Mortality

As Oregon's population has both aged and increased, the annual number of deaths has also trended upwards. During 2007, the number of deaths increased to 31,433, up from 31,304.[1] However, the crude death rate decreased from 848.2 per 100,000 population in 2006 to 839.2 in 2007. [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 also declined from 784.5 to 771.6, continuing the somewhat uneven but persistent long-term downward trend seen since 1985.

During 2006 (the most recent year for which final U.S. data are available),[3] Oregon's age-adjusted death rate was 0.5 percent lower than the U.S. rate and ranked 29th highest among the states and District of Columbia. [Table 6-54]. During the past quarter-century, the greatest difference between the rates occurred during 1982 when Oregon's rate was 7.7 percent lower than the U.S. rate (909.4 versus 984.9) and 45th among the states and District of Columbia.

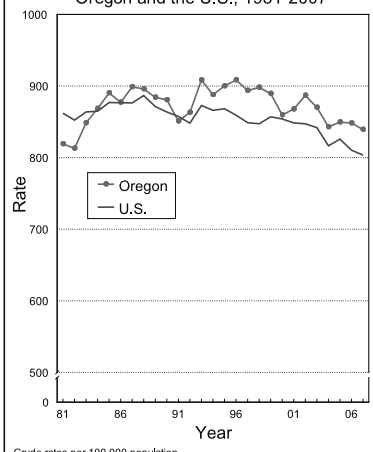
The age-adjusted death rate is at its lowest level [2]

Oregon's age-adjusted cause-specific death rates ranked among the top 10 states (including the District of Columbia) for eight causes: Alzheimer's disease (9th), hypertension (9th), viral hepatitis (7th), diabetes mellitus (8th), alcohol-induced deaths (7th), aortic aneurysm and dissection (5th), amyotrophic lateral sclerosis (4th), and Parkinson's disease (4th). At the same time, Oregon was among the states with the 10 lowest rates for seven causes, excluding states with unreliable data for each cause: homicide (10th lowest), perinatal conditions (9th lowest), nephritis/nephrosis (7th), HIV/AIDS (6th lowest), heart disease (5th), influenza/pneumonia (4th), and septicemia (4th).

Life expectancy

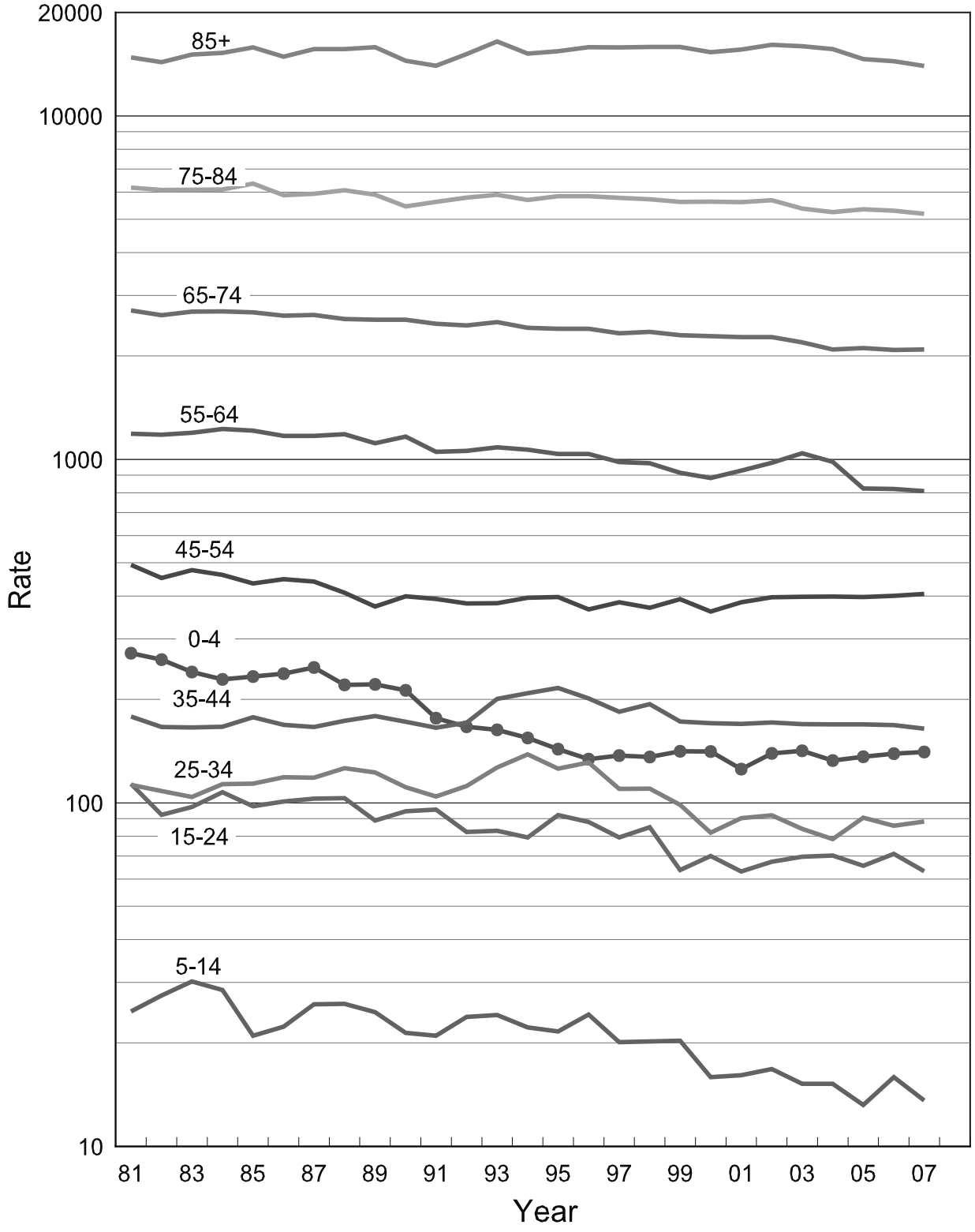
The longest living Oregonian ever recorded was a Siberian-born man who died in 1999 at 117 years of age. Most of the state's residents have far shorter lives, but the long-term trend is for an increasing life expectancy. Since 1960, the life expectancy of Oregonians has increased from 70.9 years at birth to 78.8 in 2007.

Figure 6-1.
Total Death Rates,
Oregon and the U.S., 1981-2007



Crude rates per 100,000 population.

Figure 6-2.
Age-specific Death Rates,
Oregon Residents, 1981-2007



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

Table A — Life Expectancy, Oregon and the United States, 1960-2007

Year	Oregon			United States		
	Total	Male	Female	Total	Male	Female
1960	70.9	N.A.	N.A.	69.7	66.6	73.1
1970	72.1	68.4	76.2	70.8	67.1	74.7
1980	75.0	71.4	78.8	73.7	70.0	77.4
1990	76.7	73.3	80.1	75.4	71.8	78.8
2000	78.0	75.6	80.4	76.8	74.1	79.3
2005	78.5	76.3	80.7	77.4	74.9	79.9
2007	78.8	76.6	81.0	77.9	75.4	80.4

U.S. data sources: National Center for Health Statistics. Hyattsville, MD. 2010.
Xu J, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final Data for 2007. National Vital Statistics Reports; Vol 58 no 19. (http://www.cdc.gov/NCHS/data/nvsr/nvsr58/nvsr58_19.pdf)

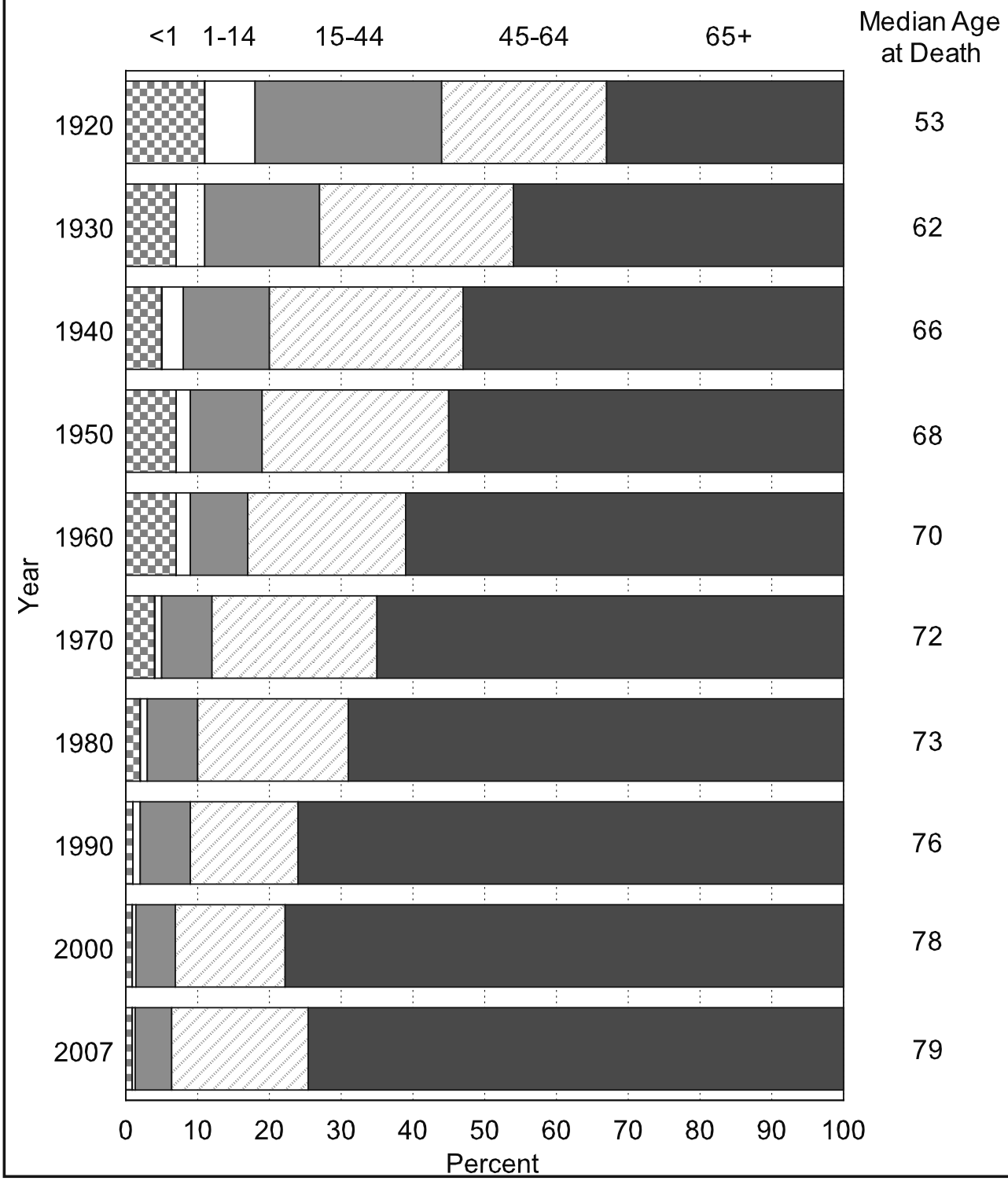
The oldest Oregonian to die in 2007 was a 109-year-old female.

Life expectancy is a theoretical construct that represents 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 medical technology.

Oregon's life expectancy increased slightly between 2006 and 2007, from 78.6 to 78.8 years, a record high. Life expectancy increased slightly among males (from 76.5 to 76.6) and females (from 80.6 to 81.0).

