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Year 2000 Population Standard for Age- Adjusting Death Rates in the United States

Information on the adoption, implementation and impact, plus frequently asked Q&A's

Adoption of the Year 2000 population standard

The National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention has adopted a new population standard for age-adjusting death rates in the United States. NCHS is one of many

health and statistical organizations that has adopted the Year 2000 population as the new standard. Age adjusting is a process by which the age composition of a population is held constant so that changes or differences in age composition can be eliminated from the analysis. This is necessary

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because older populations have higher death rates merely because death rates increase with age. Age adjusting allows the researcher to make meaningful comparisons over time and among groups in the risk of mortality.

Purpose of the Year 2000 standard

The reason for the adoption of a new standard is to promote uniformity and comparability of data from many organizations by choosing a single population standard. For many years, NCHS had used the 1940 U.S. population as the standard and other agencies had used this or other populations for age adjusting. Adoption of a new population standard by agencies that produce or utilize data will eliminate the confusion and misunderstanding created by the use of various population standards and would preclude the need to recalculate mortality rates for multiple purposes and multiple uses.

Implementation of the Year 2000 standard

The first release of NCHS data using the Year 2000 population standard will be in the upcoming report of preliminary death statistics for 1999 to be issued in the Fall of 2000. To aid users, the report will include age-adjusted death rates for

1999 and 1998. Data for earlier years, recalculated by the Year 2000 standard, will be available on the Internet. In addition, the mortality data base on the CDC WONDER system (available through the CDC Website at www.cdc.gov) will provide users with the option of the Year 2000 for age adjusting death rates, along with a variety of other standard populations. In general, it is only appropriate to track trends over time or make comparisons among groups using the same population standard.

Impact of the Year 2000 standard

Comparing age-adjusted rates calculated by the Year 2000 population standard to those calculated using the 1940 population standard would appear to increase the overall age-adjusted rates; increase rates for some causes for such major chronic diseases as heart disease, cancer and stroke; reduce age-adjusted rates for such causes as homicide; and reduce racial disparities typically seen in overall and cause-specific mortality rates. However, these changes represent only the effect of the new standard not a real change in mortality rates. Age-adjusted death rates should be used for comparative purposes only and should not be interpreted as the absolute risk of death.

Information on the Year 2000 Standard

For more information on the Year 2000 population standard and age adjusting mortality rates, check the NCHS mortality website at www.cdc.gov/nchswww/about/major/dvs/mortdata.htm. The NCHS publication, "Age Standardization of Death Rates: Implementation of the Year 2000 Standard," National Vital Statistics Reports, Vol. 47, No. 3, October 7, 1998 provides an overview of the adoption and use of the standard.

Frequently Asked Questions

1. What are death rates?

Death rates are the number of deaths shown in relation to the population at risk. This permits a meaningful comparison of the risk of mortality for population groups of various sizes. This type of death rate is called a crude death rate, because no adjustments are made to the rate. The crude death rate shows the absolute burden or risk of death.

2. What are age-adjusted death rates?

The age-adjusted death rate provides a single, summary (or average) measure of mortality risk based on a standard

population. By using a standard population to calculate the age-adjusted death rate, the age composition among periods or population groups is held constant. This is necessary because older populations have higher death rates merely because death rates increase with age.

3. When should age-adjusted death rates be used?

You should consider using age-adjusted death rates when analyzing mortality trends or comparing different population groups or different geographic areas. Crude (or unadjusted) death rates may be used to determine the absolute rate of death at any given time. In addition, a thorough analysis of mortality should also involve the examination of age-specific death rates (rates for specific age groups) because they are largely unaffected by differences in age composition.

4. Why was a new population standard selected at this time?

A number of standard populations have been used by major health and statistical agencies. Comparison of data from these groups was difficult and sometimes confusing. A 1997 workshop with technical and policy experts recommended that a common standard population be adopted. In addition, the workshop recommended that a pop-

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ulation standard that represents the current population be adopted. Thus, the Year 2000 population standard was selected.

5. Who has adopted the new population standard?

The Department of Health and Human Services (HHS) adopted the new standard in 1998 and since that time agencies, such as the National Institutes of Health and the Centers for Disease Control and Prevention have developed plans for the implementation of the Year 2000 standard. NCHS will implement the new standard beginning with data for 1999. In addition, state vital statistics programs have or will be adopting the new standard. It is expected that other public and private groups will utilize the new standard as appropriate with their data systems.

6. What help will be provided to understand and use the Year 2000 standard?

There are published reports that provide extensive information on the use of the Year 2000 standard. To aid users in trend analysis, NCHS publications will include age-adjusted death rates for earlier years recalculated by the Year 2000 standard. Historic time series back to the data year 1968 calculated by the new standard will also be available. In addition, the mortality data base

on the CDC WONDER system (available through the CDC Website at <http://wonder.cdc.gov/>) will provide users with the option of the Year 2000 for age standardizing death rates, along with a variety of other standard populations.

FOR MORE ABOUT THE YEAR 2000 POPULATION STANDARD:

- NCHS Website at <http://www.cdc.gov/nchs>
- NCHS mortality website at www.cdc.gov/nchs/about/major/dvs/mortdata.htm
- NCHS Publications:

“Age Standardization of Death Rates: Implementation of the Year 2000 Standard,” National Vital Statistics Reports, Vol. 47, No. 3, October 7, 1998, by Robert N. Anderson and Harry M. Rosenberg provides an overview of the adoption and use of the standard.

“Report on the Second Workshop on Age Adjustment,” Vital and Health Statistics, Series 4, No. 30, December 1998, by Robert N. Anderson and Harry M. Rosenberg reports on the discussion of the technical issues