

Mortality

During 2000, Oregon's death rate fell 3.4 percent to 859.6 per 100,000 population, down from 889.4 during 1999 and the lowest rate recorded since 1992. During the previous seven years the rate fluctuated between 888 and 909 per 100,000 population. [Figure 6-1, Table 6-3]. Despite the decline in the death rate, more Oregonians died in 2000 — 29,541 — than in any prior year. This apparent discrepancy is a consequence of a burgeoning state population.

Both males and females benefited from the decline in the death rate, but for just the second time in seven decades the rate for females was higher than the rate for males, 868.4 per 100,000 females vs. 850.6 per 100,000 males. [Table 6-2]. This apparent change in the relative risk of death is an extension of the trend seen during recent decades. A generation earlier, the rate for males was 28.7 percent higher than the rate for females; by 2000, the female rate exceeded the male rate by 2.1 percent. However, the increase is largely due to the changing population distribution by age rather than health status. Females still have lower age-specific death rates.

Statewide, age-specific death rates fell to record lows for residents ages 5-14 and 25-44. [Figure 6-3]. Increases were recorded for Oregonians ages 15-24 and 65+, but these were not record highs. [Table 6-1]. During 2000, the median age of Oregonians at death was 78 years, 81 for females and 75 for males. On average, an Oregonian died every 18 minutes during 2000.

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HEART DISEASE

Despite a declining death rate¹ during the past generation, heart disease continued to be the leading cause of death in Oregon, accounting for one of every four resident deaths (7,104 out of