Life expectancy varied by nearly six years among Oregon's counties, using a five- year average (2003 through 2007). [Table 6-56]. The eight counties where life expectancy was statistically significantly longer than the state average during 2003-2007 (78.4) were: Benton (81.3), Wallowa (81.1), Polk (80.5), Washington (80.5), Deschutes (80.3), Morrow (79.9), Hood River (79.5), and Clackamas (78.8). The 12 counties with significantly shorter life expectancy were: Klamath (75.5), Coos (76.0), Lake (76.1), Jefferson (76.3), Douglas (76.5), Josephine (76.5), Lincoln (77.2), Linn (77.2), Columbia (77.4), Multnomah (77.6), Yamhill (77.7), and Marion (78.1).

Figure 6-3.
Proportion of Deaths by Selected Age Groups, Oregon Residents, 1920-2007



Demographic characteristics

Gender

The decrease in Oregon's overall crude mortality rate between 2006 and 2007 was due to a decreasing female mortality rate. [Table 6-1]. While the male rate increased (839.0 per 100,000 population in 2006 compared to 840.2 in 2007), the female rate decreased 2.2 percent (857.3 compared to 838.2).

Between 2000 and 2006, the death rate for females was higher than the male rate. This was a reversal of what had been seen in the 20th century, where male rates had been higher than female rates. In 2007, the male rate was again slightly higher than the female rate. The true risk of death, as manifested by age-adjusted death rates, does continue to be greater for males than females. During 2005-2007, the male age-adjusted death rate was 33.6 percent higher than the female rate, 906.4 compared to 678.5. [Table 6-47m and Table 6-47f]. The increase in female crude death rates vis-à-vis male rates seen over the past decade is largely due to the changing age distribution within these two groups, rather than a decline in the health status of the former. 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. (See Appendix B for further information about age-specific and age-adjusted death rates.)

Age

Since 1997, age-specific death rates have declined for five of the six groups shown in Table 6-1, the exception being Oregonians ages 0-4 where the rate has slightly increased. Age-specific death rates fell by 18.8 percent among Oregonians ages 5-44, with the greatest decline seen among those ages 5-14.

Table 6-1 shows the disparity in age-specific death rates by gender: male rates are uniformly higher than female rates. The age-specific death rate for males in the 15-24 year age group is more than twice the rate for women in the same age group, 85.9 per 100,000 versus 39.5. For both sexes combined, the median age at death remained unchanged in 2007 at 79 years. While the male median age at death remained unchanged at 75 years in 2007, the female median age at death increased from 81 years to 82 years.

Table B — Age-adjusted Death Rates by County of Residence, 2007	
County	**Rate**
State Total	**771.6**
Baker	784.7
Benton**	683.3
Clackamas	797.0
Clatsop	775.3
Columbia	796.4
Coos*	864.0
Crook	728.6
Curry	845.0
Deschutes**	622.1
Douglas*	850.4
Gilliam	738.6
Grant	892.4
Harney	817.1
Hood River**	613.8
Jackson	756.8
Jefferson	836.0
Josephine*	843.3
Klamath*	973.8
Lake	917.1
Lane	770.2
Lincoln	790.1
Linn*	856.4
Malheur	788.7
Marion	809.5
Morrow**	568.8
Multnomah*	820.8
Polk**	698.4
Sherman	590.7
Tillamook	690.7
Umatilla	750.9
Union	753.0
Wallowa**	566.9
Wasco	853.1
Washington**	666.3
Wheeler	539.6
Yamhill*	838.6

Rates per 100,000 population.

* Statistically significantly higher than the state rate.

** Statistically significantly lower than the state rate.

County of residence

During 2007, the state age-adjusted death rate was 771.6 per 100,000 population. Six counties had statistically higher age-adjusted rates; while seven counties were significantly lower. [Table B]. However, not all the differences between the counties and state were statistically significant. Simply residing in a particular county will not necessarily increase or reduce one's chance of dying in a given year. Mortality is a consequence of a multitude of 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 is in itself apt to cause a reduction in longevity. For example, persons with chronic debilitating disease may move, in disproportionate numbers, to an area with lower cost of living or to an area with medical facilities that can provide specialized care.

Hispanic ethnicity and race

Beginning in 2006, the state 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 86 percent of informants are immediate family members — parents, spouse, or children of the decedent — the assumption is the informant would know best which race or ethnicity the decedent would have reported. Now the informant on the death certificate can report multiple race categories for the decedent.

There are three Hispanic ethnicity choices based on countries of origin: Mexico, Cuba, and Puerto Rico. 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.

Although this level of reporting is in our annual report tables there is also more detailed data collection in the data files for Asians and Pacific Islanders. The detailed data collection among the Asian categories allows for differentiation by Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and Other Asian specified. Among Pacific Islanders the detail allows for differentiation among

Hawaiian, Guamanian, Samoan and other Pacific Islanders. However, the counts are too small to allow for reliable statistical reporting.

Ninety-four percent of decedents are still reported as Non-Hispanic White only. [Table 6-9]. Only 98 decedents had multiple races checked. A majority of those selecting multiple race categories (89.8%) identified in part as White (in combination with one or two other races), and 64.3 percent of those selecting multiple race categories identified in part as American Indian. Allowing for multiple race choices will raise the mortality rate of American Indians by counting those who mark race combinations. In 2007 the count of American Indian decedents increases from 284 when allowing only for single mention race [Table 6-9] to 347 (22.2%) by allowing for multiple race selections [Table 6-10].

Other databases, such as birth, youth surveys, and adult telephone surveys, are now also collecting multiple race categories. With younger participants in those databases, multiple races are reported more often by participants.

Table C — Two or more races indicated for decedents, 2007

Race Group*	Percent
White	<1
African American	5
American Indian	18
Asian[1]	5
Hawaiian & Pac. Isl.[2]	20

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

Leading causes of death[4,5]

Overview

During the 20th century, with the notable exception of the great influenza pandemic of 1918-19, 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 2007, 7,398 Oregonians died from cancer while 6,632 died from heart disease.

Together, malignant neoplasms and heart disease accounted for nearly half (44.6 percent) of all deaths during 2007. Although the number of deaths resulting from these causes were similar, malignant neoplasms resulted in the loss of nearly one-and-three-quarters times as many years of potential life as heart disease (see box on page 6-3), a reflection of the younger ages of cancer's victims. [Table 6-14]. The apparent increasing risk of cancer vis-à-vis heart disease during the 21st century isn't a 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, but unintentional injuries ranked first for Oregonians ages 1-44. From age 45 through 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

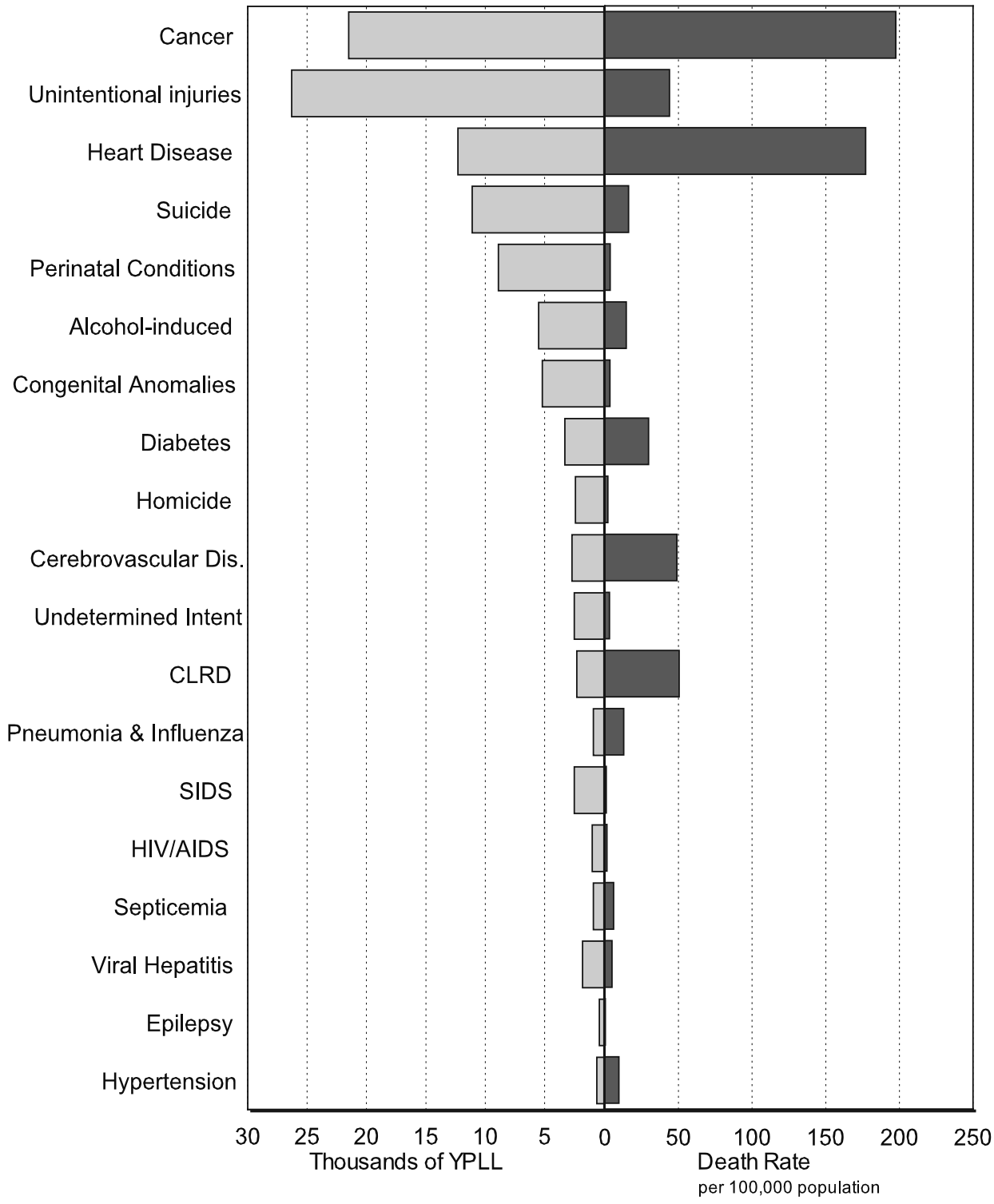
Mortality rates alone do not show the full impact upon society of certain causes of death. The deaths of young people are a greater "cost" to society than the deaths of older people in terms of years of potential life lost (YPLL). The YPLL yardstick quantifies premature mortality occurring in younger age groups by measuring the number of years between age at death and a set standard age. With the standard set at 65 years, for example, a death at age 21 results in 44 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 65 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 the potential years of life lost as younger people are more likely to die from injuries.

Cancer

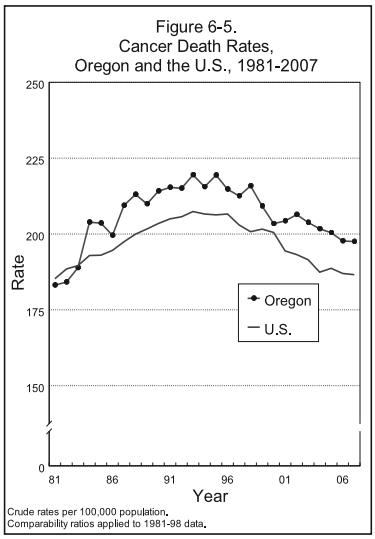
During 2007, cancer was the preeminent cause of death among Oregonians, claiming 7,398 Oregonians. Malignant neoplasms were also a contributing factor, but not the underlying cause, in another 861 deaths. For many decades, the cancer crude death rate increased inexorably, but by the early 1990s it hit a plateau; since then, the rate has trended downward. In 2007, the crude death rate was nearly unchanged, declining only slightly at 197.5 per 100,000 population compared to 197.7 in 2006. Age-adjusted death rates trended lower as well, falling from 185.7 in 2006 to 184.7 in 2007.

