/ital and Health Statistics



Mortality Experience of the 1986–2000 National Health Interview Survey Linked Mortality Files Participants

Copyright information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

Suggested citation

Ingram DD, Lochner KA, Cox CS. Mortality experience of the 1986–2000 National Health Interview Survey linked mortality files participants. National Center for Health Statistics. Vital Health Stat 2(147). 2008.

Library of Congress Cataloging-in-Publication Data

Mortality experience of the 1986-2000 national health interview survey linked mortality files participants.

p. cm. Includes bibliographical references. ISBN 0-8406-0626-5

1. Mortality--United States. 2. United States--Statistics, Vital. I. National Center for Health Statistics (U.S.)

HB1335.M675 2008

304.6'4097309049--dc22

2008030807

For sale by the U.S. Government Printing Office Superintendent of Documents Mail Stop: SSOP Washington, DC 20402-9328 Printed on acid-free paper.

Vital and Health Statistics

Series 2, Number 147

Mortality Experience of the 1986–2000 National Health Interview Survey Linked Mortality Files Participants

Data Evaluation and Methods Research

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Centers for Disease Control and Prevention National Center for Health Statistics

Hyattsville, Maryland October 2008 DHHS Publication No. (PHS) 2009-1347

National Center for Health Statistics

Edward J. Sondik, Ph.D., Director

Jennifer H. Madans, Ph.D., Acting Co-Deputy Director

Michael H. Sadagursky, Acting Co-Deputy Director

Jennifer H. Madans, Ph.D., Associate Director for Science

Jennifer H. Madans, Ph.D., Acting Associate Director for Planning, Budget, and Legislation

Michael H. Sadagursky, Associate Director for Management and Operations

Lawrence H. Cox, Ph.D., Associate Director for Research and Methodology

Linda B. Torian, Acting Director for Information Technology

Linda B. Torian, Acting Director for Information Services

Linda T. Bilheimer, Ph.D., Associate Director for Analysis and Epidemiology

Charles J. Rothwell, M.S., Director for Vital Statistics

Jane E. Sisk, Ph.D., Director for Health Care Statistics

Jane F. Gentleman, Ph.D., Director for Health Interview Statistics

Clifford L. Johnson, M.S.P.H., Director for Health and Nutrition Examination Surveys

Office of Analysis and Epidemiology

Linda T. Bilheimer, Ph.D., Associate Director for Analysis and Epidemiology

Amy B. Berstein, Ph.D., Chief, Analytic Studies Branch

Contents

Ackno	owledgments	1
Abstra	act	1
Des	uction	1 2 2
Ana Moi	ods alytic Sample rtality Ascertainment tistical Methods	2
Result	ts	3
Discus	ssion	11
Refere	ences	13
Text	Figures	
1.	Survival curves for adults aged 55–59 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population	4
2.	Survival curves for adults aged 65–69 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population	5
3.	Survival curves for adults aged 75–79 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population	6
4.	Survival curves for adults aged 55–59 years, by race and sex: 1992 NHIS Linked Mortality File cohort and U.S. population.	7
5.	Survival curves for adults aged 65-69 years, by race and sex: 1992 NHIS Linked Mortality File cohort and	
6.	U.S. population	8
7.	U.S. population	9
8.	U.S. population	10
9.	U.S. population	11
9.	U.S. population	12
Detai	iled Tables	
1.	Number of white and black sample participants aged 18 years and over, by eligibility status, NDI mortality status, race, and sex: 1986–2000 NHIS Linked Mortality Files	15
2.	Unweighted numbers of NHIS participants, by age at NHIS interview and NHIS cohort: 1986-2000 NHIS Linked	
3.	Weighted percent distribution of NHIS participants, by age at NHIS interview and NHIS cohort: 1986-2000 NHIS	16
4.	Linked Mortality Files	16
		17

Cumulative survival probabilities after 2, 5, 10, 15, and 16 years for the U.S. population, compared with those for the 1986 NHIS Linked Mortality File cohort, by race, sex, and age	18
Cumulative survival probabilities after 2, 5, 10, and 15 years for the U.S. population, compared with those for the	10
1987 NHIS Linked Mortality File cohort, by race, sex, and age	20
1988 NHIS Linked Mortality File cohort, by race, sex, and age	21
Cumulative survival probabilities after 2, 5, 10, and 13 years for the U.S. population, compared with those for the	
	22
	23
	24
	25
	26
	27
	•
	28
	20
	29
	20
	30
	31
	31
	32
	34
	33
	33
	34
·	٥.
	35
Mortality Files	36
Number and percentage of statistically significant differences between the cumulative survival probabilities based	
on the NHIS Linked Mortality File and those for the U.S. population, by NHIS cohort, age at NHIS interview, and	
length of follow-up: 1986–2000 NHIS Linked Mortality Files	37
	the 1986 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, 10, and 15 years for the U.S. population, compared with those for the 1987 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, 10, and 14 years for the U.S. population, compared with those for the 1988 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, 10, and 13 years for the U.S. population, compared with those for the 1980 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, 10, and 12 years for the U.S. population, compared with those for the 1990 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, 10, and 11 years for the U.S. population, compared with those for the 1991 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, and 10 years for the U.S. population, compared with those for the 1992 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, and 9 years for the U.S. population, compared with those for the 1993 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, and 8 years for the U.S. population, compared with those for the 1994 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2, 5, and 7 years for the U.S. population, compared with those for the 1995 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2 and 5 years for the U.S. population, compared with those for the 1995 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities after 2 and 5 years for the U.S. population, compared with those for the 1997 NHIS Linked Mortality File cohort, by race, sex, and age. Cumulative survival probabilities a

Abstract

Objectives

The National Center for Health Statistics (NCHS) has produced the 1986-2000 National Health Interview Survey (NHIS) Linked Mortality Files by linking eligible adults in the 1986-2000 NHIS cohorts through probabilistic record linkage to the National Death Index to obtain mortality follow-up through December 31, 2002. The resulting files contain more than 120,000 deaths and an average of 9 years of survival time. To assess how well mortality was ascertained in the linked mortality files, NCHS has conducted a comparison of the mortality experience of the 1986-2000 NHIS cohorts with that of the U.S. population. This report presents the results of this comparative mortality assessment.

Methods

The survival of each annual NHIS cohort was compared with that of the U.S. population during the same period. Cumulative survival probabilities for each annual NHIS cohort were derived using the Kaplan-Meier product limit method, and corresponding cumulative survival probabilities were computed for the U.S. population using information from annual U.S. life tables. The survival probabilities were calculated at various lengths of follow-up for each age-race-sex group of each NHIS cohort and for the U.S. population.

Results

As expected, mortality tended to be underestimated in the NHIS cohorts because the sample includes only civilian, noninstitutionalized persons, but this underestimation generally was not statistically significant. Statistically significant differences increased with length of follow-up, occurred more often for white females than for the other race-sex groups, and occurred more often in the oldest age groups. In general, the survival experience of the age-race-sex groups of each NHIS cohort corresponds quite closely to that of the U.S. population, providing support that the ascertainment of mortality through the probabilistic record linkage accurately reflects the mortality experience of the NHIS cohorts.

Keywords: mortality • record linkage • follow-up studies • cohort studies • passive follow-up

Mortality Experience of the 1986–2000 National Health Interview Survey Linked Mortality Files Participants

by Deborah D. Ingram, Ph.D.; Kimberly A. Lochner, Ph.D.; and Christine S. Cox, M.A., Office of Analysis and Epidemiology

Introduction

The National Center for Health Statistics (NCHS) periodically conducts mortality follow-up studies for its major population-based surveys through record linkage to administrative data sources. In 2004, NCHS completed a mortality follow-up study for the 1986–2000 National Health Interview Survey (NHIS) cohorts in which mortality follow-up through December 31, 2002, was obtained by linking NHIS participants to the National Death Index (NDI), thus adding a prospective component to these nationally representative U.S. samples. The resulting 1986-2000 NHIS Linked Mortality Files are a population-based data source containing more than 120,000 deaths and an average of 9 years of survival time. The high-quality sociodemographic, health, and mortality information available in these files provides the opportunity to conduct studies of the association of a variety of health factors with mortality in a nationally representative sample of the civilian noninstitutionalized U.S. population.