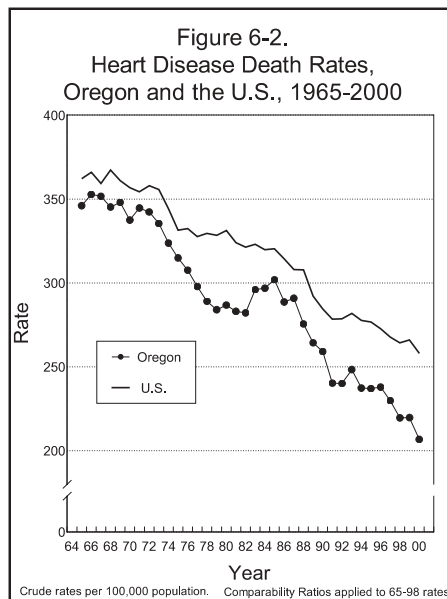
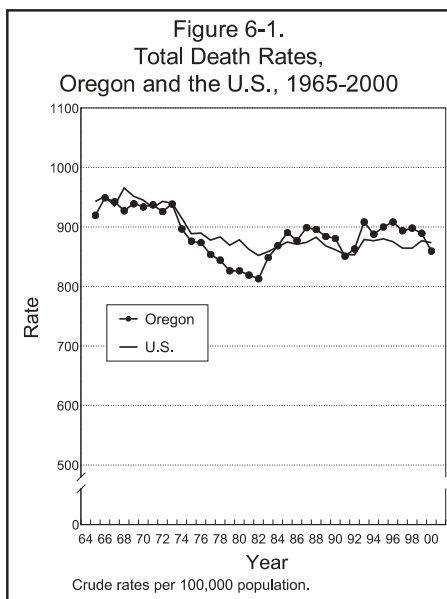
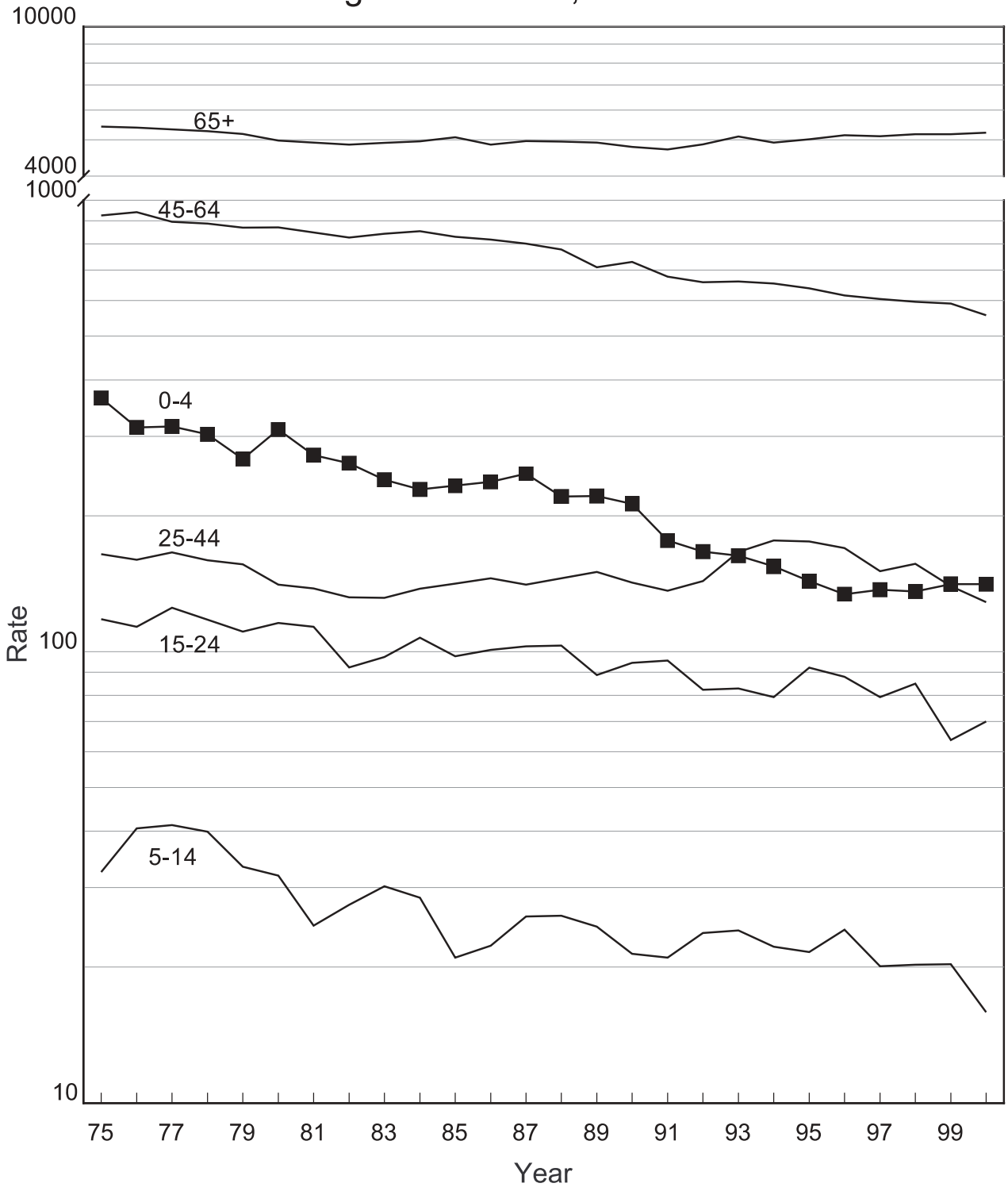
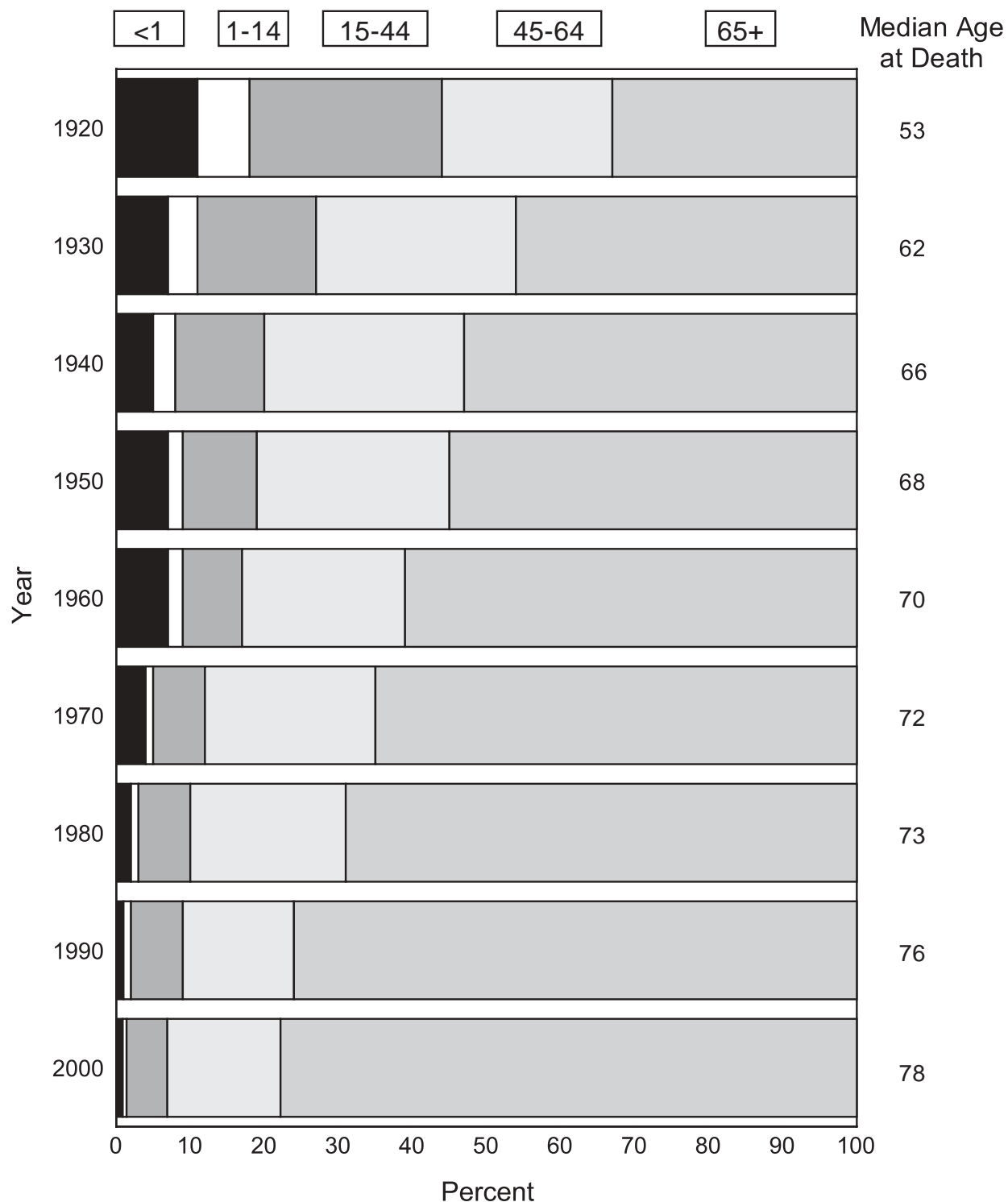


Figure 6-3.
Age-Specific Death Rates,
Oregon Residents, 1975-2000



Rates per 100,000 population

Figure 6-4.
 Proportion of Deaths by Selected Age Groups,
 Oregon Residents, 1920-2000