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 2007, the crude death rate for cancer was 10.3 percent higher for males than females,

Figure 6-4.
Leading Causes of Years of Potential Life Lost
and Corresponding Death Rates, Oregon Residents, 2007



CLRD = Chronic Lower Respiratory Disease



207.2 versus 187.8. [Table 6-2]. Nonetheless, the disparity was far greater when age-adjusted death rates were compared, 219.4 versus 159.6, a 37.5 percent difference. [Table 6-46m and Table 6-46f].

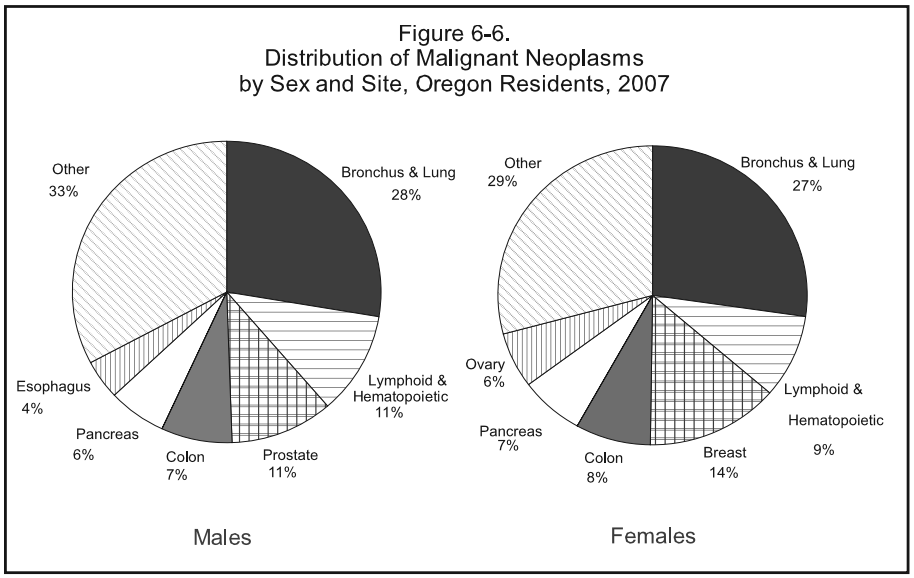
Cancer was one of the top five leading causes of death among Oregonians of all ages, except infants, and was the leading cause of death for residents ages 45 through 84. The median age at death remained unchanged from 2006, at 74 years. Malignant neoplasms were the second leading cause of premature death, following unintentional injuries, and accounted for 21,476 years of potential life lost.

During the three-year period 2005-2007, five Oregon counties had age-adjusted rates statistically significantly higher than the state rate (186.5): Coos (221.7), Columbia (215.7), Yamhill (206.7), Linn (206.6), and Multnomah (196.1). Four counties recorded statistically significantly lower rates: Hood River (138.7), Crook (152.8), Deschutes (153.6), and Washington (156.8).

Lung Cancer claimed the lives of twice as many women as did breast cancer.

A quarter-century ago, Oregon's age-adjusted cancer death rate was typically a little lower than the U.S. rate, but more recently the rate has been slightly higher; in 2006, the rate was 0.5 percent higher than that of the nation and ranked 28th among the states and District of Columbia.[3] [Table 6-54].

The most common fatal cancer for both sexes is 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 2007 the ratio was 1.1: 1.0. Although more often in the public eye than lung cancer, breast cancer claimed about one-half the number of women, 962 versus 491, respectively.

Table D — Lung cancer deaths, ratio of males to females	
1965	5.5
1975	3.6
1985	2.0
1995	1.2
2005	1.2
2007	1.1

Heart disease

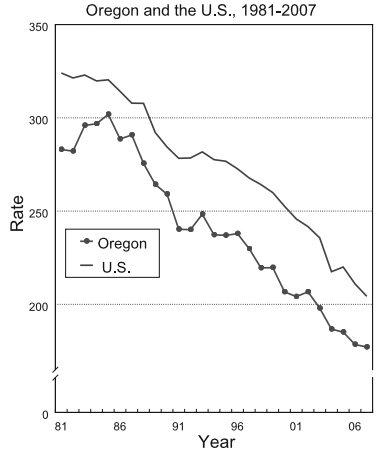
Despite brief occasional breaks in the long-term downward trend in its crude death rate, heart disease had been the leading cause of death in Oregon during most of the 20th century. In 2001, for the first time, more deaths (five) resulted from cancer than from heart disease. During 2007, heart disease was the second leading cause of death and 6,632 Oregonians succumbed to heart disease, 766 fewer than from malignant neoplasms. The crude death rate fell from 178.5 in 2006 to 177.1 in 2007, while the age-adjusted death rate fell from 162.6 per 100,000 population to 159.7, a record low. By comparison, the age-adjusted death rate was 255.5 in 1990, 60 percent higher than the 2007 rate. Heart disease was listed on 5,112 death certificates as a contributing factor in the decedent's death, but not the underlying cause.

The heart disease death rate continues to fall.

The 2007 crude death rate for heart disease was 8.4 percent higher for males than females (184.2 versus 170.0). However, age-adjusted death rates for heart disease showed that the risk of death from this cause was actually far greater among males than females, 199.6 compared to 126.8, a 57.4 percent difference. [Table 6-46m and Table 6-46f].

Heart disease was the leading cause of death for Oregonians 85 or older and one of the top-five causes among Oregonians of all ages except for children 1-4 years of age. It was the second leading cause of death for residents ages 45-84. In addition, the median age at death increased to 83 years in 2007, compared to 82 years in 2006. [Table 6-15]. Reflecting the relatively older ages at which Oregonians died from heart disease suppresses this cause's rank among the causes of premature death; 12,329 years of potential life were lost, making it the third leading cause of premature death following cancer and unintentional injuries. [Table 6-13].

Figure 6-7.
Heart Disease Death Rates
Oregon and the U.S., 1981-2007



Crude rates per 100,000 population.
Comparability ratios applied to 1980-98 data.

The age-adjusted death rates for five Oregon counties during 2005-2007 were statistically significantly higher than

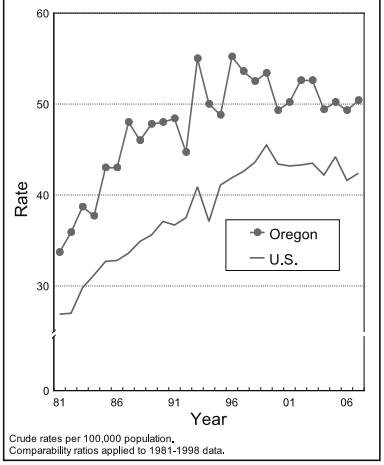
the rate for the state (163.9). The five counties with the highest rates were: Coos (206.5), Douglas (184.7), Klamath (184.0), Linn (182.5), and Multnomah (172.9). Statistically significantly low rates were recorded for five counties: Polk (133.2), Benton (133.4), Deschutes (143.3), Washington (144.1) and Lane (153.4).

In 2006, the state's age-adjusted death rate was 19.8 percent lower than the U.S. rate and Oregon ranked 47th among the states, including the District of Columbia. [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. For example, in 2005 the U.S. age-adjusted rate was 211.1 compared to 190.9 in 2007. [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 and resulted in CLRD becoming the fourth most common cause of death beginning in 1987. In 2007, CLRD was the third leading cause of death, with slightly 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]. During 2007, the crude death rate for CLRD increased to 50.4 per 100,000 population, up from 49.3 in 2006. The age-adjusted death rate increased slightly, from 46.8 to 47.5 [Table 6-46t]. CLRD was the underlying cause of death for 1,886 of the state's residents, but it contributed to an even larger number of deaths where it was not the underlying cause: 2,052.

Figure 6-8.
CLRD Death Rates,
Oregon and the U.S., 1981-2007



Crude rates per 100,000 population.
Comparability ratios applied to 1981-1998 data.

For most of the 20th century, far more males succumbed to CLRD than did females, but in 1999 this pattern reversed for the first time. In 2007, 974 females and 912 males died from this disease. Although females appear to be at greater risk than males, this is a reflection of the age distribution of Oregon's population. The 2007 age-adjusted death rates showed that males were at a greater risk from CLRD than females, 53.7 versus 43.2 [Tables 6-46m and 6-46f].

CLRD is the third leading cause of death for Oregonians ages 55 to 84, and the largest number of CLRD deaths (711) occurred to residents ages 75 to 84. [Table 6-4]. Although

the third most common cause of death overall, chronic lower respiratory disease ranked 13th in the number of years of potential life lost (2,305). The median age at death was 78, unchanged from the previous year.

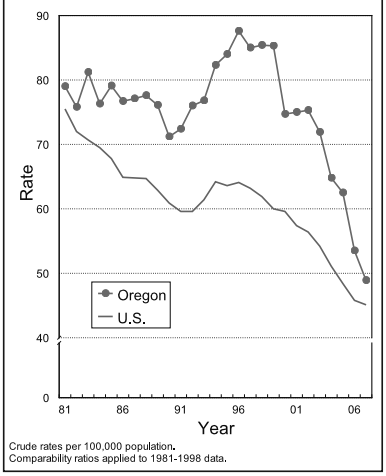
During the three-year period 2005-2007, seven counties had age-adjusted death rates statistically significantly higher than the state's (47.4). These were Harney (78.9), Wasco (69.9), Coos (62.7), Klamath (59.6), Josephine (58.3), Jackson (56.7), and Douglas (56.0). Three counties had significantly lower rates: Washington (34.1), Benton (35.7), and Clackamas (41.7).