Although the linked mortality files resulting from NCHS's data linkage activities are highly valuable for epidemiologic and health services research, they have limitations due to the passive nature of the follow-up. Because NHIS participants were not recontacted to determine their mortality status but rather had their mortality status ascertained through probabilistic matching to death records, error is introduced because of false positive and false negative matches. False positive matches can occur in two ways: 1) when an NHIS participant, who is alive, is incorrectly matched to an NDI death certificate, in which case the assumption of death is incorrect, or 2) when a deceased NHIS participant is matched to the wrong NDI death certificate, in which case the assigned date and cause of death are likely to be incorrect. False negative matches occur when a deceased participant is not matched to an NDI record and, thus, is wrongly assumed to be alive. NCHS has made every effort to minimize false positive and false negative matches. An evaluation of the current matching algorithm used to link NHIS participant records to NDI death records demonstrated that the matching

The authors gratefully acknowledge the contributions made by Emily Plunkett, who assisted with data input and the initial SAS programming as a Joint Program in Survey Methodology Program intern at the National Center for Health Statistics (NCHS). The authors also gratefully acknowledge the assistance of the following people at NCHS who reviewed this report: Amy B. Bernstein and Diane M. Makuc, Office of Analysis and Epidemiology, and Jennifer H. Madans, Acting Deputy Director, Office of the Center Director.

This report was edited by Megan M. Cox and Demarius V. Miller, CDC/CCHIS/NCHS/Division of Creative Services, Writer-Editor Services Branch, and typeset by Zung T. Le, CDC/CCHIS/NCHM/Division of Creative Services; graphics were produced by Zorica Tomic-Whalen, CDC/CCHIS/NCHM/Division of Creative Services, NOVA contractor.

algorithm correctly classified 98.5% of survey records (1).

Incorrect matches or nonmatches can lead to differences between the survival experience of the sample and that of the population itself. This may be particularly true for specific age and race groups for which the probability of correct matches may be lower. Therefore, to assess how well mortality was ascertained in the linked mortality files, NCHS has conducted a comparison of the mortality experience of the 1986-2000 NHIS cohorts with that of the U.S. population. Cumulative survival probabilities for each annual NHIS cohort were derived using the Kaplan-Meier product limit method, and corresponding cumulative survival probabilities were computed for the U.S. population using information from U.S. life tables. However, the U.S. life tables only approximate the expected survival of the NHIS cohorts because the NHIS sample is restricted to the civilian noninstitutionalized portion of the U.S. population. Survival differences between the NHIS cohorts and the U.S. population are expected to be greatest among persons who were elderly at baseline and to decrease over time as the NHIS cohorts age and approach the patterns of the total U.S. population. This report presents the results of this comparative mortality assessment.

Description of Linked Mortality Data Resources

A linkage of eligible adult NHIS participants to death certificate data found in the NDI was conducted for each of the 1986-2000 NHIS cohorts, with mortality follow-up through December 31, 2002. Mortality status is ascertained from a probabilistic match between NHIS participant records and NDI death certificate records using key identification information. For more information on eligibility criteria and the matching methodology, please refer to "The 1986-2000 NHIS Linked Mortality File: Matching Methodology" (1). NCHS has created two versions of the new NHIS Linked Mortality Files: restricted-use files that include detailed mortality information and public-use

files that include a limited set of mortality variables.

Description of U.S. Life Table Data Resources

NCHS annually produces period (or current) life tables for the United States based on final mortality data and U.S. Census Bureau July 1 postcensal population estimates for the year. Period life tables apply the age-specific death rates observed for the year to a hypothetical cohort and, therefore, assume that the cohort is subject throughout its lifetime to the death rates prevailing during that year for the U.S. population. For 1986-1995, the annual abridged life tables, which have a final age group of 85 years and over, were used; for 1996-2002, the annual complete life tables, which have a final age group of 100 years and over, were used (2–18). Beginning with the 1996 mortality data, NCHS began constructing complete annual life tables using new methodology to produce the estimates for the population under 85 years of age and also new methodology developed to extend the oldest age interval to 100 years of age and over (12). For this project, the oldest age group in the 1986-1995 abridged life tables was extended from 85 years of age and over to 100 years of age and over by employing the new methodology used to extend the oldest age group in the 1996-2002 complete life tables (12). Estimates of the proportion dying through age 100 were needed to compute survival probabilities for participants 85 years of age and over. Race-specific (white and black) and sex-specific life tables are available for all years.

Methods

Analytic Sample

The analyses were restricted to NHIS participants who were 18 years of age and over at the time of interview and who were eligible for mortality follow-up. Eligibility status is determined by the availability of key identification information that is required for matching to the NDI (1). The sample was further restricted to white and black NHIS participants who had a nonzero NHIS sample weight. In NHIS, zero weights were assigned to any household member who was in the military. Persons of other races were omitted from the analyses because of small numbers.

Mortality Ascertainment

All-cause mortality in the restricted-use NHIS Linked Mortality Files was examined. For participants who were identified as dying by December 31, 2002, length of follow-up was calculated as the time from their NHIS interview until death; respondents who were not identified as dying by the end of the follow-up period were assumed to be alive, and length of follow-up was calculated as time from their NHIS interview to December 31, 2002. Duration of follow-up was calculated using complete information on the month, day, and year of the NHIS interview and the month, day, and year of death (or December 31, 2002, for respondents assumed alive).

Statistical Methods

To assess how well mortality was ascertained in the 1986–2000 NHIS Linked Mortality Files, the survival of each annual NHIS cohort was compared with that of the U.S. population during the same period. For example, the mortality experience of the 1987 NHIS cohort through 2002 was compared with that of the U.S. population during 1987–2002.

NHIS survival probabilities—Using the Kaplan-Meier product limit method, cumulative survival probabilities and standard errors were calculated for each annual NHIS cohort by sex and race (white and black) for the following age groups: 18–24, 25–34, 35–44, 45–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, and 85 years and over, resulting in 44 age-race-sex groups. The Kaplan-Meier calculations were made using the SUDAAN KAPMEIER

procedure to take into account the sample weights and the complex survey design of NHIS (19). NHIS eligibility-adjusted sample weights were used (20). These weights have been adjusted to account for NHIS adults who were not included in the mortality follow-up because of insufficient identification data. For additional information about the eligibility-adjusted sample weights, see the report "Guide to weighting and variance estimation in the 1986–2000 NHIS Linked Mortality Files" (20).

U.S. survival probabilities— Survival probabilities were derived from the U.S. life tables for each of the 44 age-race-sex groups using the midpoint of each age group. For example, for comparison with the Kaplan-Meier survival estimates for NHIS participants aged 55-59 years at the NHIS interview, survival probabilities for persons aged 57 years were derived from the annual U.S. life tables. For the oldest age group, 85 years and over, the comparison involved the Kaplan-Meier estimates for the NHIS participants in this age group and the survival probabilities for persons aged 87 years from the U.S. life tables. Generally, 87 years was the median age for the NHIS participants in the oldest age group.

For each age-race-sex group, information for each year in the follow-up period was obtained from the corresponding U.S. life tables and used to calculate the cumulative survival probabilities. For example, for comparison with the 1987 NHIS cohort survival, the cumulative survival probabilities for the U.S. population were calculated using the probability of surviving the first year of follow-up derived from the 1987 U.S. life table, the probability of surviving the second year of follow-up derived from the 1988 U.S. life table, the probability of surviving the third year of follow-up derived from the 1989 U.S. life table, and so forth across the follow-up period (1987–2002). Note that the survival probabilities derived from the successive life tables reflect aging; that is, if the survival probability for a person aged 57 years is derived from the 1987 life table, then the survival probability for a person aged 58 years is derived from the 1988 life table (and so forth). The

survival probabilities for the U.S. population were calculated from successive life tables rather than from just the initial (survey year) life table to take into account the decrease in U.S. death rates that occurred over the follow-up period.