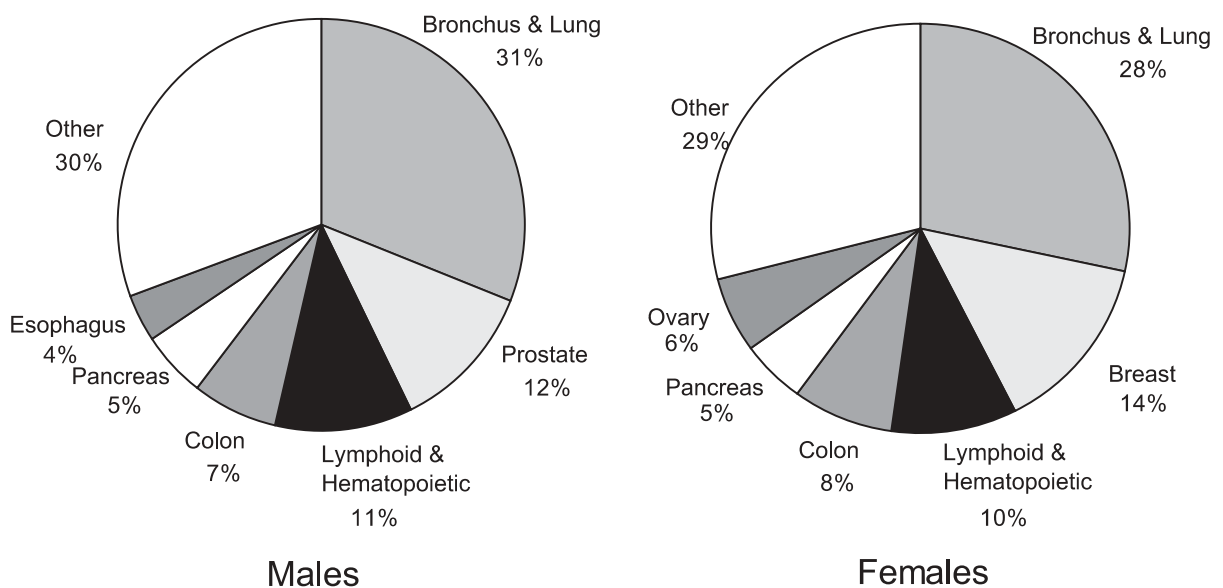
Heart disease is the leading cause of death for Oregonians 75 or older.

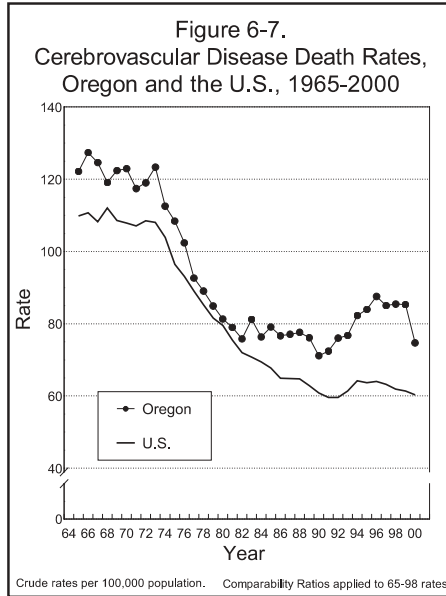
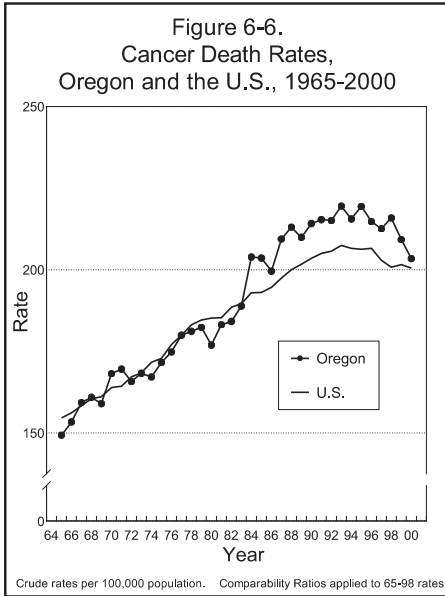
29,541). [Figure 6-2, Table 6-6]. As with many causes of death, the heart disease mortality rate was higher among males than for females, 215.8 vs. 197.8, respectively. In 2000, the male rate was 9.1 percent higher than the female rate, a much smaller difference than was seen a generation or two ago. Although the leading cause of death for Oregonians as a whole, by age group it ranks first only among persons 75 or older. The median age for heart disease declined slightly during 2000 with one-half of the decedents dying by age 80. [Table 6-13].

The heart disease category includes a number of conditions. [Table 6-6]. Most common, and accounting for the majority of heart disease deaths, are myocardial infarctions, coronary occlusions, coronary thromboses, and coronary heart disease. The infarctions, occlusions, and thromboses are acute, often terminal events, while coronary heart disease is a chronic condition.

Although the leading cause of death, heart disease ranked third in years of potential life lost (11,693) after unintentional injuries and cancer. [Table 6-11]. On average, an Oregonian died of heart disease every 74 minutes.

Figure 6-5.
Distribution of Malignant Neoplasms
by Sex and Site, Oregon Residents, 2000





Cancer will displace heart disease as the leading cause of death within the next year if current trends persist.

CANCER

Nearly seven thousand Oregonians succumbed to cancer during 2000. Although the death rate for this cause has trended downward during the past five years, because the heart disease death rate is falling more rapidly, cancer will very likely become the leading cause of death within the next year.

During the last half of the 20th Century, the discrepancy in death rates between males and females narrowed considerably. By 2000 the male death rate was just 7.1 percent higher than the female rate; nonetheless, cancer death rates among elderly males were far higher than among elderly females. [Tables 6-7f and 6-7m]. Although ranking second after heart disease, cancer is the leading killer of Oregonians ages 45 through 74. [Table 6-4]. During 2000 the median age at death for the 6,989 cancer patients fell to 73.

The decades-long upward trend¹ in cancer mortality — which now appears to have abated and reversed — was driven principally by an increasing number of lung cancer deaths, a cause that would be rare in the absence of smoking. [Figure 6-6]. The lungs were the most common site of cancer for both sexes, with lung cancer deaths becoming increasingly prevalent among women during recent decades. In 1970, there were 4.5 lung cancer fatalities among men for every female death. By 2000 the ratio declined to 1.2 to 1.0.

Malignant neoplasms accounted for more years of potential life lost (21,568) than any other cause, except unintentional injuries. [Table 6-11]. Every 75 minutes, on average, cancer claimed the life of an Oregonian.

LUNG CANCER DEATH RATES			
YEAR	TOTAL	MALE	FEMALE
1970	33.5	56.4	11.4
1975	41.2	65.9	17.7
1980	48.3	69.9	27.4
1985	56.2	76.0	37.2
1990	64.3	81.2	48.1
1995	62.5	69.5	55.7
2000	60.5	65.3	55.7

Rates per 100,000 population.