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 2006, the state's rate was 13.4 percent higher than the nation's rate and ranked 20th.[3] [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. For more than a quarter of a century, the crude death rate for this cause has trended downward and during 2007 fell to a record low of 48.9 per 100,000 population, down from 53.5 in 2006. [Figure 6-9]. The age-adjusted death rate also fell to a record low of 44.5, a decline of 8.8 percent compared to the previous year's 48.8 and a 46.8 percent decline from the record high of 83.7 recorded during 1996. The number of deaths attributed to cerebrovascular disease fell from 1,973 in 2006 to 1,833 in 2007, while simultaneously the number of deaths where this disease was a contributing factor rose from 1,425 to 1,522. However, 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. Without this change, neither the number nor the rate of cerebrovascular disease deaths would have fallen. 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

Figure 6-9.
Cerebrovascular Disease Death Rates,
Oregon and the U.S., 1981-2007



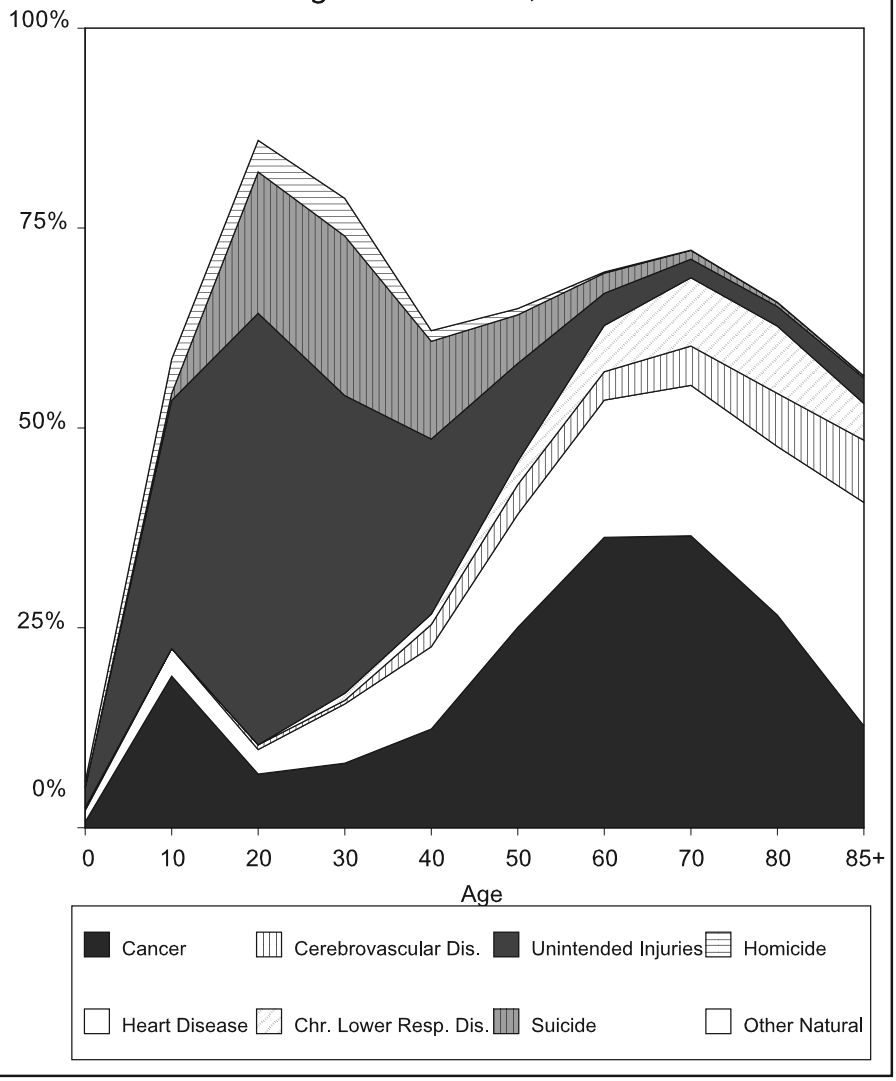
Crude rates per 100,000 population.
Comparability ratios applied to 1981-1998 data.

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 although the female crude death rate was 33.4 percent higher than the rate for males (55.9 versus 41.9), the age-adjusted rates revealed that males were at a somewhat greater risk of dying from cerebrovascular disease than females, 46.4 versus 42.5. [Tables 6-46m and 6-46f].

Fatal cerebrovascular disease was uncommon before age 45, but by age 65 it was the fifth most common cause of death among Oregon residents. Despite the frequency with which it occurred, it ranked ninth by years of potential life lost (2,719), a consequence of the older

Figure 6-10.
Percentage of Deaths by Cause and Age,
Oregon Residents, 2007



ages of decedents (compared to relatively younger ages at death for many other causes). Nearly three-fourths of the deaths occurred after age 74, and the median age at death remained unchanged from 2006 at 83 years.

Between 2005 and 2007, the age-adjusted death rates for two counties were statistically significantly higher than the state rate (50.1): Jefferson (75.6) and Linn (60.4). Only Crook County had a rate significantly lower than the state rate, at 30.7.

The cerebrovascular disease death rate has long been higher in Oregon than in the U.S. as a whole. In 2006, the age-adjusted death rate was 10.1 percent higher than the nation's rate and 17th highest among the states, including the District of Columbia. [Table 6-54].

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

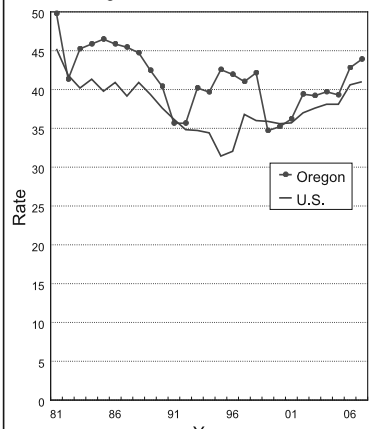
Unintentional injuries

The unintentional injury[6] crude death rate increased significantly during 2007 to a high not seen in almost two decades. The crude rate increased from 42.8 per 100,000 population in 2006 to 43.9 in 2007, the highest rate since 1988. [Table 6-3 and Figure 6-11]. Fatal unintentional injuries claimed 1,643 Oregonians, and contributed to the deaths of another 615 residents. The age-adjusted death rate increased slightly, from 40.7 a year earlier to 41.7 in 2007. Unintentional injuries were the fifth leading cause of death of Oregonians.

A strong gender dichotomy exists in unintentional injury deaths. The crude death rates revealed that males were more likely to die in this manner than females (54.8 versus 33.0). The disparity in age-adjusted death rates was even greater, with the male rate more than twice that of the female rate: 55.9 versus 27.8). [Tables 6-46m and 6-46f].

Unintentional injuries were the leading cause of death among children and adults ages 1-44 years with the age-specific rates relatively invariant from the mid-teens until middle age. [Table 6-4]. During the "golden years," however, the risk of falling led to a greatly increased unintentional injury death rate. [Figure 6-12]. Although

Figure 6-11.
Unintentional Injury Death Rates,
Oregon and the U.S., 1981-2007

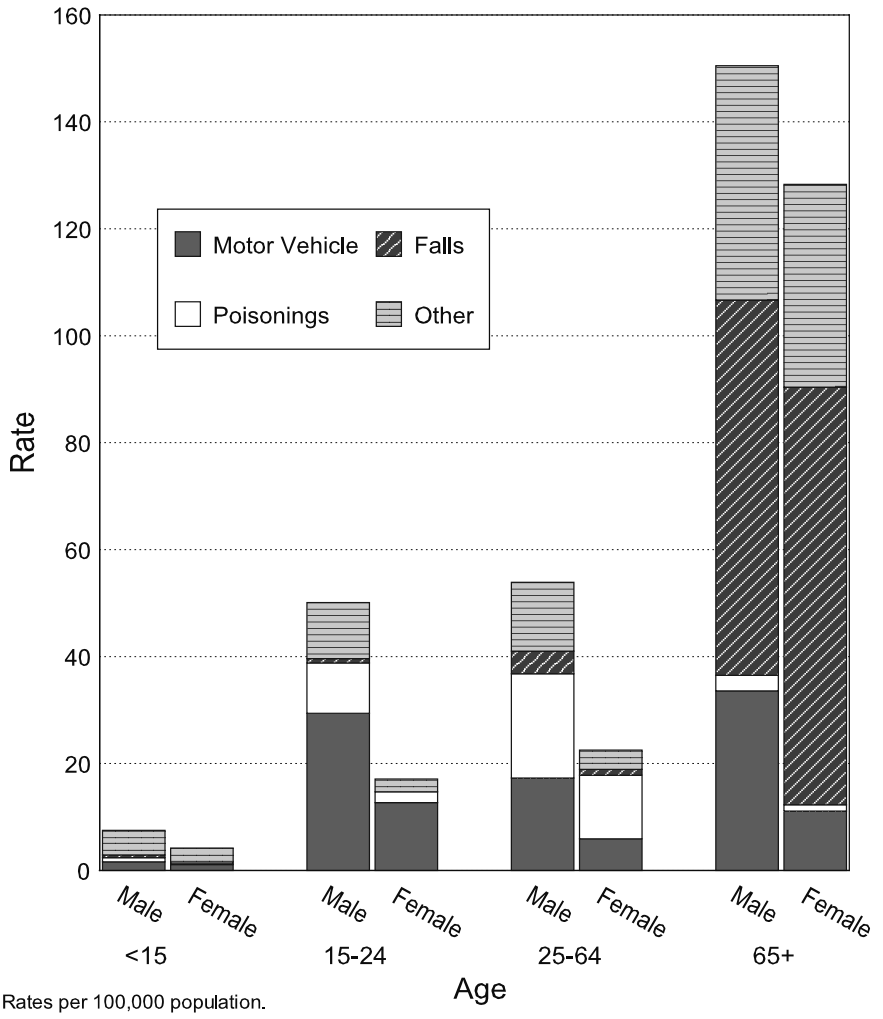


Crude rates per 100,000 population.
Comparability ratios applied to 1981-98 data.

the fifth leading cause of death, unintentional injuries accounted for more years of potential life lost (26,262) than cancer (21,476), reflecting its role as the most common killer of young Oregonians. The median age at death remained unchanged at 53 years, but by comparison, the median age at death in 1997 was 44.

Excluding those with fewer than 20 deaths in this category, nine counties had statistically significantly high age-adjusted death rates compared to the state's rate (40.0) for the past combined three-year average. Nearly all were coastal or located east of the Cascade Range. The three statistically significant highest rates were: Grant (98.5), Jefferson (73.6), and Clatsop (66.2). Only three counties had significantly lower rates: Benton (28.1), Washington (28.6), and Marion (34.6).

Figure 6-12.
Unintentional Injury Death Rates by Age and Type of Injury, Oregon Residents, 2007



During most of the past several decades, Oregon's unintentional injury death rate has, nearly without exception, been higher than that of the nation. More recently, however, the difference has been smaller; in 2006, the state's age-adjusted death rate was 2.3 percent higher than the U.S. rate and ranked 29th among the states and District of Columbia.

There were 54 work-related deaths that occurred in Oregon in 2007 (including both Oregon and non-Oregon residents). The victims were overwhelmingly male (52 versus two females) with motor vehicle crashes and falls accounting for most of the deaths. [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 drowning or suffocation. Among residents ages 25-54 poisoning (usually of drugs used in an illicit manner) was the most common cause of unintentional injury death, with transportation accidents (primarily motor vehicle traffic accidents) second. Among residents ages 55-64 poisoning and motor vehicle accidents were leading causes of death, both accounting for the same number of deaths (39 each). Among residents ages 5-24 and 64-74 motor vehicle crashes predominated. Oregonians 75 or older were most vulnerable to falls. [Table 6-26].

Transportation-related fatalities. Motor vehicle accidents/crashes (MVAs/MVCs) posed the greatest risk of fatal injuries to Oregon residents. In fact, transportation-related injuries accounted for 33.3 percent of all unintentional injury deaths. [Table 6-26]. Of the 455 MVCs, nearly three-fourths occurred among males. The age-adjusted death rate for males was more than two-and-a-half times the rate for females (19.2 per 100,000 population versus 6.8). Although teens and young adults ages 15-24 accounted for nearly a quarter of all fatalities, age-specific death rates were highest among the elderly. In rank order, the MVC death rates were highest for residents ages 85+, 75-84, 15-24 and 65-74. [Table 6-7t].