Cumulative survival probability, ${}_{n}P_{0}$ (the expected proportion surviving n years), is computed using information from the successive life tables according to formula 1:

1.
$${}_{n}P_{0} = \prod_{i=0}^{n-1} [1 - {}_{1}q_{a+i,s+i}],$$

where

n = number of years of follow-up $_{1}q_{x,y} =$ probability that persons in a given race-sex group alive at age x will die within 1 year according to the U.S. life tables for year y

a = midpoint of age group for age at baseline in the NHIS survey year

s = NHIS survey year (1986, 1987, ..., or 2000).

For each age-race-sex group of each NHIS cohort and for the U.S. population, survival probabilities were calculated at various lengths of follow-up. Graphs of survival curves are presented for selected age-race-sex groups of the 1987, 1992, and 1997 NHIS cohorts and the corresponding U.S. population.

Identifying significant differences— Assessment of the statistical significance of the differences between the NHIS and U.S. survival probabilities is complicated by the large number of comparisons being made. For each NHIS cohort, comparisons are made for each of the 44 age-race-sex groups and for one or more different lengths of follow-up. Using the Bonferroni procedure or one of the other multiple comparisons procedures to adjust the α-level of the significance tests seemed too conservative. Instead of using a multiple comparisons procedure, significance was assessed using an α-level of 0.01 rather than the usual α-level of 0.05, thus employing a more conservative test. Therefore, in Tables 5–19, a Kaplan-Meier survival probability computed for an age-racesex group of an annual NHIS cohort is considered to be statistically significantly different from the corresponding survival probability computed from U.S. life tables if the 99% confidence interval around the Kaplan-Meier estimate does not include the life table survival probability. Yet, even with an α -level of 0.01, too many differences may have been identified as statistically significant, particularly in the larger age-race-sex groups.

Results

For each NHIS cohort, the analytic sample includes white and black participants who were 18 years of age and over at the time of their NHIS interview and who were eligible for mortality follow-up. Table 1 presents the analytic sample for each NHIS cohort and the number who are assumed to be deceased as well as the number of those ineligible for mortality follow-up. Note that the sample sizes of the 1986 and 1996 NHIS cohorts are smaller than other survey years and that the number of ineligible respondents increases beginning with the 1997 NHIS.

The age distribution (unweighted counts and weighted percentages) of the eligible adults in each NHIS cohort is shown in Tables 2 and 3. The sample size of the age groups varies considerably. Between 55% and 60% of the eligible adults are aged 25–54 years. The percentage of each cohort that is in the oldest age groups is small, only 1% to 2% for those aged 80-84 years or 85 years and over. The number of decedents in each age group of each NHIS cohort is shown in Table 4. As expected, the percentage of each age group that was deceased at the end of follow-up (December 31, 2002) increases with age and with length of the follow-up. However, for the earlier NHIS cohorts, 10% or more of the participants aged 85 years and over at the time of the baseline interview were assumed to be alive at the end of follow-up, at which time they would be very old (aged 95 years and over).

Cumulative survival probabilities and their associated standard errors for

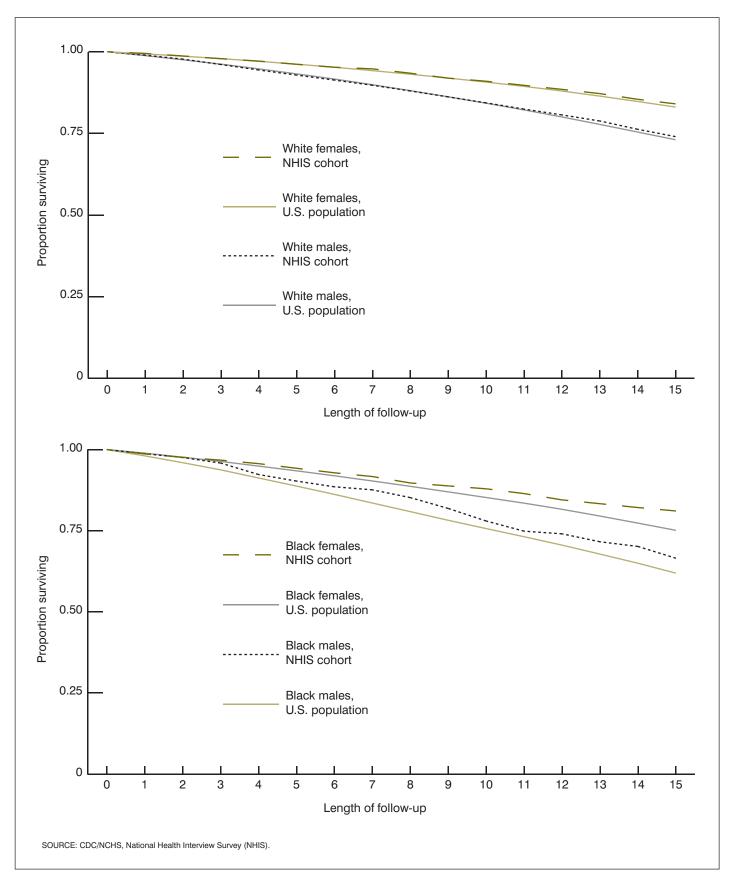


Figure 1. Survival curves for adults aged 55-59 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population

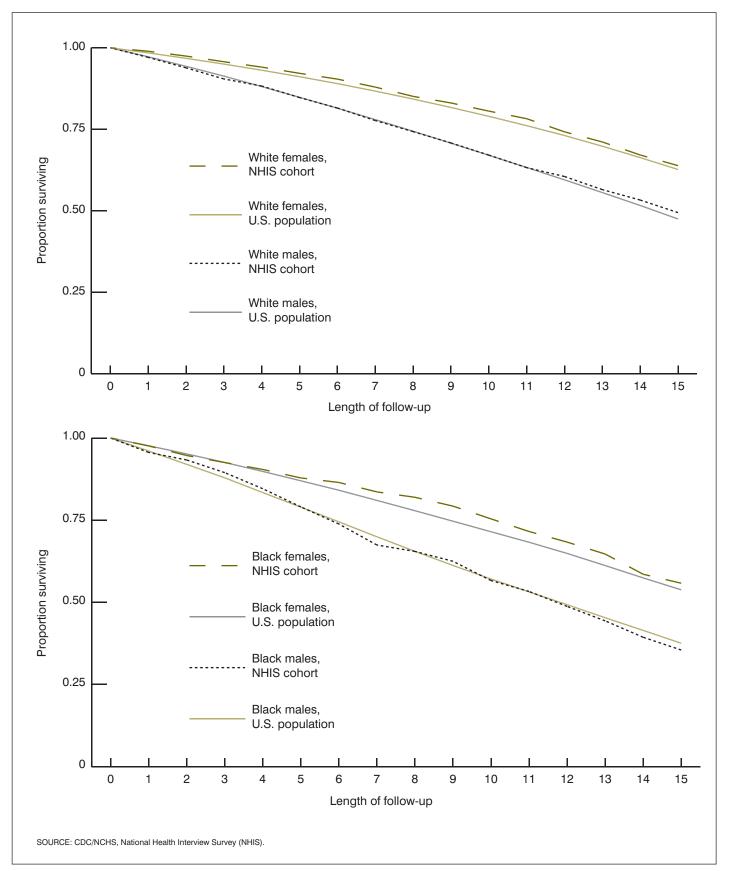


Figure 2. Survival curves for adults aged 65-69 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population