CEREBROVASCULAR DISEASE

The cerebrovascular disease rate declined sharply during 2000, falling to a level not seen since the 1980s. [Figure 6-7]. With 2,567

deaths (74.7 per 100,000 population), cerebrovascular disease was the third leading cause of death among Oregonians and claimed females far more often than males (91.9 vs. 57.2). Among residents 85 or older it was the second leading cause of death. The median age at death was 83 years. [Table 6-13].

Sudden circulatory crises such as strokes, cerebral thromboses, and hemorrhages are common acute forms of these diseases; cerebral arteriosclerosis is a chronic form.

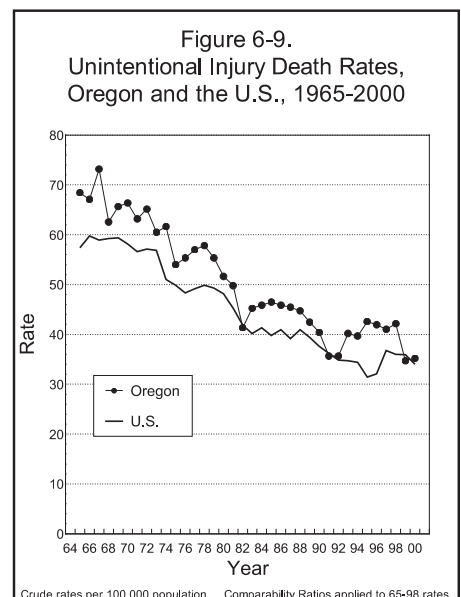
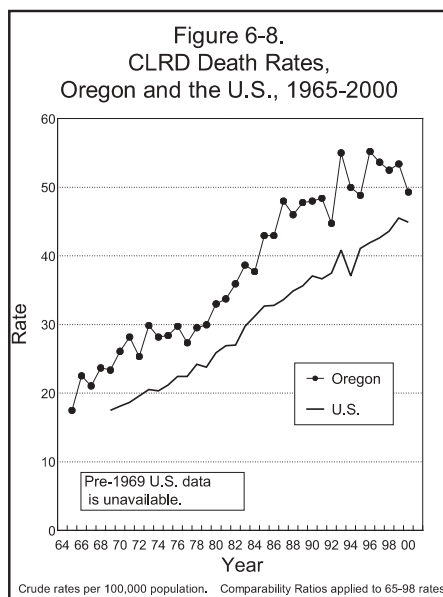
Although the third leading cause of death, cerebrovascular disease ranked 11th in the number of years of potential life lost (2,036), a consequence of the older ages of the decedents (compared to relatively younger ages at death for many other causes). An Oregonian died from cerebrovascular disease every 3.4 hours.

CLRD

Chronic lower respiratory disease (CLRD) has become an increasingly common killer of Oregonians over the past several decades and is currently the fourth leading cause of death. (CLRD was formerly classified as chronic obstructive pulmonary disease.) During 2000, CLRD claimed 1,696 residents, or 49.3 per 100,000 population. Until recently, males were far more likely to succumb to this cause than females, but in 1999, and for the first time, more females than males died from this cause. This pattern extended into 2000 with 858 female deaths compared to 838 male deaths. A generation ago, males were twice as likely to die from CLRD, but by 2000 the female death rate was slightly higher, 49.5 compared to 49.2 for males. CLRD ranked as the third leading cause of death among residents 55-74 years-old. [Table 6-4]. The median age at death was 77.

The vast majority of CLRD deaths are caused by tobacco use with the sharp rise in deaths among women reflecting their increased smoking prevalence during recent decades. No other cause,

More females than males die from chronic lower respiratory disease.



except lung cancer, has a higher proportion of deaths linked to tobacco use than does CLRD; at least eight in 10 CLRD deaths were associated with tobacco use. [Table 6-18].

The group of allied conditions categorized as CLRD includes four principal diseases: chronic and unspecified bronchitis, emphysema, asthma, and chronic airways obstruction. Although the fourth most common cause of death, chronic lower respiratory disease ranked 12th in the number of years of potential life lost (YPLL). An Oregonian died from CLRD every 5.2 hours, on average. Most of these deaths were preventable.

CLRD Death Rates		
Year	Male	Female
1980	40.3	18.0
2000	49.2	49.5
% Change	+22.1	+175.0

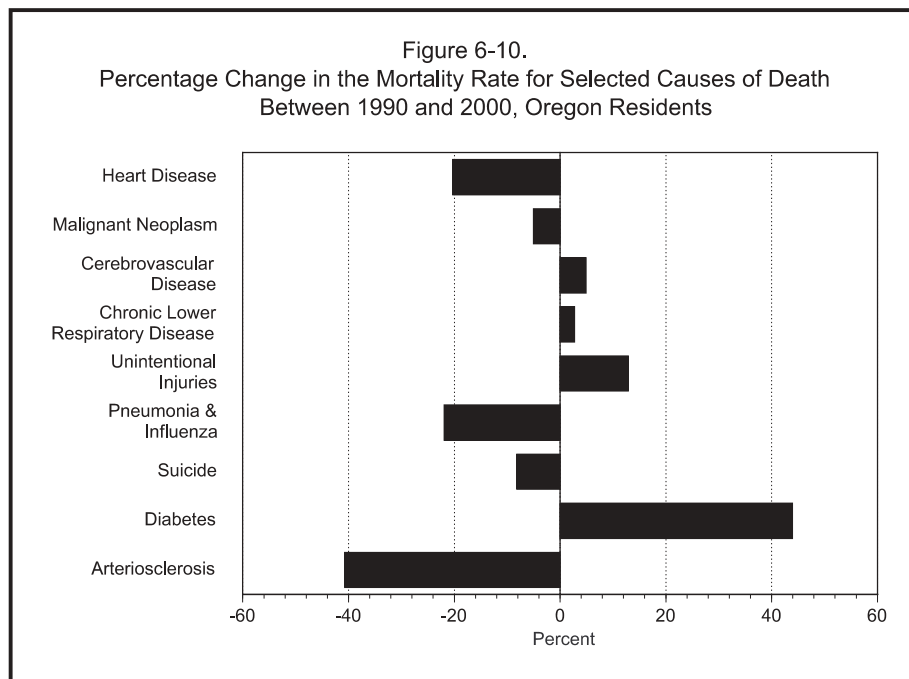
Rates per 100,000 population.

