gradually increased over time: in 1997 the median age at death was 41, compared to 53 in 2011. [Table 6-15]. The years of potential life lost were 859 years. [Table 6-13].



During 2009–2011, there was one county with age-adjusted rates significantly higher than the state rate (1.1): Multnomah County (2.3). No counties were significantly lower than the state rate.

Oregon's AIDS/HIV age-adjusted death rate has long been lower than the nation's and in 2010 was 53.8 percent lower than the national rate, ranking 30th (9th lowest) among 38 states including the District of Columbia (states with unreliable data excluded).<sup>3</sup> [Table 6-54].

### Drug-induced deaths

During 2011, fewer deaths were attributed to drug-related causes compared to those attributed to alcohol, 592 versus 644. Because of a considerable overlap between the drug-induced death category and other cause of death categories, it is not counted among the leading causes of death.

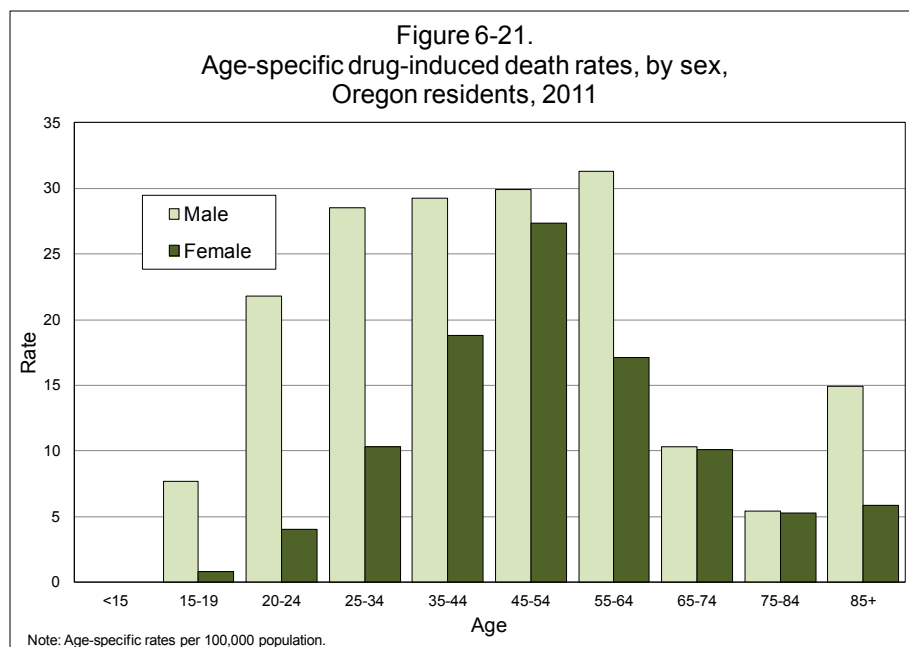
Nevertheless, with a crude death rate of 15.3 per 100,000 population, drugs/poisonings represented a significant cause of mortality among Oregonians. The drug-induced death rate has trended up during recent years, with the rate in 2006 (15.7) representing the record high.

Males were more likely to die from drug-induced causes than females. Their age-adjusted death rate was 18.6 per 100,000 population compared to 11.0 for females. Nearly half of all drug-induced deaths (46.5 %) occurred among residents ages 35–54.

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***Oregon's 2009 age-adjusted HIV/AIDS death rate was the 4th lowest nationally.***

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During the period 2009–2011, three counties had age-adjusted rates statistically significantly higher than the state rate (14.6): Clatsop (29.3), Lane (19.1) and Multnomah (18.9). Excluding counties with fewer than 20 deaths in this category, two counties had a rate significantly lower than the state rate: Washington (8.7) and Benton (8.1).

This category consists of ICD codes included in other cause of death rubrics, with the majority of deaths categorized as mental disorders, unintentional injuries and suicide.