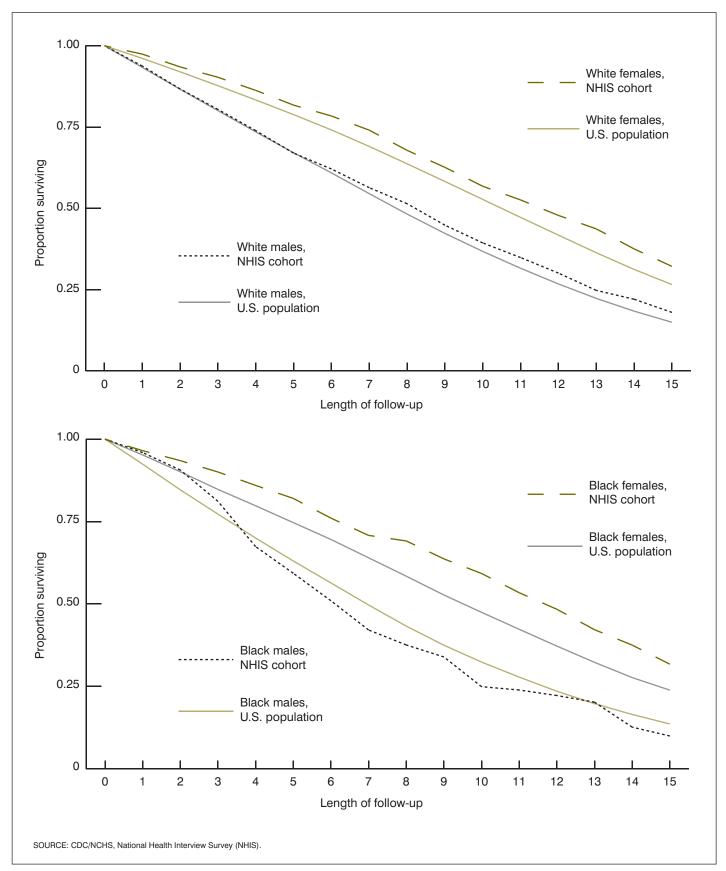


Figure 3. Survival curves for adults aged 75-79 years, by race and sex: 1987 NHIS Linked Mortality File cohort and U.S. population

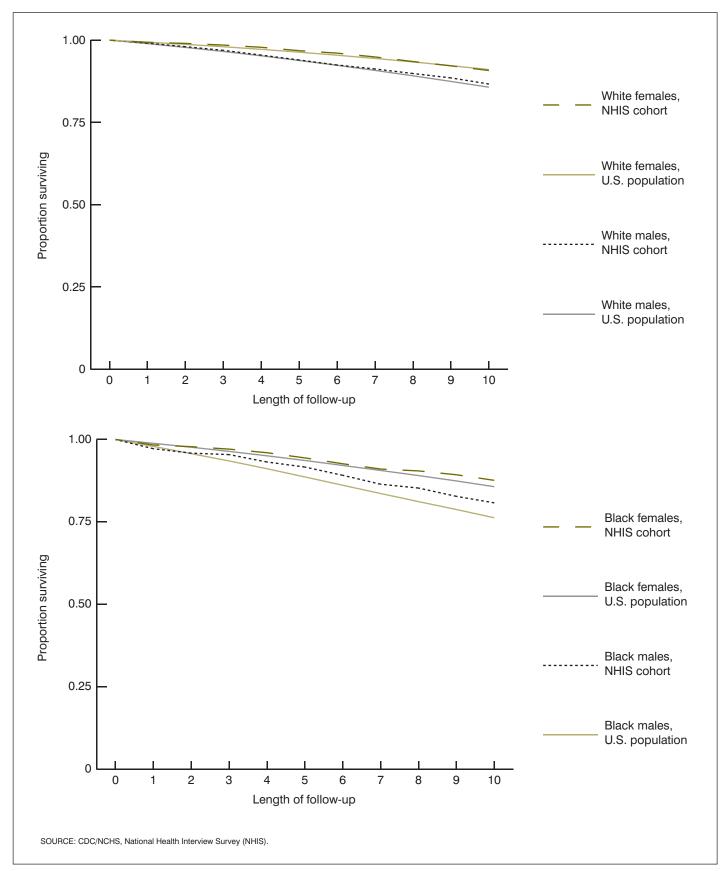


Figure 4. Survival curves for adults aged 55-59 years, by race and sex: 1992 NHIS Linked Mortality File cohort and U.S. population

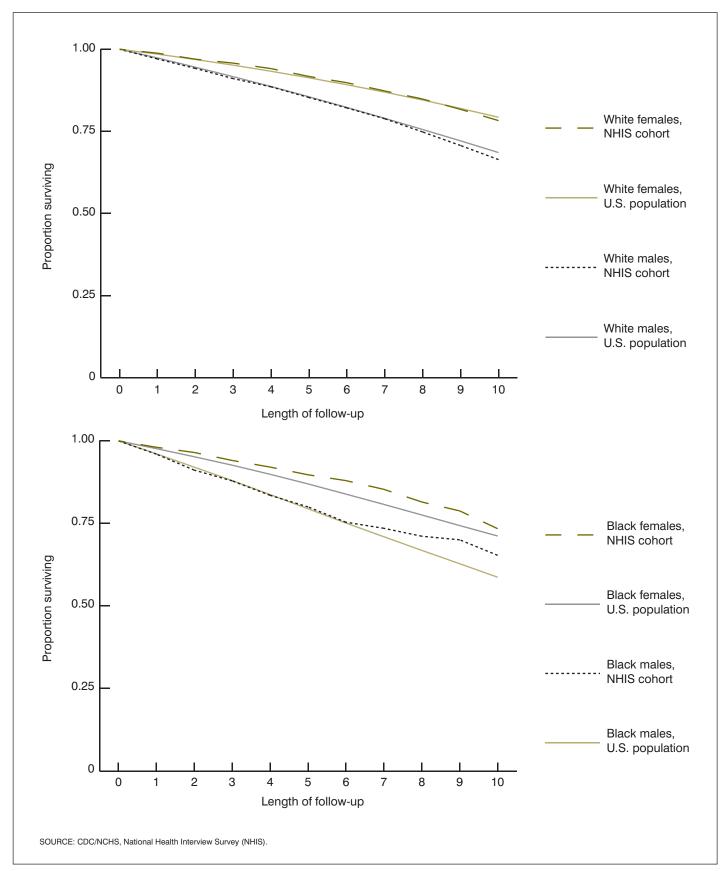


Figure 5. Survival curves for adults aged 65-69 years, by race and sex: 1992 NHIS Linked Mortality File cohort and U.S. population

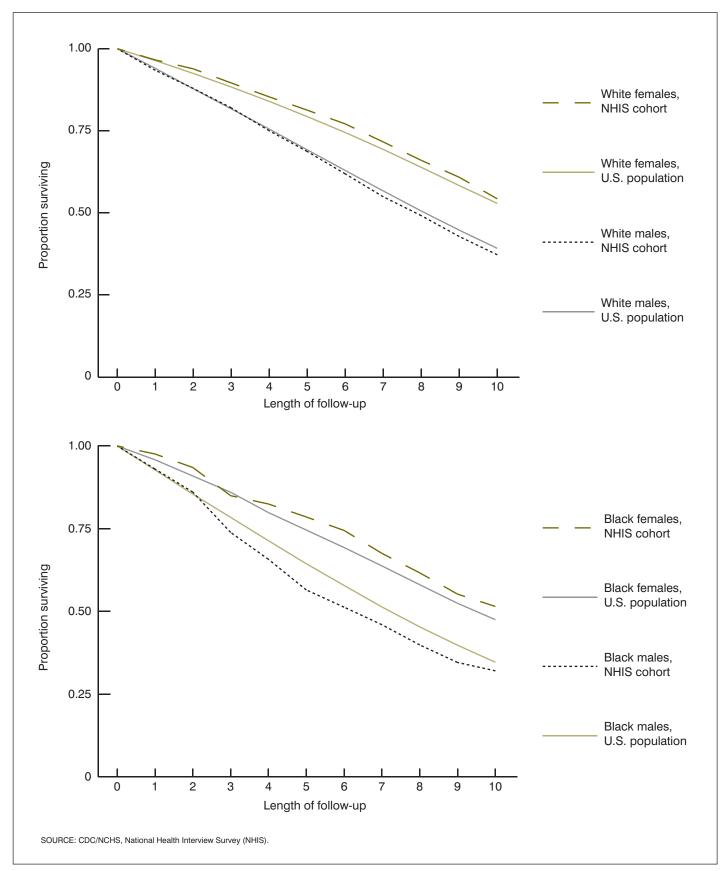


Figure 6. Survival curves for adults aged 75-79 years, by race and sex: 1992 NHIS Linked Mortality File cohort and U.S. population