UNINTENTIONAL INJURIES

During 2000, 1,211 Oregonians died from unintentional injuries², making them the fifth leading cause of death. One of the strongest gender dichotomies by cause is seen in unintentional injuries. With a rate of 44.5 per 100,000 population, males were almost twice as likely to die in this manner than were females (26.1). [Table 6-2]. The overall death rate was 35.2 per 100,000 population. Although this category ranked fifth in the number of deaths, it was the leading cause of death for Oregonians ages 1-34. One-half of all unintentional injury deaths occurred by age 44, but unlike most causes the age distribution was bimodal: death rates were highest among Oregonians ages 15-24 and 65+.

Unintentional injuries were the leading cause of years of potential life lost.

Transportation-related injuries accounted for nearly half of all unintentional injury deaths with most resulting from motor vehicle crashes. About one in four of these deaths were of 15- to-24-year-olds. [Table 6-23]. Falls, the second most common type of fatal unintentional injury, claimed 267 Oregonians. Seventy-seven percent of fall victims were 75 or older with most falls occurring on the same level, often from slipping or tripping. Poisonings, most often



by narcotics and hallucinogens, ranked third while drowning was the fourth most common type of fatal unintentional injury. [Tables 6-23 and 6-31]. Summer was the season of greatest risk, with more residents dying from unintentional injuries during June, July, and August than during any other season. [Table 6-8]. During 2000, 66 fatal unintentional injuries were sustained in the workplace.

More years of potential life were lost (23,208) from unintentional injuries than from any other cause. [Table 6-11]. (Cancer ranked second and heart disease third.) An Oregonian died as a consequence of an unintentional injury every 7.2 hours.

ALZHEIMER'S DISEASE

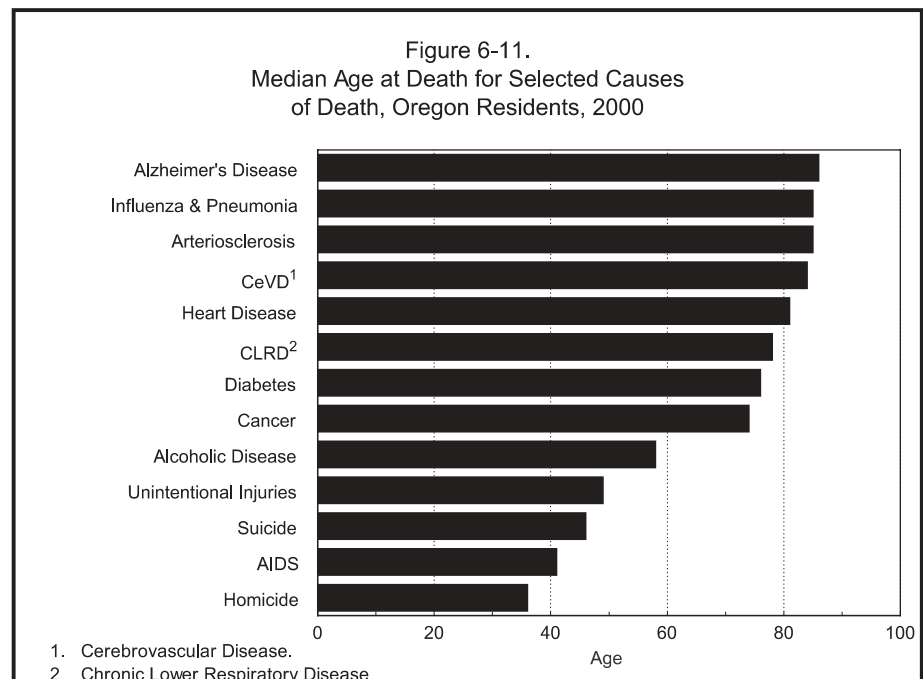
Mirroring the aging of Oregon's population has been the seemingly inexorable rise in Alzheimer's disease deaths. In just the past decade, the death rate for this cause has nearly doubled. During 2000, the tangles and plaques characteristic of this disease led to the deaths of 905 Oregonians (26.3 per 100,000 population), making it the sixth leading cause of death. As in past years, women were about twice as likely as men to die from Alzheimer's disease (37.2 per 100,000 vs. 15.3). Alzheimer's was the fifth leading cause of death among women but ninth among men. [Table 6-2]. This devastating disorder takes years to claim its victims lives; 19 in 20 of the deaths occurred after the decedent's 75th birthday. [Table 6-6]. The median age at death was 86 years, the highest for any leading cause of death. [Table 6-13 and Figure 6-11].

Concomitant with the high median age at death was a minimal number (41) of years of potential life lost. Every 9.7 hours, this disease claimed an Oregonian.

For further information on Alzheimer's disease in Oregon, see *Oregon Health Trends*, Number 52. Because of differences between

Alzheimer's disease is the fifth leading cause of death among women.

Figure 6-11.
Median Age at Death for Selected Causes of Death, Oregon Residents, 2000



the state and the nation in leading cause of death categorization, the comparability ratios published by the National Center for Health Statistics should not be applied to Oregon data (unless only ICD-9 code 331.0 is used). Please see Appendix B for further information.

DIABETES MELLITUS

With 847 deaths during 2000, diabetes was the seventh leading cause of mortality among Oregonians. At 24.6 per 100,000 population, the death rate was twice as high as it was in 1985, a consequence of the ballooning number of obese Americans. Both males and females were about equally likely to die from diabetes. Among the various chronic diseases that lead to death, diabetes had one of the youngest median ages at death (76). [Table 6-13]. It was the fifth leading cause of death for Oregonians 55 to 74 years of age.

Residents lost 2,050 years of potential life as a consequence of diabetes, making it the tenth leading cause of YPLL. An Oregonian died of diabetes every 10.3 hours in 2000.

INFLUENZA AND PNEUMONIA

During 2000, 637 Oregonians died from influenza and pneumonia, making it the eighth leading cause of death. The death rate was 18.5 per 100,000 population. These respiratory diseases more often claim females than males; during 2000, their death rates were 21.8 and 15.2, respectively.

