

## ELDERLY MORTALITY

Life ended for 29,323 elderly persons (age 65+) in 2000, for a mortality rate of 4,390.7 per 100,000 (**Table 2C-24**), 3.6 percent greater than the 1990 rate of 4,239.2. In absolute numbers, 9,026 more elderly Arizonans died in 2000 than in 1990.

### Leading causes of death

Compared to the 2000 census enumerations, the projected population numbers for elderly for 1998-1999 (used as denominators to calculate rates) were overestimated. Not surprisingly, all rates for the leading causes of death among elderly were greater in 2000 than they were in 1998 or 1999.

However, two of the leading cause-specific rates of death for elderly were lower in 2000 compared to 1990. The rate of elderly deaths from *heart disease* was 13.7 percent lower, and the mortality rate for cancer was 3.9 percent lower in 2000 than in 1990 (**Table 2C-24**).

Fifty-two percent of the elderly deaths in 2000 were due to either *heart disease* or *cancer*. In 1990, *heart disease* was 49 percent more likely than *cancer* to claim senior lives; in 2000 the differential was 34 percent greater for *heart disease*.

For two of the leading causes of death (*Alzheimer's disease* and *influenza and pneumonia*) major breaks occurred in comparability as a result of coding and classification changes between ICD-9 and ICD-10. Over 55 percent more deaths are classified to *Alzheimer's disease* in ICD-10 than ICD-9. Almost all of this increase comes from deaths classified in ICD-9 as *Presenile dementia* but reclassified in ICD-10 to *Alzheimer's disease*.

In contrast, deaths classified as *pneumonia* in ICD-9 are classified in ICD-10 to many other causes. As a result, the comparability ratio of 0.6982 for influenza and pneumonia indicates a decrease of about 30 percent in the allocation of deaths to this cause.

The comparability-modified death rate for *Alzheimer's disease*, the fifth leading cause of elderly female mortality in Arizona in 2000, increased by 80.8 percent from 106.0/100,000 in 1994\* to 191.6/100,000 in 2000 (**Figure 2C-13**). For elderly males, the mortality rate for *Alzheimer's disease*, their seventh leading cause of death, increased by 15.6 percent from 93.4/100,000 in 1994 to 108.0/100,000 in 2000. In 1994, the *Alzheimer's disease* mortality risk of elderly females compared to males was 13.5 percent greater, while in 2000 the risk was 77.4 percent greater.

The comparability-modified mortality rate for influenza and pneumonia increased from 149.1/100,000 in 1999 to 153.8/100,000 in 2000.

Among unintentional injury deaths unrelated to motor vehicles, Arizona's elderly experienced a substantial increase in mortality from *fall-related injuries* (**Figure 2C-14**). Between 1990 and 2000, 2,504 Arizona's elderly died from *fall-related injuries*. The rate of *fall-related deaths* increased by 27 percent from 36.1/100,000 in 1989 to 45.7/100,000 in 2000.

Risk of death from both *Alzheimer's disease* and *fall-related injury* increases sharply with age. Older elderly, those equal to or older than 75 years of age, made up a larger share of the general elderly population in 2000 (48.2 percent) than in 1990 (39.4 percent). Females accounted for 56 percent of all older elderly in Arizona in 2000.

### Urban/rural differences

During the 11-year period from 1990 to 2000, annual total mortality rates were consistently lower for rural elderly than for urban elderly (**Table 2C-25**). Urban compared to rural elderly had a greater risk of dying from *chronic lower respiratory diseases* (16 percent), *heart disease* (13 percent), *stroke* (8.9 percent) and cancer (2.5 percent).

\* It is unclear whether comparability-modified rates can be calculated for years before 1994.