

Technical Notes

Computation of Death Rates

In this report, total mortality rates are expressed as resident deaths per 1,000 population. All cause-specific death rates are expressed as resident deaths per 100,000 population. Deaths are assigned to cause-of-death categories based on the underlying (or primary) cause of death from the death certificate. Appendix A describes the cause-of-death categories in terms of codes from the tenth revision of the International Classification of Diseases. All rates in Tables 1-20 use total population in the denominator except rates for the sex-specific cancer sites use male or female population in the denominator. Population bases for these rates were provided by the Office of State Planning in the Governor's Office. The infant mortality rates in Table 21 are computed as the number of resident deaths under one year of age per 1,000 resident live births.

Deaths in this report are assigned to place of residence. For deaths of people in long-term institutions (mental, penal, old age, orphan, nursing home, rest home, etc.), the institution is considered the usual residence if the decedent lived in the institution at least one year. College students and military personnel are considered residents of the college or military community.

The following definition applies to the rates of this report:

Unadjusted Annual Death Rate: The annual death rates are computed as resident deaths per 1,000 or 100,000 population. These rates reflect an area's status according to the deaths during the given year.

A Word of Caution: Rates for sex-specific cancers (e.g., prostate) use male or female population in the denominator and therefore are not comparable to other rates. Therefore, in ranking the causes of cancer death by site one must use the observed number of deaths rather than the rates.

Interpretation of Death Rates

In assessing the relative mortality of a county, be particularly aware of rates based on a small number of deaths (fewer than 20 deaths). In such cases, random fluctuation in the rate may make comparisons misleading. The reader should read very carefully the next section entitled "Caution About Use of Rates."

Caution About Use of Rates

Small Number of Events:

Any death rate with a small number of deaths in the numerator will have substantial random variation over time (a large standard error). A good rule of thumb is that any rate based on fewer than 20 events in the numerator may be subject to serious random error. As such, extreme caution should be taken when making comparisons or assessing trends with rates calculated with fewer than 20 events. Many of the death rates in this report have numerators smaller than 20. For a detailed discussion of Problems with Rates Based on Small Numbers, refer to Statistical Primer No. 12 of the State Center for Health Statistics, available on our Web site (www.schs.state.nc.us/SCHS/pubs/) or by request to the Center.