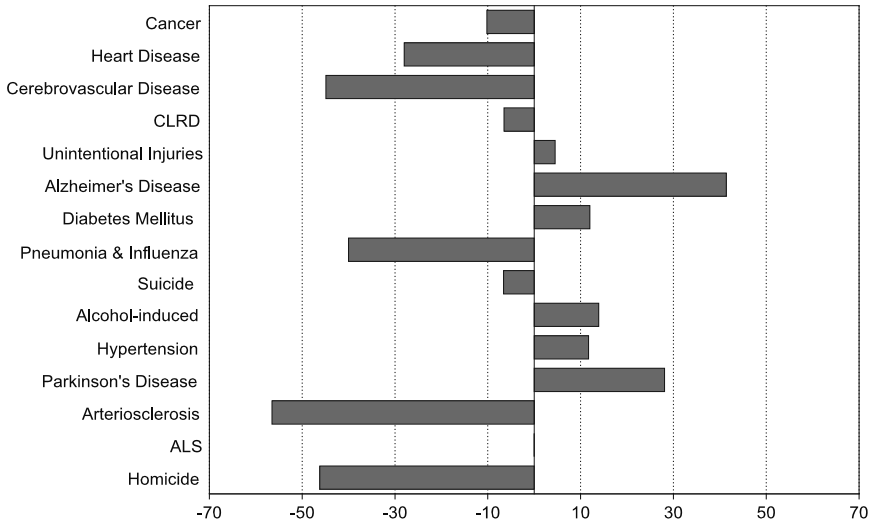
In most transportation-related deaths in Oregon, the fatalities occurred among persons traveling by car (185), unspecified vehicle (83), or foot (67). Less common were the deaths of those traveling by pickup truck/van (63), motorcycle (56), all-terrain vehicle (21), and pedal cycle (20). [Table 6-28]. Interestingly, while 17.7 percent of all

fatalities occurring among persons in cars resulted from non-collisions (i.e., rollovers following loss of control), more than a third (38.1 percent) of the fatalities occurring among persons in pickups or vans involved non-collisions. [Table 6-30].

Falls. The second most common type of fatal unintentional injury, falls, claimed 406 Oregonians, most of whom (77.6%) were 75 or older. [Table 6-26]. Falls commonly occurred on the same level (54.7%), most often from slipping or tripping. Twenty-six involved falls from stair/steps, 15 from beds, and nine from ladders. [Table 6-27]. Among adults 75 or more years of age, falls were the most common type of unintended fatal injury. The age-adjusted death rates for fatal falls revealed that the male rate was 37.8 percent higher than the female rate. [Table 6-46m and Table 6-46f]. The age-adjusted death rate for falls has increased by 58.1 percent since 1997, increasing from 6.2 per 100,000 population to 9.8 in 2007, a statistically significant trend.

Overdoses and poisonings. Unintentional poisonings involving drugs/medications, most often by narcotics and hallucinogens, ranked third among the types of fatal unintentional injuries, claiming 363 Oregonians in 2007. The age-adjusted death rate increased significantly between 1997 and 2007 (from 5.6 per 100,000 population to 9.5). As with most other types of unintentional injuries, age-adjusted poisoning death rates were far higher for males than females (12.2 versus 6.6). [Table 6-46m and Table 6-46f]. The death

Figure 6-13.
Percentage Change in Age-adjusted Mortality Rates for Selected Causes of Death Between 1997 and 2007, Oregon Residents



CLRD = Chronic Lower Respiratory Disease
ALS = Amyotrophic Lateral Sclerosis

rate peaked among residents ages 45-54. [Table 6-7t].

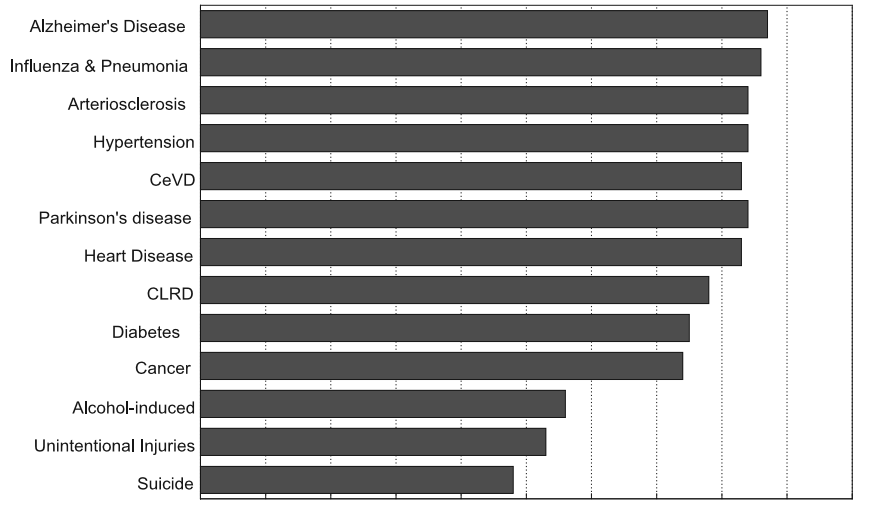
Although 363 deaths were attributed to this category, it alone does not account for all deaths resulting from overdoses/poisonings; depending on how the fatality was reported on the death certificate, a death could be attributed to an unintentional injury or to a mental/ behavioral disorder (see the first footnote of Table 6-34).

Drownings. Ranking fourth, drownings (including those involving watercraft) accounted for the deaths of 66 residents. [Table 6-26]. In Oregon, drownings not involving watercraft were most common with 35 deaths occurring in natural water. Six deaths occurred in bathtubs/hot tubs and another six occurred in swimming pools. Five deaths involved watercraft. [Table 6-31].

Alzheimer's disease

Mirroring the aging of Oregon's population has been the seemingly relentless rise in the number of deaths resulting from Alzheimer's disease. The number of deaths declined slightly in 2007, from a record high of 1,263 in 2004 to 1,195 in 2007 with the crude death rate slipping from 33.3 per 100,000 population to 31.9. Nonetheless, the age-adjusted death rate has increased from 16.1 in 1990 to 28.0 in 2007, an increase of 73.9 percent and the largest increase seen among the leading causes of death. Alzheimer's disease also contributed to the deaths of 458 residents (where it was not the underlying cause).

Figure 6-14.
Median Age at Death for Selected Causes of Death, Oregon Residents, 2007



CeVD = Cerebrovascular Disease
CLRD = Chronic Lower Respiratory Disease

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 51.2 percent higher than that for men (32.2 versus 21.3). Alzheimer's disease was the ninth leading cause of death among men but fifth among women.

This devastating disorder takes years to claim its victim's lives; nearly 19 in 20 of the deaths occurred after the decedent's 75th birthday. [Table 6-6]. The median age at death remained at a record high of 87 years in 2006. Alzheimer's disease was the sixth leading cause of death overall.

Excluding those with fewer than 20 deaths in this category, two counties had statistically significant higher age-adjusted death rates than the state (29.3) during the three-year period 2005-2007: Jackson (39.2) and Clackamas (38.0). Only Linn County had a significantly lower rate (21.6).

Oregonians have long been more likely to die from Alzheimer's disease than other U.S. residents. In 2006, the state's age-adjusted death rate was 28.8 percent higher than the nation's (29.1 and 22.6, respectively) and ranked ninth highest among the states and District of Columbia.[3] [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 in which 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 2007, the deaths of 1,431 Oregonians were attributed under the rubric "organic dementia" (ICD codes F01 and F03). Together, organic dementia and Alzheimer's disease/dementia accounted for 2,626 deaths, surpassing the third leading cause of death, chronic lower respiratory disease (1,886).

Diabetes mellitus

During 2007, 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 2002-2004. 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 slightly, with a rate of 29.7 in 2007. Despite the slight decline in rate since 2005, the death rate for diabetes mellitus is still higher than it was a decade ago. In comparison, the rate in 1997 was 25.9. At 27.9 deaths per 100,000 population, the age-adjusted rate was 1.6 times higher than the rate in 1990 (17.2) and slightly lower than 2005's record high of 29.3. Diabetes was a contributing factor more often than it was the underlying cause of death, 2,478 versus 1,114.

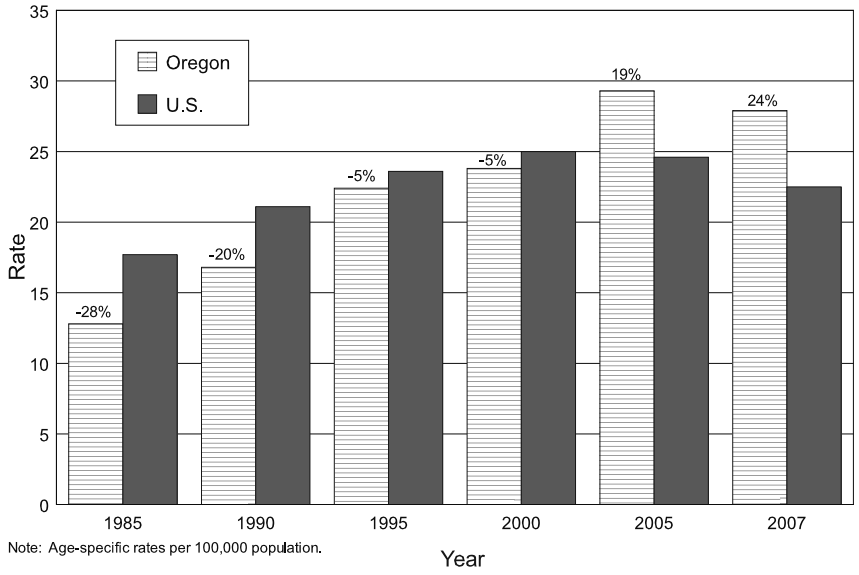
Crude death rates for males are slightly higher than those for females (30.7 versus 28.8). However, age-adjusted death rates showed that males actually had a death rate from diabetes that was 39.1 percent higher than females (32.7 versus 23.5). [Table 6-46m and Table 6-46f].

Three Oregonians younger than 25 died from diabetes, but 88.3 percent of all deaths occurred after age 54. It was the fourth leading cause of death among Oregonians ages 55-74. The median age at death decreased from 76 in 2006 to 75 in 2007 and was one of the lowest ages recorded among the natural causes of death. [Table 6-15]. Diabetes resulted in a loss of 3,305 years of potential life.

Table E — Diabetes death rates and state ranking

Year	U.S.	Oregon
1982	17.2	12.2
Percent Difference: -29.1		
Rank: Lowest		
2006	23.3	28.3
Percent Difference: +21.5		
Rank: 8th highest		

Figure 6-15.
Age-adjusted Diabetes Mellitus Death Rates,
Oregon and the US with Percentage Difference, 1985-2007



Note: Age-specific rates per 100,000 population.

During the three-year period 2005-2007, four counties had statistically significantly higher age-adjusted death rates compared to the state's (28.7): Klamath (45.8), Malheur (42.9), Marion (35.6), and Multnomah (32.3). Three counties had significantly lower rates: Benton (17.7), Deschutes (19.1), and Jackson (21.0).

A generation ago, the state'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. The gap has continued to widen, and in 2006 Oregon's rate was 21.5 percent higher than the U.S. rate, ranking eighth among the states and District of Columbia.[3]

Suicide

Suicide claimed the lives of 604 Oregonians during 2007, increasing from 573 deaths in the previous year. The crude death rate increased slightly from 15.5 per 100,000 population in 2006 to 16.1. Oregon's highest suicide rate was recorded during 1998: 17.4. The age-adjusted death rate was 15.6 during 2007, up from 15.1 the year before, and a 9.3 percent decrease compared to the record high of 17.2 in 1998.