### **Maternal deaths**

Before 2006 the category for maternal death (ICD10 codes O00-O99) included only fatalities where the female was either pregnant at the time of death or pregnant within 42 days before death. In addition, for every death of a female between 17 and 44 attributable to such causes as infections, cerebrovascular disease, digestive diseases or ill-defined unknown causes, the Center for Health Statistics re-contacted the physician and asked if the woman was pregnant at the time of death or within 42 days prior to death. Typically this querying process might yield one additional maternal death record. However, the types of records queried were small in number.

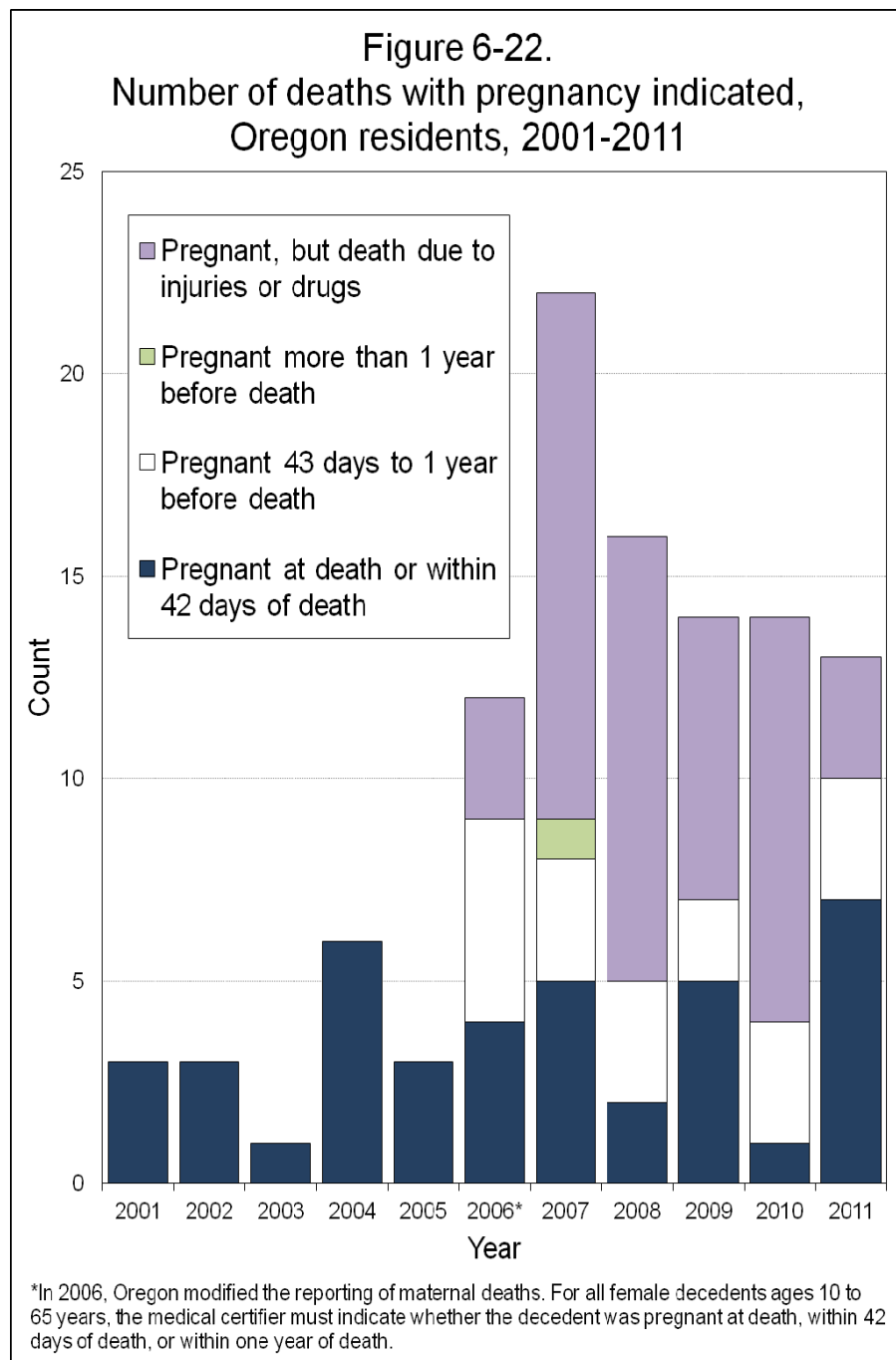
Beginning in 2006, Oregon modified the reporting of maternal deaths by adding a new item to the death certificate. An item-specific box was added under the section for causes of death. For all female decedents between 10 and 65 years of age, the medical certifier must now indicate if the decedent was pregnant at death, pregnant within 42 days of death, or pregnant within one year of death. As shown in Figure 6-22, the addition of this question has increased the count of maternal deaths.