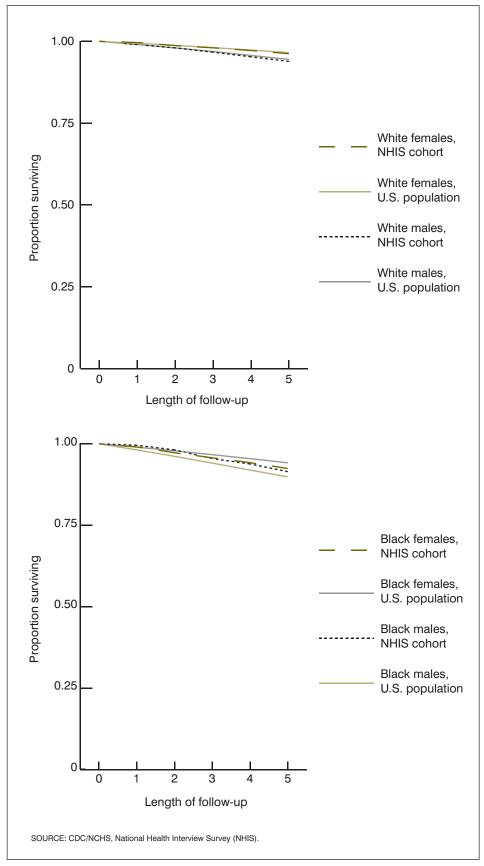


Figure 7. Survival curves for adults aged 55–59 years, by race and sex: 1997 NHIS Linked Mortality File cohort and U.S. population

each age-race-sex group of each NHIS cohort (1986-2000) and for the U.S. population are presented in Tables 5-19. Graphs of the survival probabilities of selected age groups for the 1987, 1992, and 1997 cohorts are presented in Figures 1–9. In general, the survival of each age-race-sex group of the NHIS cohorts corresponds quite closely to that expected on the basis of the U.S. life table survival probabilities, with the survival probabilities for the NHIS cohorts usually somewhat higher than the corresponding survival probabilities for the U.S. population. This latter finding was expected because the NHIS sample includes only noninstitutionalized persons. For white males and females, 60% to 80% of the differences between the NHIS and U.S. survival probabilities were smaller than 0.01; for black males and females, 22% to 61% of the differences were less than 0.01 (Table 20). Very few or none of the differences between the NHIS and U.S. survival probabilities were as large as 0.1 for white males and females: 3% to 11% of the differences for black males and females were 0.1 or larger.

Most of the differences observed between the NHIS and U.S. survival probabilities were not statistically significant (Table 20). For example, only 6.6% of the differences computed for white males in the 1988-1992 NHIS cohorts were statistically significant. The differences observed for the 1986-1987 cohorts and for the 1988-1992 cohorts were more likely to be statistically significant than those for the 1993–1997 and 1998-2000 cohorts. Within each NHIS cohort group (1986-1987, 1988-1992, 1993-1997, and 1998-2000), the differences between the NHIS and U.S. survival probabilities observed for white females were more likely to be statistically significant than those for the other race-sex groups. For example, for the 1988-1992 cohorts, 24.8% of the differences observed for white females were statistically significant compared with those for black males (5.4%), black females (6.0%), and white males (6.6%). Additionally, for white females, differences of 0.05 to less than 0.1 generally were statistically significant, whereas for black males and females.

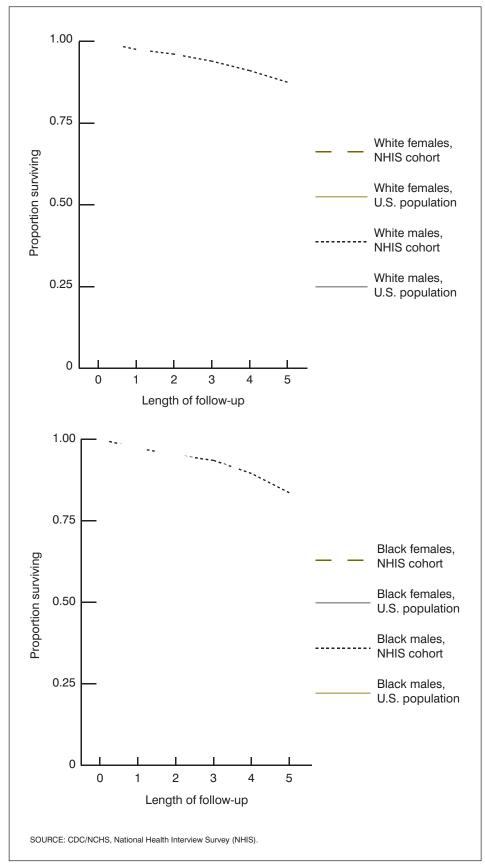


Figure 8. Survival curves for adults aged 65–69 years, by race and sex: 1997 NHIS Linked Mortality File cohort and U.S. population

differences of this size generally were not statistically significant. For example, 10.3% of the differences for white females in the 1988-1992 cohorts were 0.05 to less than 0.1 in size, and all were statistically significant: 12.7% of the differences for black males in these cohorts were this size, and none were statistically significant. Because of the small sample sizes of some age-race-sex groups (e.g., black males and females and persons aged 85 years and over), some differences between the NHIS and U.S. survival probabilities that appear to be fairly large may not be statistically significant. For example, for both black males and black females in the 1986-1987 cohorts, 8.0% of the differences are 0.1 or greater and are not statistically significant, whereas for white females, all of the differences of that size are statistically significant. Tables 20–23 summarize the results of the NHIS-U.S. survival probability comparisons with regard to statistically significant differences. The number of times U.S. survival probabilities were not included in the 99% confidence interval around the NHIS survival probability increased with length of follow-up (Table 21), occurred more often for white females than for the other race-sex groups (Table 22), and occurred more often in the oldest age groups (persons aged 80 years and over at the NHIS interview) (Tables 22 and 23). Note that these two age groups comprise only about 3% to 4% of the annual NHIS cohorts (Table 3).

Discussion

This report presents comparisons of the mortality experience of the 1986–2000 NHIS cohorts, which was ascertained through record linkage to death certificates, with the mortality experience of the U.S. population obtained from vital statistics. In general, the cumulative survival probabilities of the age-race-sex groups of each NHIS cohort closely resembled those for the U.S. population. The NHIS survival probabilities tended to be slightly higher than the corresponding U.S. survival

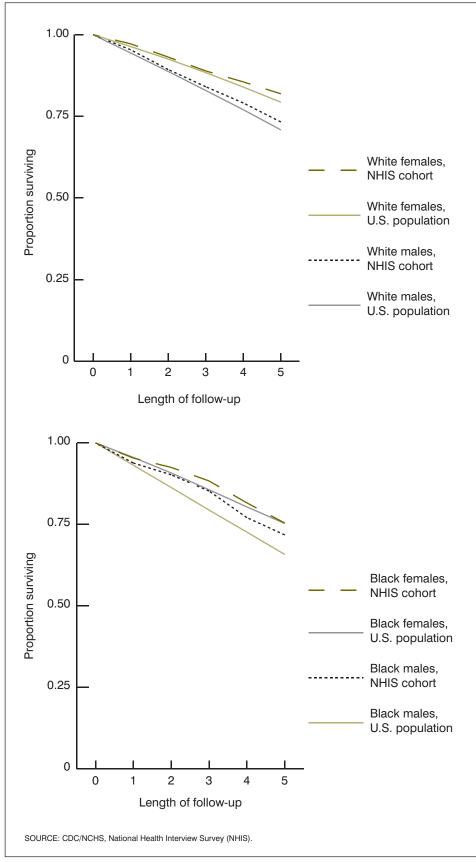


Figure 9. Survival curves for adults aged 75–79 years, by race and sex: 1997 NHIS Linked Mortality File cohort and U.S. population

probabilities, though usually not statistically significantly higher. Statistically significant differences between the NHIS and U.S. survival probabilities occurred more often for white females than for the other race-sex groups, occurred more often for the oldest age groups, and increased in frequency with length of follow-up.