Males have long been at a far greater risk than females, with age-adjusted death rates of 24.9 and 6.9, respectively; but gender-specific rate differences were greatest among the elderly. [Tables 6-46m, 6-46f, 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 rate peaked at 13.9 among 45- to 54-year-olds, while rates among males increase with age, with the highest rate (86.3) recorded among those age 85 and over. Although the overall suicide rate is highest among the elderly, nearly two-thirds of deaths occurred before age 55, resulting in the fourth largest number of years of potential life lost (11,109) by cause. Suicide was the second-leading cause of death among residents ages 15-34, third among those ages 35-44, and fifth among those ages 45-54. The median age at death was 48 during 2007, up from 47 the previous year. The youngest person to die by suicide was a 12-year-old boy and the oldest a 96-year-old male.

Table F — Number of times a male Oregonian was more likely to die by suicide than females, by age, 2003-2007

5-14	7.0
15-24	4.9
25-34	4.1
35-44	2.7
45-54	2.4
55-64	3.7
65-74	6.2
75-84	8.3
85+	12.2

Three Oregon counties had age-adjusted death rates that were statistically significantly higher than the state's rate (15.2) during the three-year period 2005-2007: Coos (23.1), Douglas (22.9), and Klamath (22.3). Two counties had significantly lower rates: Clackamas (12.0) and Washington (12.1).

Oregonians have long had higher suicide rates than residents of most other states. In 2006, Oregon's age-adjusted suicide rate was 39.4 percent higher than the nation's and ranked 10th highest among the states and District of Columbia.[3]

The method of suicide varied by age and gender, but overall most (54.1%) deaths resulted from fatal gunshot

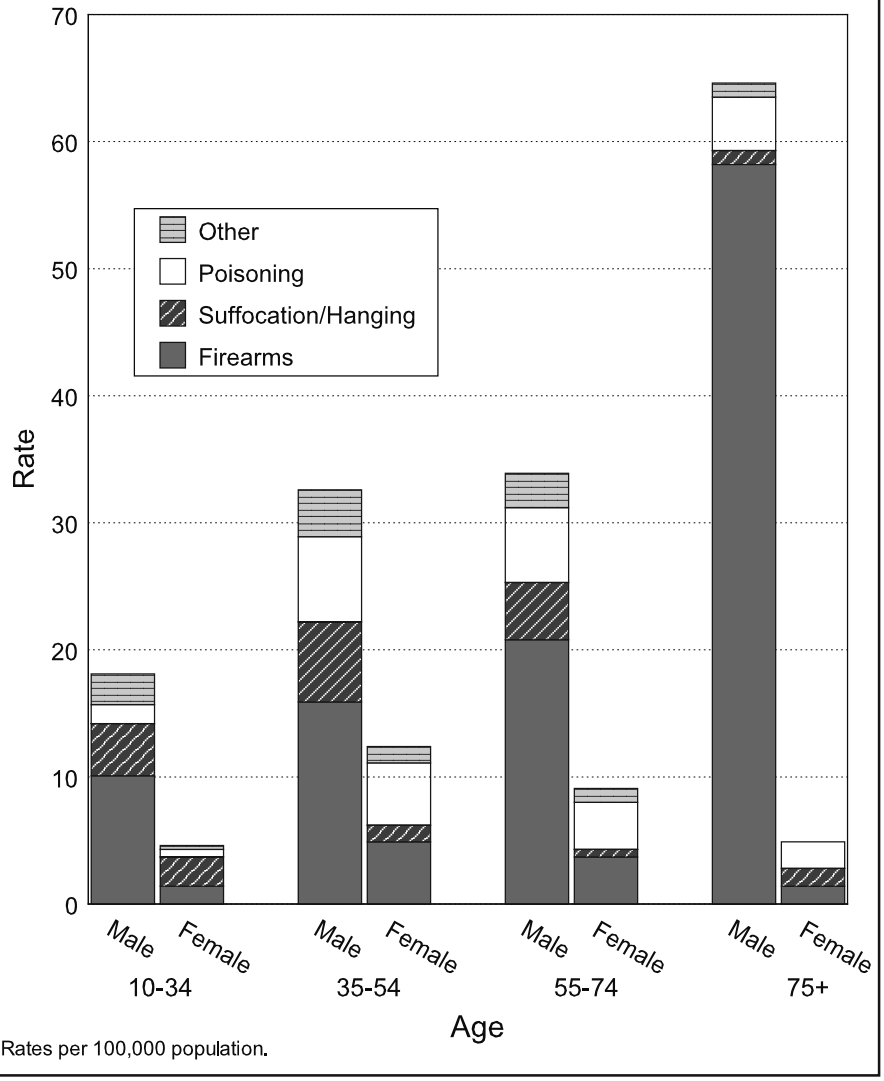
Table G — Suicide Characteristics by Region, 2007

Age	Metro	Coastal	Other
<25	10%	7%	10%
25-64	76%	70%	67%
65+	14%	23%	23%
Method	**Metro**	**Coastal**	**Other**
Firearm	48%	48%	59%
Hanging/ Suff.	20%	9%	16%
Poison	18%	30%	18%
Other	14%	14%	7%

Metro counties: Clackamas, Multnomah and Washington.

Coastal counties: Clatsop, Coos, Curry, Lincoln, and Tillamook.

Figure 6-16.
Suicide Death Rates by Method, Sex, and Age Group, Oregon Residents, 2007



Rates per 100,000 population.

injuries. [Table 6-32 and Figure 6-16]. Although most suicides for both males and females were a result of gunshot wounds, a higher percentage of men used this method than females (59.0% versus 37.3%). Handguns were utilized in 62.1 percent of gunshot fatalities.

Poisoning was the second most common method of suicide and overall, and about one in five suicides involved poisoning (19.2%). However, the proportion of females who poisoned themselves was more than twice that of males (34.3% versus 14.9%). Moreover, there was a difference by gender in the type of poison used: 76.1 percent of all poisoning deaths by females involved medications compared to 60.0 percent of the poisoning deaths among males. Hanging/suffocation was the third most common method of suicide (16.9%), with only a small difference in the proportion of males (16.4%) and females (18.7%) using this method.

Alcohol-induced deaths[7]

Alcohol-induced deaths is a category created by Oregon 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 ninth leading cause of death in Oregon. This category is comprised of alcohol-related disorders from multiple organ systems with cirrhosis of the liver accounting for the greatest number of deaths (61.4%). 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.

Alcoholism, including related disorders and alcohol poisonings, claimed 542 Oregonians during 2007. Additionally, alcohol was a contributing factor, but not the direct cause, in no fewer than 512 deaths. [Table 6-51]. The crude death rate increased to 14.5 per 100,000 population during 2007 (from 12.8 in 2006), and the age-adjusted death rate also increased from 11.7 in 2006 to 13.1.

Fatal alcohol abuse was the eighth leading cause of death among men and 11th leading cause among women, but

the difference is greater than this would suggest: the age-adjusted death rate for males was more than twice that for females, 18.8 versus 7.8, respectively.

Age-specific alcoholism rates peak among residents ages 55-64. [Figure 6-17]. This disorder 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 years. The median age at death increased from 55 years during 2006 to 56 during 2007. Oregonians are dying at markedly younger ages than they were a generation ago when the median age of alcohol-induced death was 62. Alcoholism was the sixth leading cause of premature death, accounting for 5,498 years of potential life lost.

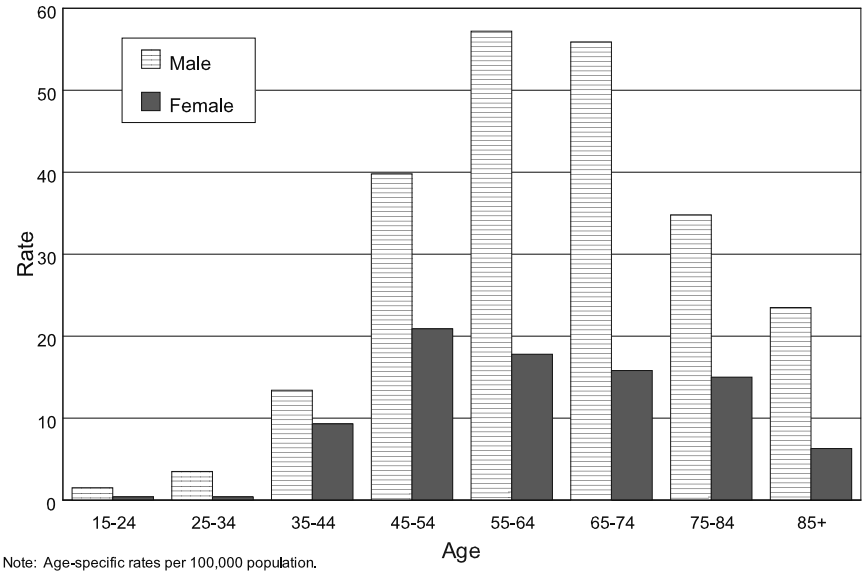
During the period 2005-2007, three counties had rates statistically significantly higher than the state's rate (12.8), excluding counties with fewer than 20 deaths in this category. They were Lincoln (20.5), Klamath (20.0), and Multnomah (15.2). Rates were significantly below the state average in only one county: Washington (7.3).

The Oregon alcohol-induced death rate has long been higher than that for the United States. In 2006, Oregon's rate was 66.7 percent higher than the nation's and ranked seventh among the states and the District of Columbia.[3] However, at least part of the difference between the state and the nation likely results from a reporting artifact: while

Table H – Alcohol-induced Deaths by Diagnoses, 2007

Diagnosis	Count
Liver Cirrhosis	197
Mental/Behavioral Disorders	174
Unspecified Liver Disease	55
Hepatic Failure	53
Hepatitis	24
Cardiomyopathy	13
Accidental Poisoning	13
Degeneration of Nervous Sys.	5
Fatty Liver	4
Polyneuropathy	1
Chronic Pancreatitis	1
Intentional Self-Poisoning	1
Poisoning undetermined intent	1

Figure 6-17.
Age-specific Alcohol-induced Death Rates,
by Sex, Oregon Residents, 2007



Note: Age-specific rates per 100,000 population.

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 2007, influenza/pneumonia claimed 481 Oregonians compared to 522 a year earlier. The crude death rate decreased from 14.1 per 100,000 population in 2006 to 12.8, a record low. In addition, the age-adjusted rate decreased from 12.8 to 11.4, also a record low. Influenza/pneumonia contributed to three-and-a-half times as many deaths as it directly caused: 1,693.

Although slightly more women than men died from these two infectious diseases in 2007 (249 versus 232), age-adjusted death rates revealed that males were still at greater risk (13.9 per 100,000 population versus 9.7). [Table 6-46m and Table 6-46f]. These two related types of pulmonary infections claimed Oregonians in every age group, but eight in 10 of the deaths occurred after age 74. Along with a decrease in the number of deaths during 2007, the median age at death increased to 86 from 85 one year earlier.

During the three-year period of 2005-2007, age-adjusted death rates were statistically significantly higher than the state's rate (13.1) in two counties: Yamhill (23.9) and Benton (18.7). Excluding counties with fewer than 20 deaths in this category, only one county recorded significantly lower rates: Josephine (7.9).

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 2006, Oregon's age-adjusted death rate was 29.8 percent lower than the nation's and ranked 48th (fourth lowest) including the District of Columbia.[3] [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.