One-half of all influenza and pneumonia deaths occurred by age 85. Influenza and pneumonia accounted for 588 years of potential life lost, ranking 15th among the causes of death. A resident died from these causes every 13.8 hours, on average.

Because of a substantial change in the manner of coding influenza and pneumonia deaths with the advent of ICD-10, death rates subsequent to 1998 should not be compared to those of earlier years without applying the ICD-10/ICD-9 comparability ratio. (See Appendix B.)

SUICIDE

During 2000, 502 Oregonians died by suicide, or 14.6 per 100,000 population. (Note that residents choosing the “Death with Dignity” option [Measure 16] are not counted here; they are included in the appropriate disease categories.) Overall, suicide ranked ninth among the leading causes of death but seventh for males compared to twelfth for females; their death rates were 22.8 per 100,000 and 6.6, respectively. Even more striking, is the difference in rates between the elderly; males 85 or older were more than ten times as likely to die by suicide as were their female counterparts. [Tables 6-7f and 6-7m]. Females most often died from suicide during middle age. Suicide is the second leading cause of death of Oregonians ages 15-34. [Table 6-4].

The youngest Oregonian to commit suicide was a 10-year-old girl (who shot herself with a rifle) and oldest a 93-year-old man (who shot himself with a shotgun). Firearms were the most frequently

The risk of death from diabetes has doubled in the past 15 years.

Suicide is the second leading cause of death for Oregonians ages 15-34.

chosen method (60.4%) of completed suicide, followed by poisoning (16.9%) and hanging/suffocation (15.5%). The method varied within different age and sex cohorts, however. [Table 6-30].

The median age at death was 44. Suicide was the fourth leading cause of YPLL (10,242 years) following unintentional injuries, cancer, and heart disease. [Table 6-11]. Every 17.5 hours an Oregonian died from suicide.

ALCOHOL-INDUCED

Alcoholism (including related disorders) and alcohol poisonings³ claimed 383 Oregonians during 2000, making it the tenth leading cause of death. The death rate was 11.1 per 100,000 population. Fatal alcohol abuse occurred more than three times as often among males as among females; their death rates were 17.2 and 5.2, respectively. [Table 6-2]. Alcoholism was the fifth most common cause of death for 35- to 44-year-olds and fourth most common for 45- to 54 year-olds. [Table 6-4]. For more than a decade, Oregonians have been dying at younger ages from this cause; in 2000, the median age at death was 56, the second lowest ever recorded.

This category is comprised of alcohol-related disorders from multiple organ systems with alcoholic liver disease accounting for the majority (63.1%). If intentional and unintentional injury deaths where alcohol was a factor (e.g., motor vehicle crashes) were included in this category, the count would be substantially higher. (The role, if any, of alcohol in injury deaths is rarely reported on death certificates.)

Alcoholism was the seventh leading cause of years of potential life lost (3,734). About once a day an Oregonian succumbed to this cause.

PARKINSON'S DISEASE

Ranking twelfth during 2000, Parkinson's disease claimed 278 Oregon residents; the death rate was 8.1 per 100,000 population. Men more often die from this disease than do women and in 2000 they were about half-again as likely to do so. Their death rate was 9.9 compared to 6.3 for women. [Table 6-2]. A small number of middle-aged residents died from Parkinson's disease, but eight in ten of the deaths occurred to residents 75 or older. [Table 6-6]. The median age of death was 83.

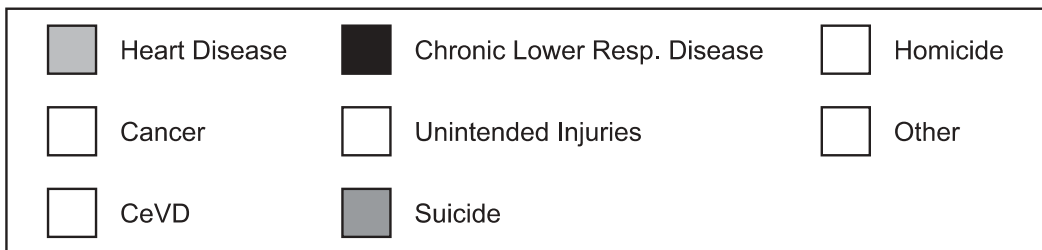
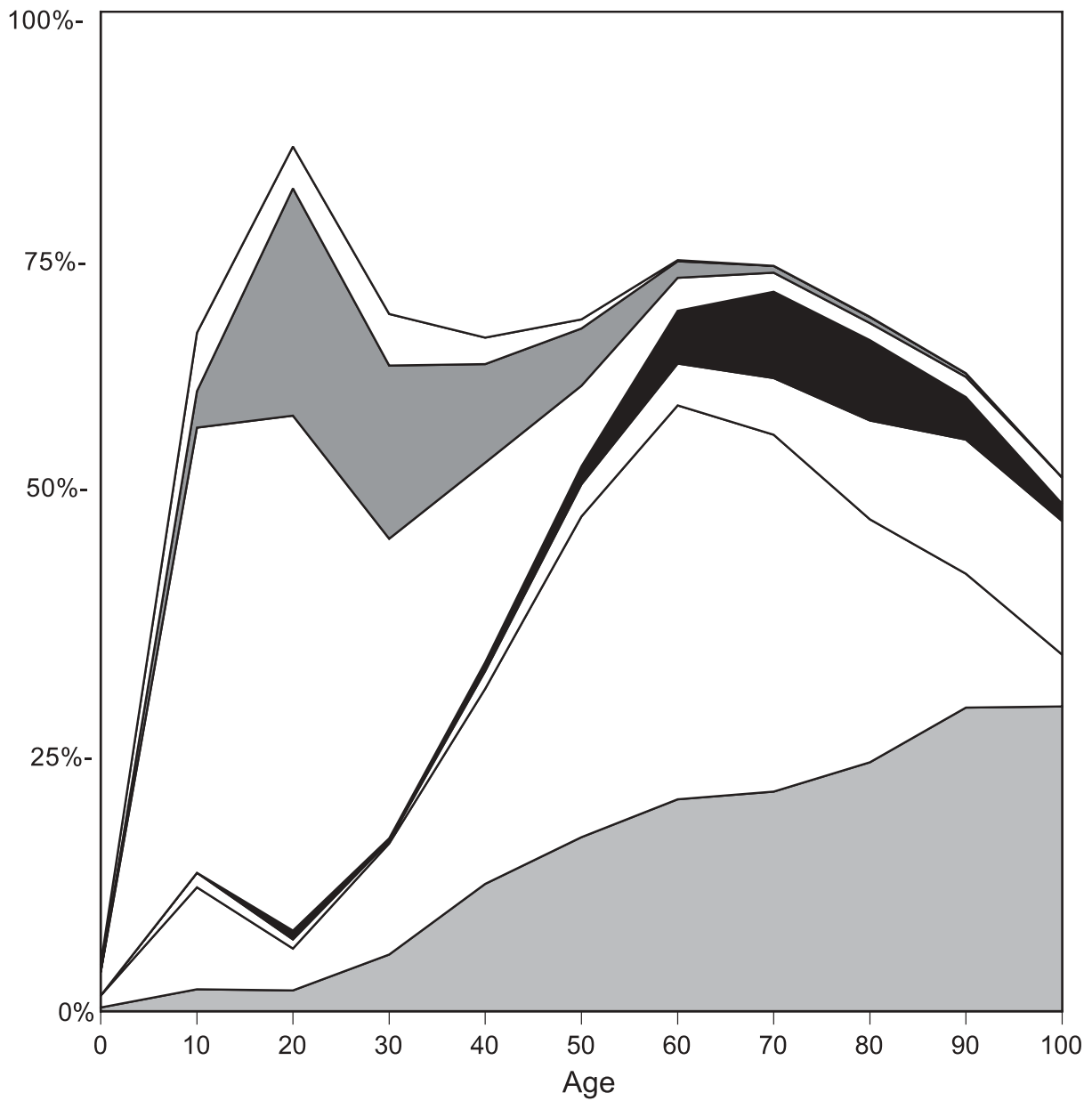
Because most deaths were among the elderly, very few (20) years of potential life were lost by Oregonians due to this disease. [Table 6-12]. The 278 deaths represent the loss of an Oregonian every 1.3 days. For additional information, see *Oregon Health Trends*, Number 52.

