SAMPLE DESIGN OF THE
1993 NATIONAL MORTALITY FOLLOWBACK SURVEY

Background

The 1993 National Mortality Followback Survey (NMFS) is the sixth in a series of surveys, first initiated by National Center for Health Statistics (NCHS) in the 1960's, to provide additional information related to the mortality experience of the United States beyond that obtained through the vital registration of deaths. The survey is a collaborative project between NCHS and various Federal agencies, state and local governments, colleges and university, and private associations and organizations.

The 1993 NMFS concentrates on five subject areas: socio-economic differentials in mortality, associations between risk factors and cause of death, disability, access and utilization of health care facilities in the last year of life, and the reliability of certain items reported on the death certificate. There is particular emphasis given to deaths resulting from homicide, suicide, and accidental injuries.

Sample design

The survey focuses on a nationally representative sample of individuals aged 15 year and over who were residents of the United States and died in 1993. Forty-nine of the 50 State vital registration areas granted approval to sample their death certificates. The independent vital registration areas of the District of Columbia and New York City also gave permission to sample their death certificates. South Dakota declined to participate in the NMFS due to state law restricting the use of death certificate information.

The universe or target population for the 1993 NMFS is therefore, all death certificates filed for individuals aged 15 year and over who were residents of the United States and died in 1993, excluding death certificates filed in South Dakota or death certificates for residents of South Dakota filed in other states. The sampling frame for the 1993 NMFS is the 1993 Current Mortality Sample (CMS). The CMS is a 10-percent systematic random sample of death certificates received by the vital statistics offices. In 1993, NCHS received certificates from the vital registration areas on a monthly basis about three to four months after death occurred.

Based on the expressed focus and emphasis of the survey, an evaluation of the distribution of 1992 deaths was undertaken to assist in the identification of sample strata. This evaluation established four basic criteria for the identification of sampling strata: age, race, gender, and cause of death. Four broad age groups (15 to 24, 25 to 34, 35 to 98, an 99 years and over) and two broad racial groups (black and nonblack decedents) were identified. Twelve causes of death were identified: homicide; suicide; motor vehicle accidents involving drivers, motorcyclists, and pedestrians; other motor vehicle accidents; non-motor vehicle accidents; alcohol related; drug related; human immunodeficiency virus; malignant neoplasms; chronic obstructive pulmonary diseases; diseases of the heart; and all other diseases and external causes. The initial 35 to 98

year age group for individuals dying of suicide was further divided into ages 35 to 49, 50 to 64, 65 to 79, and 80 to 98 years.

Using these criteria, 50 sampling strata were created and certificates were randomly drawn, by month, from the 1993 CMS. Certificates from the CMS were selected with certainty for 12 of the 50 strata (see table A), representing 45-percent of the total sample of 22,957 certificates. An over-sample of some of CMS death certificates was used to obtain reliable estimates for several population subgroups. The over-sampled subgroups include black decedents, female decedents, decedents under age 35, and decedents over age 99. For the remaining 38 non-certainty strata, the sampling interval or "take every" values ranged from 1.09 to 115.24.

Table A. Strata selected with certainty for causes of death by sex, age, and race: National Mortality Followback Survey, 1993

Cause of death and ICD-9 code	Sex	Age	Race
Human immunodeficiency virus. *041-*044	Male and female	All	Black
Human immunodeficiency virus. *041-*044	Male	15-24 and 99+ years	Nonblack
Human immunodeficiency virus. *041-*044	Female	All	Nonblack
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues 140-208	Male and female	15-34 and 99+ years	All
Chronic obstructive pulmonary diseases and allied conditions. 490-496	Male and female	All	Black
Chronic obstructive pulmonary diseases and allied conditions. 490-496	Male and female	15-34 and 99+ years	Nonblack
Diseases of the heart 390-398, 402, 404-429	Male and female	15-34 years	All
Diseases of the heart 390-398, 402, 404-429	Male	99+ years	All
Diseases of the heart 390-398, 402, 404-429	Female	99+ years	Nonblack
Alcoholic psychoses. . . . . .291 Alcohol dependencies syndrome . . . . 303 Alcohol abuse . . . . .305.0 Alcoholic polyneuropathy 425.5	Male and female	All	Black
Alcoholic gastritis 535.5	Female	All	Nonblack
Alcohol related chronic liver disease and cirrhosis 571.0-571.3	Male	15-34 and 99+ years	Nonblack
Excessive blood level of alcohol. . . . . .790.3 Accidental poisoning by alcohol, not elsewhere classified. E860			
Drug psychoses . . . . 292 Drug dependence. . . . . 304 Nondependent abuse of drugs. . . . . . . 305.2-305.9 Accidental poisoning by drugs, medicaments and biologicals. E850-E858	Male and female	All	Black
	Male	All	Nonblack
Drug related poisoning, undetermined as to accidental or purposely inflicted. . . .E980.0-E980.5	Female	15-34 and 99+ years	Nonblack
Motor vehicle accidents E810-E825	Male and female	All	Black
Motor vehicle accidents E810-E825	Female	All	Nonblack
Motor vehicle accidents E810-E825	Male	99+ years	Nonblack
Drivers, motorcyclists, and pedestrians . .E810-E819[1]	Male and female	All	All
Other accidents and adverse effects. E800-E807, E826-E949	Male and female	All	Black
Other accidents and adverse effects. E800-E807, E826-E949	Male and female	99+ years	Nonblack
Other accidents and adverse effects. E800-E807, E826-E949	Female	15-34 years	Nonblack
Suicide. E950-E959	Male and female	All	Black
Suicide. E950-E959	Female	All	Nonblack
Suicide. E950-E959	Male	80+ years	Nonblack
Homicide and legal intervention E960-E978	Male	99+ years	Black
Homicide and legal intervention E960-E978	Female	All	Black
Homicide and legal intervention E960-E978	Male and female	99+ years	Nonblack
All other diseases and external causes. . .All other codes	Male and female	15-34 and 99+ years	Black
All other diseases and external causes. . .All other codes	Male	15-24 and 99+ years	Nonblack
All other diseases and external causes. . .All other codes	Female	15-34 years	Nonblack

[1] ICD-9 codes E810-E819 include the fourth digit specification of 0, 2, or 7 used to identify the injured person.

Note: ICD-9 is the Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, based on the recommendations of the Ninth Revision Conference, 1975 (Geneva: World Health Organization, 1977).