### **Male veteran deaths**

In 2011, there were 9,501 veteran deaths. Of these, 404 were women and 9,097 were men. Due to the small number of female veterans in Oregon, the terms “non-veterans” and “veterans” refer only to males, age 18 and older throughout this section of the report. Table 6-22 contains cause of death information for veterans versus non-veterans. Male veteran population figures for rate calculation were obtained from the United States Department of Veteran Affairs, VetPop 2011 State Data Tables 8 and are shown in Appendix A, Table A-3.



The death rate for veterans in 2011 was nearly five times higher than the rate for non-veterans (3,012.7 per 100,000 population versus 603.0). However, much of this difference is due to the larger number of veterans in the older age groups. In the youngest age groups (18 to 34 years and 35 to 54 years), the ratios of veteran deaths to non-veteran deaths are 1:19 and 1:5, respectively. The ratio of veteran deaths to non-veteran deaths in the 55 to 74 year age group is nearly 1:1 (with slightly more non-veteran deaths than veteran deaths). In the oldest age group (age 75 and older), veteran deaths outnumber non-veteran deaths by a ratio of nearly 3:1. [Table 6-22].



If Female age 10-65, specify pregnancy status	<input type="text"/>
Did tobacco use contribute to death	<input type="text"/>
Manner of Death	<input type="text"/>
Was case referred to the Medical Examiner?	<input type="text"/>

Not pregnant within 1 year of death

Pregnant at time of death

Not pregnant, but pregnant within 42 days of death

Not pregnant, but pregnant 43 days to 1 year before death

Unknown if pregnant within one year of death

The age-specific death rates were not statistically significantly higher for veterans than for non-veterans for the age groups shown in Table 6-22.

The top two causes of both veteran and non-veteran deaths in 2011 were cancer and heart disease. The third most often cited cause of death for veterans was chronic lower respiratory disease (CLRD). For non-veterans the third most cited cause was unintentional injuries. [Table 6-22]. Because there are more veteran deaths than non-veteran deaths in the oldest age group, veteran death rates for causes seen primarily in older persons tend to be higher for veterans than for non-veterans (for instance, CLRD).

Suicide is the fourth leading cause of death for non-veterans and the eighth leading cause of death for veterans. The percentage of veteran deaths attributed to suicide is lower than the same for non-veterans (1.6 % versus 5.0 %). However, this masks an overall veteran suicide rate that was 1.6 times higher than that for non-veterans (47.7 versus 30.0). The suicide rate for veterans is higher than the rate for non-veterans in all age groups. The difference in rates is greatest among those ages 35 to 54 where the veteran suicide rate is 2.1 times higher than the rate for non-veterans (64.3 versus 30.3). [Table 6-22].

### **Deaths due to military operations**

The Oregon vital statistics data files do not include deaths of Oregon residents who died in military operations outside the United States. Death records of military personnel are registered with the U.S. Department of Defense and are not forwarded to the decedent's state of residence. However, these deaths (with the decedent's name, date of death, home city, age and sex) are posted weekly on the Department of Defense's website (see source in table). They are presented here in tabular form for Oregon residents for 2003–2011. In 2011, no Oregon resident deaths were due to military operations.