ARTERIOSCLEROSIS

Although the number of arteriosclerosis deaths increased during 2000, the long-term trend has been downward. The death rate, 6.7 per 100,000 population, was second only to the record low of 6.0

Men were three times more likely to die from alcoholism than were women.

Figure 6-12.
 Percentage of Deaths by Cause and Age,
 Oregon Residents, 2000



recorded in 1999. Arteriosclerosis was the thirteenth leading cause of death in 2000, claiming 230 Oregonians. However, the number of deaths attributed to arteriosclerosis do not include all deaths related to this cause, since many have been classified under more specific manifestations of cardiac and cerebral disease.

Women have long been more likely to die from arteriosclerosis; their 2000 death rate was 7.7, compared to 5.7 for men. [Table 6-2]. Eight in ten of the deaths (82.6%) occurred among those 75 or older. The median age at death was 85, one of the oldest among the leading causes.

Because most deaths attributed to arteriosclerosis do not occur until age 85 or older, the number of years of potential life lost are typically very small; in 2000, just 61 years were lost. Oregon residents died from arteriosclerosis every 1.6 days, on average.

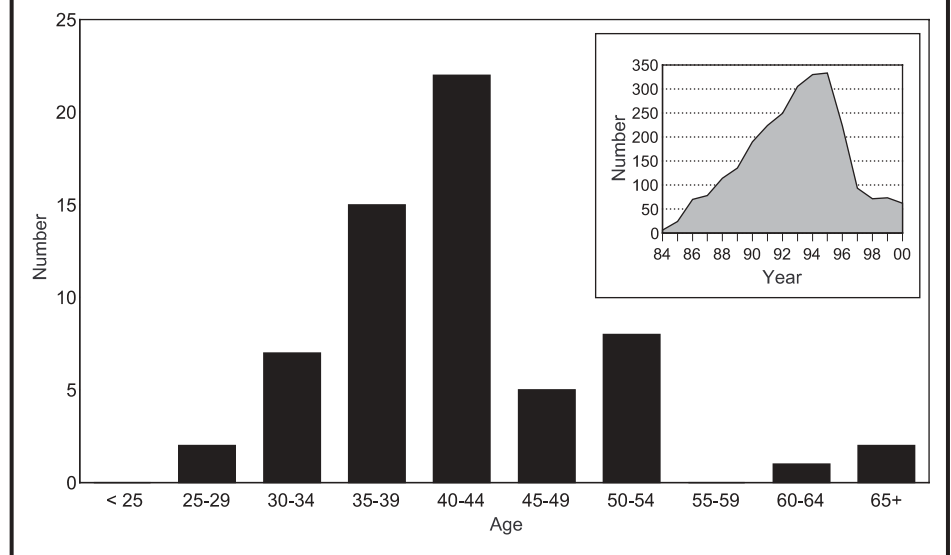
HOMICIDE

Oregonians were least likely to be murdered in 2000 than any time since 1964. The number of deaths fell to 109 and the rate to 2.7 per 100,000 population. Compared to 1986, when the homicide rate peaked at 6.8, the risk of being murdered in 2000 was less than one-half of what was a little more than a dozen years earlier. Homicide ranked 22nd among the leading causes of death. (Unlike ICD-9, deaths resulting from legal intervention are no longer included in this category; see Table 6-30 for the number of deaths attributable to the actions of law enforcement officers.)

Males were almost four times as likely to be murdered as were females (4.3 per 100,000 versus 1.1). Even the youngest Oregonians were at risk. Ten children who had not yet reached their

The homicide rate fell to a level not seen for almost two generations.

Figure 6-13.
Number of AIDS Deaths by Age During 2000
and Distribution of Total AIDS Death by
Year, 1984-2000, Oregon Residents



fifteenth birthday were murdered during 2000; in fact, the death rate for infants was about the same as for 25- to 44-year-olds, the age group at greatest risk. [Table 6-7t]. Although the infant homicide rate for any one year is based on a very small number of deaths, the pattern of high infant death rates is generally consistent over time. The median age at death was 32 years.