Hypertension

During 2007, 361 Oregonians died as a consequence of hypertension (including hypertensive renal disease), making it the 12th 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 slightly decreased from 9.8 in 2006 to 9.6 in 2007. In 2005, the age-adjusted rate for hypertension reached a record high of 10.6 per 100,000 population, more than double the 1990 rate of 4.9. However, the age-adjusted rate decreased in 2006 to 8.9, then decreased again slightly to 8.6 in 2007, the lowest rate seen since 2001.

Although the crude death rate for females was nearly half again that of males (11.3 versus 8.0), age-adjusted death rates show only a small difference in the risk of death from this cause: 8.5 for males and 8.2 for females.

Deaths from hypertension are rare among middle-aged and younger Oregonians, but by age 65 begin to increase sharply. Age-specific death rates are more than 14 times higher among residents 85 or older compared to those ages 65-74 (16.9 versus 247.1).

During the three-year period of 2005-2007, age-adjusted death rates were statistically significantly higher than the state's rate (9.3) in only Umatilla County (15.2). Excluding counties with fewer than 20 deaths in this category, no counties had a death rate statistically significantly lower than the state's rate.

A generation ago, Oregon's hypertension death rate was markedly lower than the U.S. rate, but during the past 20 years that relationship has reversed. In 2006, Oregon's age-adjusted hypertension death rate was 16 percent higher than the U.S. rate (8.7 versus 7.5) and ranked ninth highest nationally.[2]

Parkinson's disease

Ranking 13th among the leading causes of death during 2007, Parkinson's disease claimed 327 Oregon residents. The crude death rate decreased to 8.7 per 100,000 population in 2007 from 9.4 in 2006. The age-adjusted death rate hit a record high of 8.7 in 2006, but decreased to 8.2 in 2007. 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, such as those seen in 2005 and 2007. [Table 6-3]. The age-adjusted Parkinsons death rate for males was over

two-times that of females (11.8 versus 5.6). [Table 6-46m and Table 6-46f].

Parkinson's disease claims almost exclusively persons 55 or older, although one younger Oregonian did die from the disorder during 2007. [Table 6-6]. The median age at death has shown no clear trend during the previous decade, ranging between 81 and 83 years for most of the decade, increasing above that range in 2007. This year the median age of death increased from 83 in 2006 to 84.

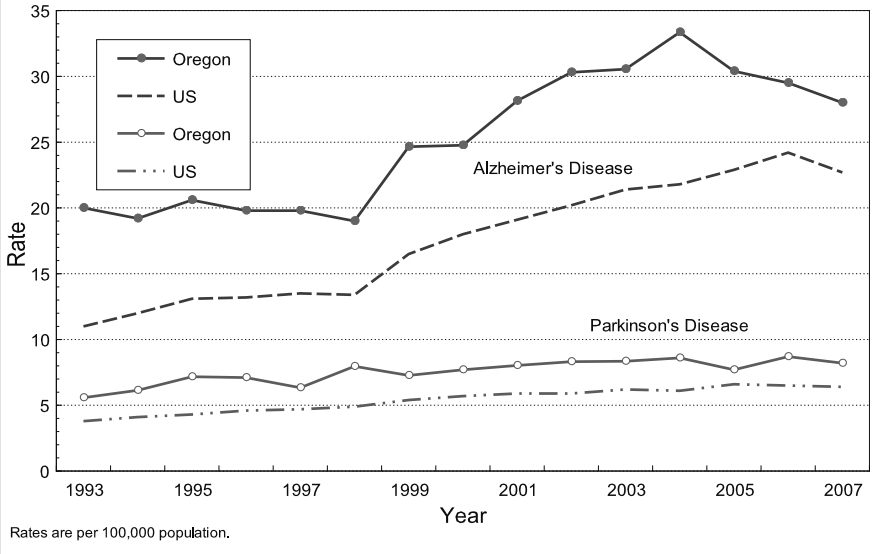
During 2005-2007, only Yamhill County (13.8) had a statistically significant elevated age-adjusted death rates compared to the state (8.2).

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 2006, Oregon's death rate was 34.9 percent higher than the U.S. rate and ranked 4th highest among the states and District of Columbia.[3]

Homicide

Oregon's homicide rate decreased 30 percent from the previous year (3.0 per 100,000 population in 2006 versus 2.1 in 2007). With 80 victims, homicide was the 22nd leading cause of death during 2007. Only one county had more than 10 deaths in 2007.

Figure 6-18.
Alzheimer's Disease and Parkinson's Disease Age-adjusted Death Rates, Oregon and the U.S., 1993-2007



Rates are per 100,000 population.

Every year, more males than females are murdered — and 2007 was no exception. The male age-adjusted death rate was 3.2, but the female rate was not calculated as there were fewer than 20 female deaths due to homicide. [Table 6-46m and Table 6-46f]. The age-adjusted rate for both genders was 2.1.

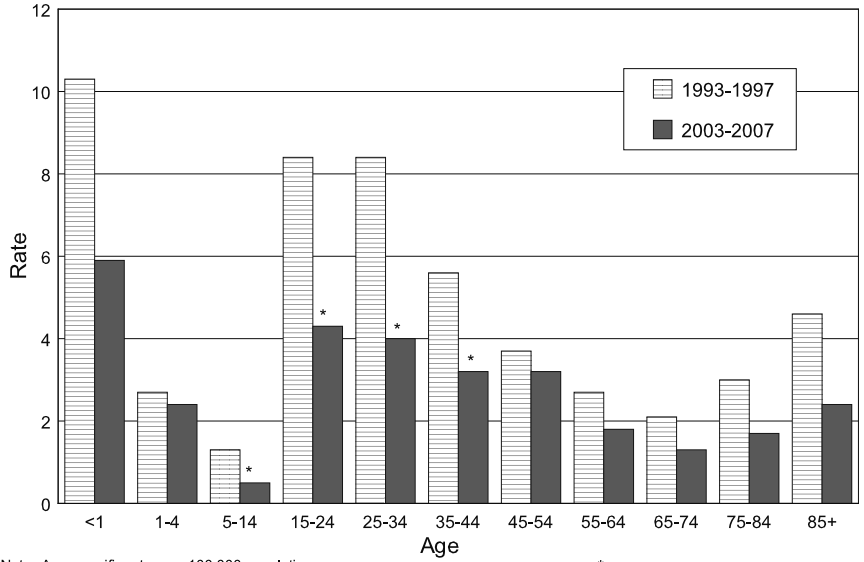
Table I – Five Leading Methods of Homicide, 2007	
Firearms	42
Sharp Objects	10
Blunt Objects	4
Suffocation	2
Bodily Force	2

By age, infants had higher homicide death rates than Oregonians in any other age group; during 2003-2007, their homicide rate was 5.9 per 100,000 population compared to 4.3 for 15- to 24-year-olds, the next statistically significant age group. (Rates based on multiple years yield more representative values than those based on the relatively small numbers recorded for any single year). Children between the ages of 5 to 14 and adults ages 65 to 74 had the lowest homicide death rates. The median age at death for homicide victims in 2007 was 34 years, two years lower than the previous year and the lowest among the leading causes (except for causes associated with infancy). With 2,388 years of potential life lost, homicide was the 12th leading cause of premature death.

During the period 2005-2007 only Multnomah County's homicide death rate (4.1) was statistically significantly higher than the state rate (2.7); while Washington County's rate (1.4) was lower.

Historically, Oregon's homicide death rate has been markedly lower than the nation's. During 2006, the

Figure 6-19.
Age-specific Homicide Rates,
Oregon Residents, 1993-1997 and 2003-2007



Note: Age-specific rates per 100,000 population.

* P <0.05, test for trend of individual years.

state's rate was 50 percent lower and ranked 38th among 47 of the states and the District of Columbia (states with unreliable rates excluded).[3]

Firearms are unrivaled as an implement of homicide, accounting for more than half of all such deaths, and of those, handguns outnumbered long guns two to one.

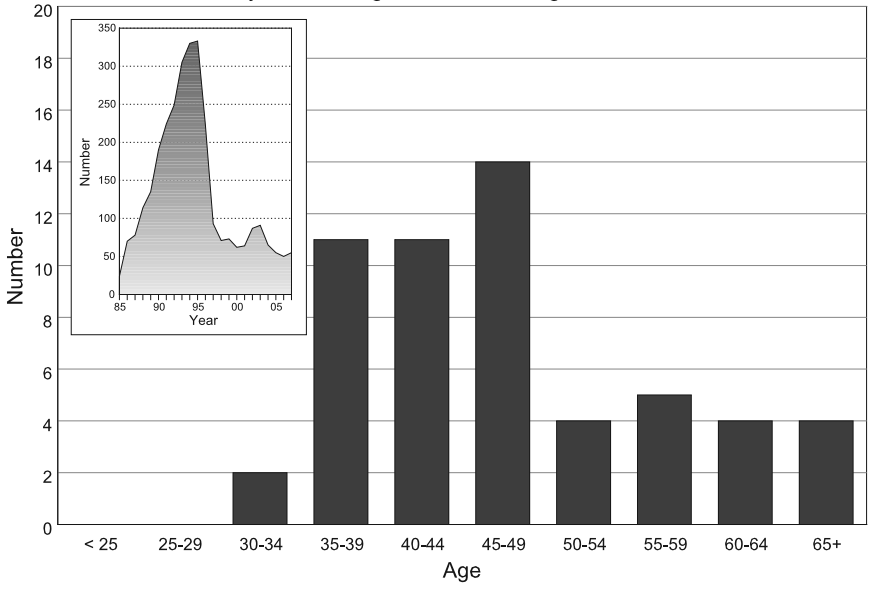
AIDS/HIV

After peaking at 360 deaths in 1995, the number of AIDS/HIV deaths has declined. In 2007, the number of deaths increased from 50 in 2006 (an all-time low) to 55. The age-adjusted death rate has also greatly decreased since 1995, from 11.5 per 100,000 population to 1.5 in 2007.

Although long considered among the top 20 leading causes of death, there's no greater dichotomy by sex and the risk of death than there is with AIDS/HIV. With sex-specific death rates of 2.5 and 0.5, respectively, the male rate is five times higher than the female rate.

Unlike most causes of death, AIDS/HIV most often claims middle-aged adults. Age-specific death rates rose sharply in early adulthood reaching 4.3 for those 35-44 years, before declining to 3.2 among those 45-54 years, and then diminishing markedly among older age groups. [Figure 6-20]. These rates are driven largely by deaths among males. The youngest person to die from this disease was a 33-year-old male and the oldest a 72-year-old male. The years of

Figure 6-20.
Number of AIDS Deaths by Age During 2007
and by Year During 1985-2007, Oregon Residents



potential life lost were 989 and the median age at death 45 years, one year more than that recorded during 2006. A decade earlier, half of all deaths occurred by age 41.