**Table J - Oregon resident military deaths in Operation Iraqi Freedom, Operation Enduring Freedom, and Operation New Dawn, 2002-2011<sup>1</sup>**

County	2002 to 2006	2007	2008	2009	2010	2011	Characteristics
Benton	2	2	-	-	-	-	<b>Sex</b>
Clackamas	3	1	-	1	1	-	Male 98
Clatsop	1	1	-	-	-	-	Female 1
Columbia	-	1	-	-	-	-	Total 99
Coos	1	2	1	-	-	-	
Deschutes	1	1	2	-	-	-	
Douglas	3	-	1	1	1	-	
Hood River	1	-	-	-	1	-	
Jackson	1	1	1	-	-	-	<b>Age</b>
Jefferson	1	-	-	-	-	-	<20 5
Josephine	-	1	-	-	-	-	20-24 51
Klamath	2	1	-	-	-	-	25-29 22
Lane	-	1	1	-	-	-	30+ 21
Lincoln	2	2	-	-	-	-	Total 99
Linn	4	-	1	-	1	1	
Malheur	-	1	-	-	-	-	
Marion	2	1	-	-	-	1	
Multnomah	15	1	-	-	-	1	<b>Race</b>
Polk	2	1	-	1	1	-	White 80
Umatilla	4	-	-	-	-	-	Black 1
Union	1	-	-	-	-	-	Hawaiian 2
Wasco	1	-	-	-	-	-	Asian 2
Washington	7	2	1	1	-	1	Hispanic 8
Yamhill	1	-	-	-	-	-	Multiple 1
N.S.	1	-	-	1	-	1	Unknown <sup>2</sup> 5
<b>Total</b>	<b>56</b>	<b>20</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>Total 99</b>

<sup>1</sup>Source: <https://www.dmdc.osd.mil/dcas/pages/casualties.xhtml>.

<sup>2</sup>Race and ethnicity are unknown for all decedents after 2010, since the Defense Casualty Analysis System no longer provides race or ethnicity in the record-level datasets available on the website.

## Endnotes

1. State vital records offices within the United States maintain an interstate exchange agreement such that when a resident of a state dies outside of his or her home state, a copy of the death certificate, or electronic equivalent, is provided to the vital records office of the decedent's residence state. This exchange is highly dependent on the forwarding state of death's capacity to provide those files to Oregon.
2. The rates were electronically compared back to 1990 death files.
3. These data are from the federal Centers for Disease Control and Prevention's (CDC) WONDER online database (<http://wonder.cdc.gov/mortSQL.html>). The most recent year for which final mortality data are available was 2010 at the time of compilation of this report. Oregon mortality data from the WONDER database may vary slightly from Oregon data presented elsewhere within this annual report due to different file closure dates, different population estimate methodologies, out-of-state reporting by other states to CDC/NCHS and incorporation of Oregon's physician query results.
4. Periodically, the International Classification of Disease manual is revised. The 10th revision was implemented in 1999 resulting in considerably greater detail for some causes (and less detail for others); shifts of inclusion in terms and titles from one category, section, or chapter to another; regrouping of diseases; new titles in sections; and, modification of the coding rules. As a result, serious breaks occurred in the comparability for a number of causes of death. Readers wishing to compare death rates (and/or number of deaths) for 1999 and subsequent years to prior years should use the final comparability ratios described in Appendix B. Final comparability ratios have been applied to data in tables 6-3, 6-13, 6-15, 6-50 and 6-54.
5. Statewide records of cause of death were first collected in 1908.

6. “Unintentional injuries” is preferred to the term “accidents” by the public health community.
7. Neither chronic liver disease and cirrhosis nor nephritis were discussed as leading causes in the narrative section, although they would be ranked as the ninth and 13th leading causes of death under the NCHS rubric. Most of these deaths were counted under alcohol-induced deaths in the narrative section.
8. Male veteran population estimates for calculating crude death rates were obtained from the United States Department of Veteran Affairs, VetPop 2011 State Data Tables: <http://www1.va.gov/VETDATA/docs/Demographics/11.xls>. Accessed on April 2, 2012.