Firearms were used in most (67.7%) homicides; handguns predominated. [Table 6-30]. Sharp objects (e.g., knives) and strangulation/hanging followed tied at a distant second with 5.4 percent each. Homicide was the eighth leading cause of years of potential life lost by Oregonians, accounting for 2,918 years. On average, a state resident was murdered every 3.9 days.

HIV DISEASE

HIV disease (AIDS) led to the deaths of 62 Oregonians, or 1.8 per 100,000 population, the lowest rate in the past 15 years. [Figure 6-13]. Most (54 or 87.1%) of the decedents during 2000 were males, but eight were females. [Table 6-6]. Age-specific death rates were highest among 35- to 45-year-olds. With the advent of powerful AIDS drug cocktails, including protease inhibitors and anti-retroviral medications, survival time has increased and is reflected in the median age at death. One-half of the decedents survived until age 40, six years longer than during 1985.

A declining number of deaths from this cause as well as increased survival times has resulted in a diminishing number (1,432) of years potential life lost. HIV disease claimed an Oregonian every 5.9 days.

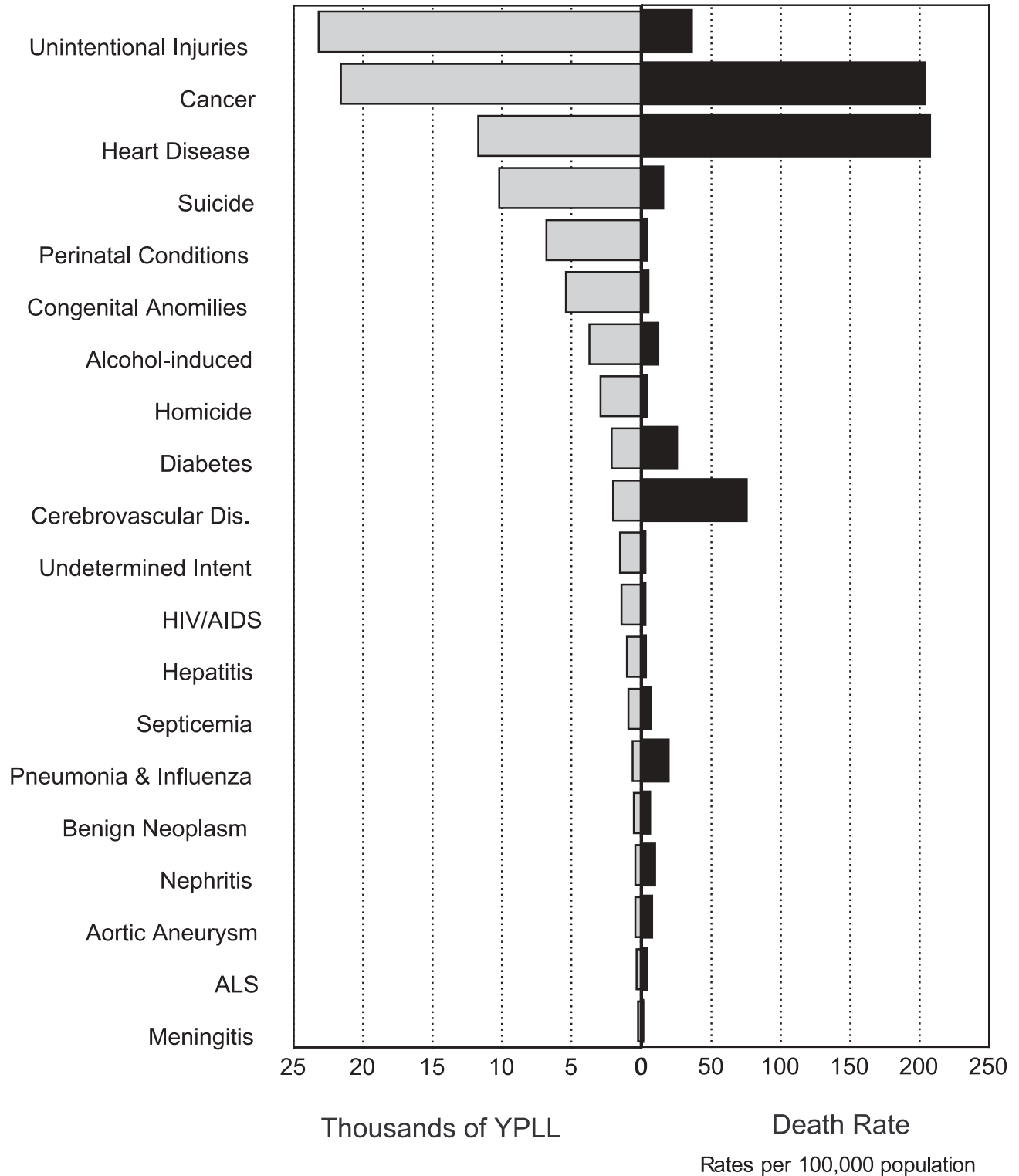
This category is more inclusive than it was prior to 1999; please see Appendix B.

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 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. 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 6-14 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.)

***The oldest
Oregonian to die
in 2000 was a man
born in 1889.***

Figure 6-14.
 Leading Causes of Years of Potential Life Lost Before Age 65 and Corresponding Death Rates, Oregon Residents, 2000



ENDNOTES

1. 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 and sections; and modifications 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 comparability ratios described in Appendix B.
2. Unintentional injuries is preferred to the term accidents (ICD-10 V00-X59, Y85-Y86) among health professionals.
3. This cause includes both a complex of natural and acute poisoning deaths unlike previous years' data which excluded the latter. Beginning with 1999 data, the following causes are included: alcoholic mental/behavioral disorders, degeneration of the nervous system, polyneuropathy, cardiomyopathy, gastritis, liver disease, maternal care for damage to fetus from alcohol, fetus or newborn affected by maternal alcohol use, alcohol in the blood, acute unintentional alcohol poisoning, acute suicidal alcohol poisoning, and acute alcohol poisoning of undetermined manner. The ICD-10 codes are F10, G31.2, G62.1, I42.6, K29.2, K70, O35.4, P04.3, R78.0, X45, X65, and Y15, respectively.