Some of the observed differences between the survival experience of the NHIS cohorts and that of the U.S. population were expected because of the sample design of NHIS. For example, NHIS samples the noninstitutionalized U.S. population, whereas the U.S. life tables reflect the mortality experience of both noninstitutionalized and institutionalized persons. Institutionalized persons tend to have poorer survival than noninstitutionalized persons, so the survival curves for the NHIS cohorts were expected to be higher than those for the U.S. population, with this difference being greatest for the older age groups. The study findings generally were consistent with these expectations. The differences between the NHIS and U.S. survival probabilities were also expected to decrease as the length of follow-up increased because of increasing rates of institutionalization within the NHIS cohorts. This expectation was not borne out; rather. differences between the NHIS and U.S. survival probabilities among the older age groups tended to increase as length of follow-up increased. Although most of the observed differences were not statistically significant, the number of statistically significant differences did increase with length of follow-up.

Another aspect of the NHIS survey design that may impact the comparability of the NHIS and U.S. survival probabilities is the exclusion from the linked mortality files of adults with insufficient identifying information to permit them to be linked to the NDI. The exclusion of these participants from the Linked Mortality Files would primarily impact the survival probabilities estimated for the 1997–2000 NHIS cohorts because the percentage ineligible is substantially higher for these cohorts than for earlier cohorts. During 1986–1996, a relatively

small percentage of NHIS participants was ineligible for mortality follow-up; the unweighted percentage that was ineligible ranged from 1.5% to 3.0% per year. However, starting in 1997, changes in the design and administration of the NHIS questionnaire resulted in the percentage ineligible for mortality follow-up increasing to approximately 10%. Those ineligible for linkage tend to be younger, female, and have higher levels of education and income, and they therefore have lower mortality than those who were eligible. Clearly, ignoring the ineligible participants, particularly for the 1997–2000 NHIS cohorts, could bias estimates of the survival probabilities downwards. The eligibility-adjusted sample weights were derived to mitigate the effect of excluding the ineligible participants. However, use of the adjusted sample weights cannot entirely remove bias due to exclusion of the ineligible adults because the weights are adjusted only for differences in age, race, and sex and not for differences in other important mortality predictors such as education and income. NHIS survival probabilities were found to be more likely to be lower than the U.S. population survival probabilities for the 1997–2000 cohorts than for the 1986–1996 cohorts (though usually not statistically significantly lower). Because the NHIS survival probabilities are expected to be higher than the U.S. survival probabilities (as discussed above), this may indicate that the adjusted sample weights did not entirely adjust for the exclusion of the ineligible adults. However, the exclusion of the larger percentage of ineligible adults does not appear to cause any significant bias in the survival probabilities of the 1997–2000 cohorts when length of follow-up ranges from 2 to 5 years; only a small number of the differences were statistically significant. As the follow-up period is extended through additional NDI linkages, the impact of the exclusion of the ineligibles on the survival experience of these cohorts can be assessed.

The passive nature of the follow-up for the Linked Mortality Files may introduce bias into the estimation of the survival probabilities for the NHIS cohorts because incorrect matches or nonmatches can contribute to differences between the NHIS and U.S. population survival probabilities. Although the matching methodology used to link NHIS participants to NDI death records correctly matches 98.6% of those eligible for mortality follow-up, the probability of correct matches is lower for some age-race-sex groups than for others. The effect of false matches would be greatest in the oldest age groups because of the small numbers in these groups and their high death rates, and the effect would tend to increase with time. It is likely that there are some false negative matches in the older age groups, particularly in the earlier cohorts where the length of follow-up is longest and many survivors in the oldest age groups were centenarians at the end of the follow-up period (December 31, 2002). As the number of true survivors shrinks in these oldest age groups, even a small number of false negative matches may have a noticeable influence on the survival probabilities for the group. Thus, the presence of false negative matches in the NHIS sample will result in overestimation of survival. The observation that the NHIS survival probabilities generally were higher than the U.S. population survival probabilities in the oldest age groups at the end of follow-up and that the difference between the NHIS and U.S. probabilities tended to increase with time rather than decrease lends support to this possibility. However, the survival probabilities in the U.S. life tables for the late 1990s underestimate survival among the U.S. population because the denominators (1990-based postcensal population estimates) used to calculate the life table statistics were too low. (The 2000 census showed that the 1990-based postcensal estimates for the late 1990s were too low by about 2.5% overall, but the percentage differed among age, race, and sex groups.) Revision of the life table values for the late 1990s using intercensal population estimates would result in higher survival probabilities for the U.S. population and, thus, may narrow the differences observed in this analysis.

Because of the much smaller number of black participants in the NHIS cohorts, their survival probabilities were less stable than those for the white participants, as indicated by the size of the standard errors for the Kaplan-Meier estimates. Differences in the quality of the race data in the denominator data used to calculate the U.S. life table values may also have influenced the comparisons. Additionally, it appears that the 1996-2002 U.S. life tables, which have single-year of age survivorship estimates through age 100 years, show exceptionally high survival probabilities for black males and females aged 85 years and over (21). The single-year survival probabilities for black males and females aged 85 through 100 years that were computed for the 1986-1995 U.S. life tables also are exceptionally high because they were derived using the same methodology used to obtain the estimates for the 1996-2002 life tables.

The 1986–2000 NHIS Linked Mortality Files provide a unique database for examining the associations between demographic and health factors and subsequent mortality in a large heterogeneous sample that is representative of the U.S. population. This report presents comparisons of the mortality experience of the NHIS cohorts (between baseline and end of follow-up on December 31, 2002) with that of the U.S. population. In general, the mortality experience of the NHIS cohorts was quite similar to that of the U.S. population. As expected, mortality tended to be underestimated by the NHIS cohorts, but this underestimation generally was not statistically significant. The preponderance of the statistically significant differences between the NHIS and U.S. survival probabilities was observed for the 80-84 years and 85 years and over age groups. Estimation of mortality among persons aged 85 years and over has long been problematic and appears to be so in these data as well (12,22–24). However, the mortality experience of adults under 80 years of age in the NHIS Linked Mortality Files appears to be quite similar to that of the U.S. population, providing support that the ascertainment of mortality through the probabilistic record linkage accurately reflects the mortality experience of the NHIS cohorts.