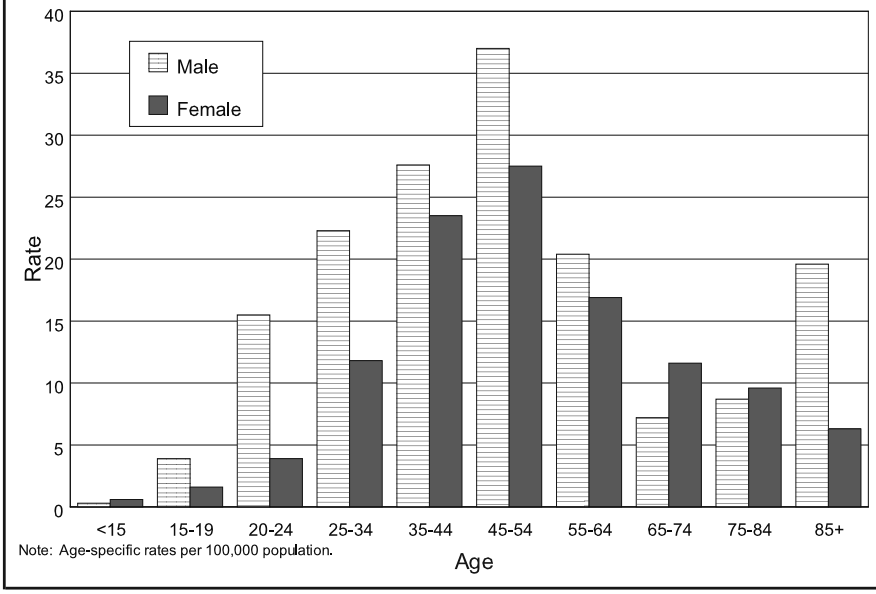
Oregon's AIDS/HIV age-adjusted death rate has long been lower than the nation's and in 2006 was 65 percent lower than the national rate, ranking 34th among 39 of the states and District of Columbia (states with unreliable data excluded).[3]

Drug-induced deaths

During 2007, more deaths were attributed to drug-related causes compared to those that were attributed to alcohol, 565 versus 542. 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 15.1 per 100,000 population, drugs/poisonings represent a significant cause of mortality among Oregonians. The drug-induced death rate has trended up during recent years, with the rate one year ago (15.7) representing the record high.

Males were more likely to die from drug-induced causes than females. Their age-adjusted death rate was 16.9 per 100,000 population compared to 12.4 for females. More than half of all drug-induced deaths (55.2%) occurred among residents ages 35-54.

Figure 6-21
Age-specific Drug-induced Death Rates,
by Sex, Oregon Residents, 2007



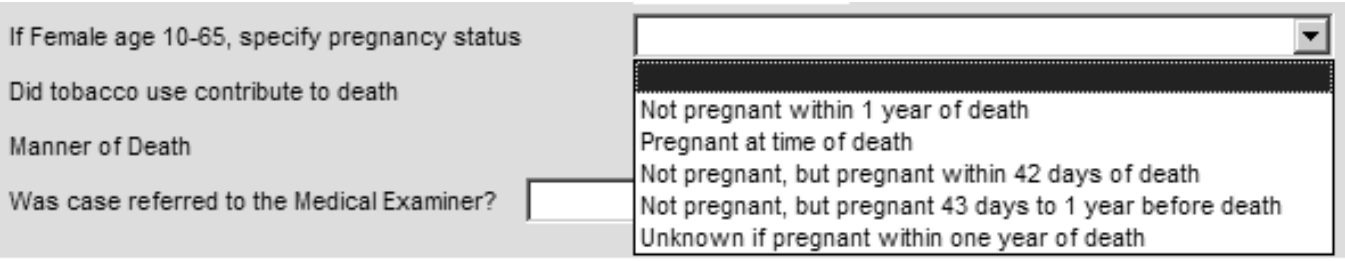
Note: Age-specific rates per 100,000 population.

For the period 2005-2007, the state's age-adjusted death rate (14.5) was driven by just a handful of counties, two of which had statistically significantly elevated rates: Clatsop (24.2) and Multnomah (21.8). Three counties had significantly lower rates: Washington (8.8), Deschutes (10.2), and Clackamas (11.5).

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

Maternal deaths

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, the medical certifier must now indicate if the decedent

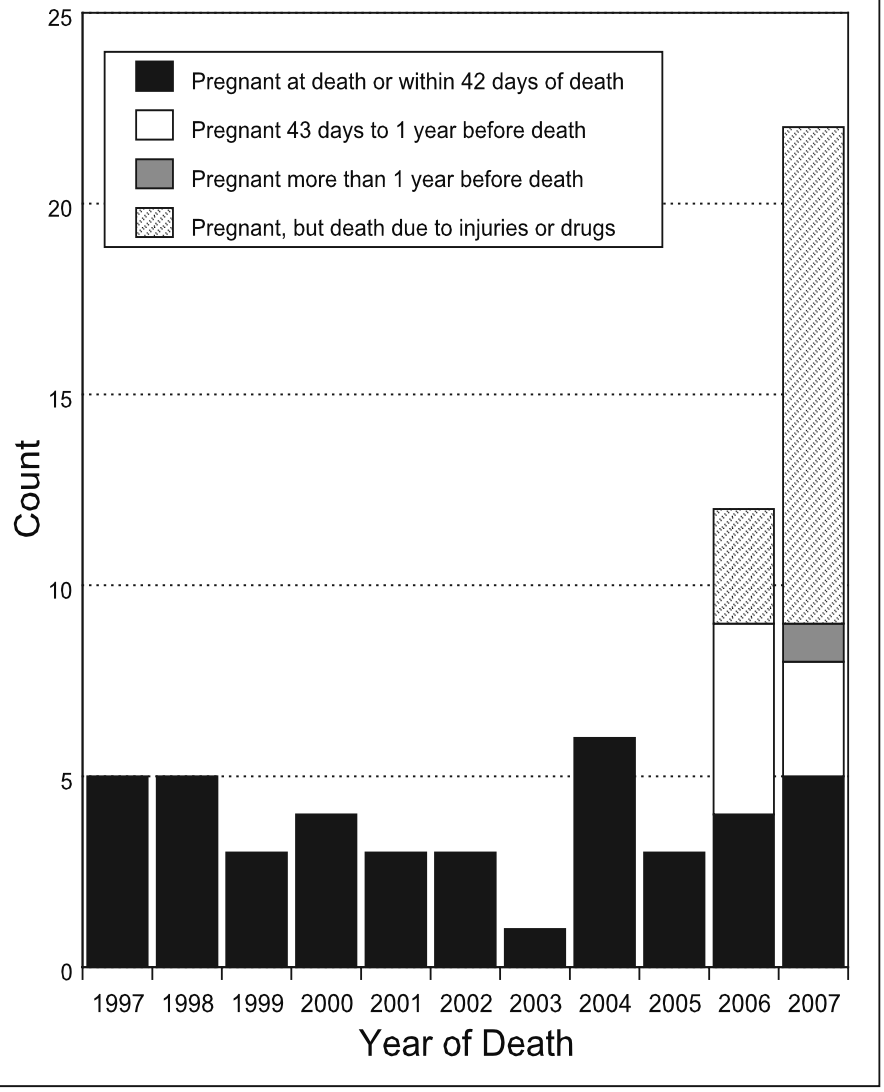


was pregnant at death, pregnant within 42 days of death, or pregnant within one year of death.

Before 2006 the category for maternal death (ICD10: O00 – O99) included only those deaths 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 that was attributable to such causes as infections, cerebrovascular disease, digestive diseases or ill-defined unknown causes, the Center for Health Statistics would re-contact the physician and ask 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 added the additional box expanding the time frame to include deaths occurring within one year of pregnancy. The automated Web-based system forces this question to be asked about every woman between the ages of 10 and 60. Figure 6-22 shows how

Figure 6-22.
Number of Pregnancy Related Deaths by Year,
Oregon Residents, 1997-2007



the addition of this question has increased the count of maternal deaths in 2007 from five deaths using the old method to eight using the new method.

It should be noted that tables in the 2007 annual report show nine maternal deaths. This is because the “maternal death” lines in our tables record all deaths due to obstetric causes, regardless of time frame, and in 2007 there was one decedent whose underlying cause of death was related to a pregnancy that occurred several years prior to death.

Male veteran deaths

In 2007, there were 9,153 veteran deaths. Of these, 370 were women and 8,783 were men. Table 6-22 looks at cause of death for only male veterans versus male non-veterans (age 18 and older), due to the small number of female veterans. Throughout this section, "non-veterans" and "veterans" refers specifically to males, age 18 and older. Non-veterans actually outnumber veterans in the population by slightly more than five to one,[8] so it is significant that veteran deaths outnumbered non-veteran deaths by 2,259 in 2007. [Table 6-22].

More veteran deaths occurred in the older age groups, with 64.5 percent of the veteran deaths among those 75 and over, compared to 35.4 percent of non-veteran deaths. [Table 6-22]. This difference is due to the larger number of veterans in the older age groups, and masks the fact that veterans over age 75 actually have a crude death rate that is 16 percent lower than non-veterans (8,049.0 per 100,000 population versus 9,599.8).[8] The death rate is higher for veterans in all other age groups, reflecting a larger percentage of veterans dying at younger ages than non-veterans.

Cancer was responsible for more veteran deaths than any other cause (26.9%), followed by heart disease (23.2%). Cancer and heart disease were also the first and second most common causes of death for non-veterans (22.7% and 20.9%, respectively). [Table 6-22]. While suicide is not the most common cause of death for either group, much attention has been given to the higher suicide rate among veterans compared to non-veterans. While the percentage of veteran deaths attributed to suicide is lower than the same for non-veterans (1.8% of veteran deaths versus 4.6% of non-veteran deaths), this masks an overall veteran suicide rate that is nearly 1.7 times higher than that for non-veterans (45.7 versus 27.4 per 100,000 population), when looking at the time period 2003-2007.[9]

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 2003-2007.

Table J - Operations Iraqi Freedom and Operation Enduring Freedom, Oregon Resident Military Deaths, 2002-2007

County	2002	2003	2004	2005	2006	2007
Benton	-	1	1	-	-	2
Clackamas	-	-	-	-	3	1
Clatsop	-	-	1	-	-	1
Columbia	-	-	-	-	-	1
Coos	1	-	-	-	-	2
Deschutes	-	-	-	-	1	1
Douglas	-	-	-	2	1	-
Hood River	-	-	-	-	1	-
Jackson	-	-	-	1	-	1
Jefferson	-	-	-	-	1	-
Josephine	-	-	-	-	-	1
Klamath	-	-	2	-	-	1
Lane	-	-	-	-	-	1
Lincoln	-	-	1	1	-	2
Linn	-	-	2	2	-	-
Malheur	-	-	-	-	-	1
Marion	-	-	-	-	2	1
Multnomah	-	3	6	3	3	1
Polk	-	1	1	-	-	1
Umatilla	-	1	1	2	-	-
Union	-	-	-	1	-	-
Wasco	-	-	-	-	1	-
Washington	-	1	4	-	2	2
Yamhill	-	-	-	1	-	-
N.S.	-	-	-	1	-	-
Total	1	7	19	14	15	20

Characteristics	
Sex	
Male	76
Female	0
Total	76
Age	
<20	3
20-24	38
25-29	18
30+	17
Total	76
Race	
White	64
Black	1
Hawaiian	2
Asian	1
Hispanic	7
Multiple	1
Total	76

Source: http://siadapp.dmdc.osd.mil/personnel/CASUALTY/castop.htm

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 2006 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, 6-50, 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 10th and 11th 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 2007 State Data Tables: http://www1.va.gov/VETDATA/docs/Demographics/1l.xls. Accessed on September 14, 2010.

9. Shen X, Millet L. 2010. Suicides in Oregon: Trends and Risk Factors. Oregon Department of Human Services, Portland, OR. http://www.oregon.gov/DHS/ph/ipe/nvdrs/docs/Suicide_in_Oregon_5year_data_report_2010.pdf.