References

- National Center for Health Statistics,
 Office of Analysis and Epidemiology.
 The 1986–2000 National Health
 Interview Survey Linked Mortality
 Files: Matching methodology.
 Hyattsville, MD. Available from:
 http://www.cdc.gov/nchs/data/datalinkage/matching_methodology_nhis_final.pdf. October 2005.
- National Center for Health Statistics.
 Vital statistics of the United States,
 1986, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from: http://
 www.cdc.gov/nchs/data/lifetables/
 life86 2acc.pdf. 1988.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1987, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life87_2acc.pdf. 1990.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1988, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life88_2acc.pdf. 1991.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1989, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life89_2acc.pdf. 1992.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1990, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life90_2acc.pdf. 1994.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1991, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life91_2acc.pdf. 1995.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1992, life tables, vol II, section 6.
 Washington, DC: Public Health
 Service. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life92_2.pdf. 1996.
- National Center for Health Statistics.
 Vital Statistics of the United States,

- 1993, life tables, vol II, section 6. Hyattsville, MD. Available from: http://www.cdc.gov/nchs/data/lifetables/life93_2.pdf. 1997.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1994, life tables, vol II, section 6.
 Hyattsville, MD. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life94_2.pdf. 1998.
- National Center for Health Statistics.
 Vital Statistics of the United States,
 1995, life tables, vol II, section 6.
 Hyattsville, MD. Available from:
 http://www.cdc.gov/nchs/data/lifetables/life95_2.pdf. 1998.
- Anderson RN. Methodology for constructing complete annual U.S. life tables. National Center for Health Statistics. Vital Health Stat 2(129). Available from: http://www.cdc.gov/nchs/data/series/sr_02/sr02_129.pdf. 1999.
- Anderson RN. United States life tables, 1997. National vital statistics reports; vol 47 no 28. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr47/nvs47_28.pdf. 1999.
- Anderson RN. United States life tables, 1998. National vital statistics reports; vol 48 no 18. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr48/nvs48_18.pdf. 2001.
- Anderson RN, DeTurk PB. United States life tables, 1999. National vital statistics reports; vol 50 no 6. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/ nvsr50/nvsr50_06.pdf. 2002.
- Arias E. United States life tables, 2000. National vital statistics reports; vol 51 no 3. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_03.pdf. 2002.
- 17. Arias E. United States life tables, 2001. National vital statistics reports; vol 52 no 14. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_14.pdf. 2004.
- Arias E. United States life tables, 2002. National vital statistics reports; vol 53 no 6. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/data/nvsr/ nvsr53/nvsr53_06.pdf. 2004.

- Shah BV, Barnwell BG, Bieler GS. SUDAAN user's manual: Software for analysis of correlated data. Release 9.0.1. Research Triangle Park, NC: Research Triangle Institute. 2006.
- 20. National Center for Health Statistics, Office of Analysis and Epidemiology. Guide to weighting and variance estimation in the 1986–2000 NHIS Linked Mortality Files. Available from: http://www.cdc.gov/nchs/data/ datalinkage/nhis_ndi_variance_ guidelines_final.pdf. 2007.
- Preston SH, Elo IT. Black mortality at very old ages in official U.S. life tables: A skeptical appraisal. Population and Development Review 3232:557–66. 2006.
- Coale AJ, Kisker EE. Mortality crossovers: Reality or bad data? Popul Stud 40:389–401. 1986.
- 23. Coale AJ, Kiske EE. Defects in data on old-age mortality in the United States: New procedures for calculating mortality schedules and life tables at the highest ages. Asian and Pacific Population Forum. 4:1–31. 1990.
- Rosenwaike I, Hill ME. The accuracy of age reporting among elderly African Americans: Evidence of a birth registration effect. Research on Aging. 18:310–24. 1996.

Table 1. Number of white and black sample participants aged 18 years and over, by eligibility status, NDI mortality status, race, and sex: 1986–2000 NHIS Linked Mortality Files

						Analytic	sample				
	Ineligible		Д	III participan	ts			Ass	sumed dece	ased	
NHIS cohort	and insufficient data	Total	White males	White females	Black males	Black females	Total	White males	White females	Black males	Black females
1986 ¹	795	42,548	17,091	19,070	2,651	3,736	8,350	3,572	3,469	635	674
1987	1,515	84,210	33,657	38,106	5,135	7,312	15,539	6,566	6,495	1,205	1,273
1988	1,473	84,229	33,857	38,096	5,010	7,266	14,449	6,115	6,114	1,083	1,137
1989	1,448	80,577	32,600	36,688	4,650	6,639	12,718	5,363	5,369	939	1,047
1990	1,262	82,427	33,287	37,443	4,805	6,892	11,843	5,071	5,012	852	908
1991	1,528	81,782	33,213	37,185	4,650	6,734	10,800	4,680	4,549	766	805
1992 ²	1,819	81,882	33,422	37,189	4,573	6,698	10,020	4,353	4,214	673	780
1993	1,631	74,417	30,449	33,790	4,144	6,034	7,974	3,417	3,383	585	589
1994	2,144	77,996	31,874	35,544	4,310	6,268	7,729	3,296	3,294	513	626
1995	1,700	68,090	28,028	31,431	3,611	5,020	5,594	2,550	2,302	370	372
1996 ¹	1,330	42,279	17,368	19,123	2,428	3,360	2,926	1,249	1,227	221	229
1997	5,358	63,128	25,510	28,599	3,771	5,248	3,875	1,678	1,623	261	313
1998	6,712	58,096	23,913	26,219	3,356	4,608	2,870	1,271	1,169	193	237
1999	6,638	56,856	23,296	25,622	3,358	4,580	2,078	954	794	171	159
2000	6,781	58,121	23,632	25,953	3,601	4,935	1,440	664	566	100	110

¹The 1986 and 1996 NHIS were fielded with a one-half sample.

NOTES: NDI is National Death Index. NHIS is National Health Interview Survey.

²Some of the 1991 NHIS Hispanic participants are included on the 1992 NHIS file. For these analyses, all participants who were interviewed in 1991 are excluded from the 1992 NHIS Linked Mortality File.

Table 2. Unweighted numbers of NHIS participants, by age at NHIS interview and NHIS cohort: 1986-2000 NHIS Linked Mortality Files

								NHIS cohor	t						
Age at NHIS interview	1986 ¹	1987	1988	1989	1990	1991	1992 ²	1993	1994	1995	1996¹	1997	1998	1999	2000
All ages	42,548	84,210	84,229	80,577	82,427	81,782	81,882	74,417	77,996	68,090	42,279	63,128	58,096	56,856	58,121
18–24 years	6,435	11,956	11,380	10,810	10,647	10,294	10,323	9,104	9,266	8,458	5,140	7,262	6,673	6,778	7,053
25–34 years	9,800	19,254	19,163	18,204	18,968	18,266	17,824	16,017	16,054	14,201	8,929	12,707	11,324	10,651	10,835
35–44 years	8,154	16,535	16,730	16,488	17,087	17,150	17,476	16,137	17,036	15,254	9,550	14,184	12,854	12,603	12,732
45–54 years	5,578	11,428	11,754	11,469	11,696	12,008	12,303	11,697	12,564	11,199	7,178	11,031	10,557	10,350	10,871
55–59 years	2,834	5,395	5,114	4,970	4,919	4,887	4,872	4,364	4,688	3,959	2,459	3,873	3,678	3,774	3,882
60–64 years	2,781	5,477	5,391	4,816	4,950	4,897	4,689	4,127	4,438	3,610	2,173	3,243	3,043	3,098	3,122
65–69 years	2,359	4,874	5,036	4,624	4,721	4,625	4,637	4,242	4,319	3,567	2,117	3,256	3,013	2,735	2,717
70–74 years	1,901	3,777	3,963	3,719	3,772	4,016	3,917	3,564	3,878	3,191	1,844	2,899	2,569	2,502	2,553
75–79 years	1,371	2,760	2,884	2,785	2,780	2,767	2,773	2,484	2,741	2,214	1,403	2,265	2,106	2,126	2,079
80–84 years	826	1,650	1,699	1,636	1,759	1,747	1,834	1,594	1,812	1,419	858	1,435	1,358	1,273	1,366
85 years and over	509	1,104	1,115	1,056	1,128	1,125	1,234	1,087	1,200	1,018	628	973	921	966	911

¹The 1986 and 1996 NHIS were fielded with a one-half sample.

NOTE: NHIS is National Health Interview Survey.

Table 3. Weighted percent distribution of NHIS participants, by age at NHIS interview and NHIS cohort: 1986-2000 NHIS Linked Mortality Files

							ı	NHIS cohor	t						
Age at NHIS interview	1986 ¹	1987	1988	1989	1990	1991	1992 ²	1993	1994	1995	1996 ¹	1997	1998	1999	2000
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
18–24 years	15.4	14.7	14.4	14.1	13.6	13.3	12.8	12.7	13.1	12.9	12.5	12.6	12.6	12.7	12.7
25–34 years	23.9	24.0	23.8	23.7	23.4	23.0	22.4	21.9	21.6	21.1	20.9	19.9	19.2	18.6	18.1
35–44 years	18.7	19.2	19.5	20.0	20.5	21.1	21.2	21.5	21.8	22.1	22.2	22.3	22.4	22.3	22.0
45–54 years	13.1	13.2	13.5	13.7	13.9	14.2	14.9	15.4	15.7	16.2	16.7	17.1	17.6	17.9	18.5
55–59 years	6.5	6.2	6.0	6.1	5.9	5.9	5.9	5.9	5.7	5.7	5.8	6.0	6.3	6.5	6.6
60-64 years	6.3	6.3	6.3	5.9	5.9	5.8	5.6	5.5	5.3	5.3	5.1	5.1	5.2	5.3	5.4
65–69 years	5.5	5.6	5.6	5.6	5.6	5.4	5.5	5.5	5.2	5.2	5.1	5.0	5.0	4.7	4.7
70–74 years	4.4	4.4	4.5	4.5	4.5	4.7	4.8	4.7	4.6	4.7	4.6	4.5	4.3	4.4	4.5
75–79 years	3.1	3.2	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.5	3.6	3.5	3.7	3.7
80–84 years	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.3	2.3	2.3	2.4
85 years and over	1.2	1.3	1.3	1.2	1.3	1.4	1.5	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.6

¹The 1986 and 1996 NHIS were fielded with a one-half sample.

NOTE: NHIS is National Health Interview Survey. Percentages may not sum to 100 due to rounding.

²Some of the 1991 NHIS Hispanic participants are included on the 1992 NHIS file. For these analyses, all participants who were interviewed in 1991 are excluded from the 1992 NHIS Linked Mortality File.

²Some of the 1991 NHIS Hispanic participants are included on the 1992 NHIS file. For these analyses, all participants who were interviewed in 1991 are excluded from the 1992 NHIS Linked Mortality File.

Table 4. Unweighted number and percentage of decedents among sample participants, by age at NHIS interview and NHIS cohort: 1986–2000 NHIS Linked Mortality Files

							NHI	S cohort							
Age at NHIS interview	1986¹	1987	1988	1989	1990	1991	1992 ²	1993	1994	1995	1996¹	1997	1998	1999	2000
							N	umber							
All ages	8,350	15,539	14,449	12,718	11,843	10,800	10,020	7,974	7,729	5,594	2,926	3,875	2,870	2,078	1,440
18–24 years	130	262	187	178	154	126	131	84	88	63	53	55	45	25	17
25–34 years	320	569	507	394	426	346	314	200	204	146	88	121	70	66	46
35–44 years	541	902	883	791	711	642	551	471	397	360	173	235	162	118	96
45–54 years	836	1,615	1,341	1,183	1,070	935	865	726	666	505	278	330	262	196	151
55–59 years	773	1,227	1,054	917	793	717	625	490	455	340	180	235	164	118	84
60–64 years	1,022	1,855	1,584	1,339	1,225	1,107	915	702	649	456	228	270	248	154	106
65–69 years	1,188	2,262	2,109	1,777	1,628	1,439	1,363	1,069	935	646	305	407	310	211	132
70–74 years	1,237	2,358	2,261	1,997	1,791	1,723	1,497	1,166	1,200	807	389	542	369	274	178
75–79 years	1,107	2,092	2,115	1,902	1,737	1,570	1,532	1,179	1,180	827	453	564	409	302	222
80–84 years	734	1,413	1,405	1,322	1,371	1,260	1,230	1,017	1,064	726	379	576	424	296	191
85 years and over	462	984	1,003	918	937	935	997	870	891	718	400	540	407	318	217
							P	ercent							
18–24 years	2.0	2.2	1.6	1.6	1.4	1.2	1.3	0.9	0.9	0.7	1.0	0.8	0.7	0.4	0.2
25–34 years	3.3	3.0	2.6	2.2	2.2	1.9	1.8	1.2	1.3	1.0	1.0	1.0	0.6	0.6	0.4
35–45 years	6.6	5.5	5.3	4.8	4.2	3.7	3.2	2.9	2.3	2.4	1.8	1.7	1.3	0.9	0.8
45–54 years	15.0	14.1	11.4	10.3	9.1	7.8	7.0	6.2	5.3	4.5	3.9	3.0	2.5	1.9	1.4
55–59 years	27.3	22.7	20.6	18.5	16.1	14.7	12.8	11.2	9.7	8.6	7.3	6.1	4.5	3.1	2.2
60–64 years	36.7	33.9	29.4	27.8	24.7	22.6	19.5	17.0	14.6	12.6	10.5	8.3	8.1	5.0	3.4
65–69 years	50.4	46.4	41.9	38.4	34.5	31.1	29.4	25.2	21.6	18.1	14.4	12.5	10.3	7.7	4.9
70–74 years	65.1	62.4	57.1	53.7	47.5	42.9	38.2	32.7	30.9	25.3	21.1	18.7	14.4	11.0	7.0
75–79 years	80.7	75.8	73.3	68.3	62.5	56.7	55.2	47.5	43.0	37.4	32.3	24.9	19.4	14.2	10.7
80–84 years	88.9	85.6	82.7	80.8	77.9	72.1	67.1	63.8	58.7	51.2	44.2	40.1	31.2	23.3	140
85 years and over	90.8	89.1	90.0	86.9	83.1	83.1	80.8	80.0	74.3	70.5	63.7	55.5	44.2	32.9	23.8

¹The 1986 and 1996 NHIS were fielded with a one-half sample.

NOTE: NHIS is National Health Interview Survey. Percentages may not sum to 100 due to rounding.

²Some of the 1991 NHIS Hispanic participants are included on the 1992 NHIS file. For these analyses, all participants who were interviewed in 1991 are excluded from the 1992 NHIS Linked Mortality File.

Table 5. Cumulative survival probabilities after 2, 5, 10, 15, and 16 years for the U.S. population, compared with those for the 1986 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years			10 years			15 years			16 years	
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹												
White males															
18–24 years	0.997	0.997	0.001	0.992	0.993	0.001	0.984	0.987	0.002	0.976	0.979	0.004	0.975	0.978	0.004
25–34 years	0.997	0.996	0.001	0.991	0.993	0.001	0.978	0.981	0.002	0.965	0.966	0.003	0.961	0.963	0.003
35–44 years	0.995	0.995	0.001	0.985	0.985	0.003	0.964	0.967	0.004	0.936	0.942	0.005	0.929	0.936	0.005
15–54 years	0.987	0.991	0.002	0.965	0.967	0.004	0.915	0.919	0.006	0.847	0.852	0.007	0.831	0.834	0.006
55–59 years	0.975	0.979	0.003	0.931	0.941	0.007	0.840	0.840	0.010	0.725	0.726	0.011	0.700	0.696	0.013
60–64 years	0.960	0.963	0.006	0.895	0.900	0.009	0.764	0.773	0.013	0.611	0.606	0.015	0.578	0.584	0.014
65–69 years	0.942	0.932	0.010	0.846	0.838	0.015	0.666	0.662	0.015	0.470	0.460	0.017	0.432	0.422	0.017
70-74 years	0.909	0.911	0.011	0.768	0.769	0.017	0.529	0.521	0.021	0.297	0.322	0.018	0.257	0.278	0.017
75–79 years	0.864	0.852	0.019	0.665	0.634	0.028	0.361	0.349	0.026	0.145	0.145	0.017	0.116	0.119	0.016
30-84 years	0.796	0.870	0.024	0.522	0.570	0.037	0.198	0.269	0.028	0.050	0.063	0.016	0.036	0.042	0.014
35 years and over	0.698	0.724	0.038	0.359	0.337	0.039	0.083	0.121	0.027	0.011	**0.088	0.024	0.007	**0.083	0.023
White females															
8–24 years	0.999	1.000	0.000	0.998	0.997	0.001	0.995	0.994	0.001	0.991	0.989	0.002	0.990	0.988	0.002
25–34 years	0.999	0.998	0.001	0.997	0.997	0.001	0.992	0.991	0.002	0.984	0.982	0.002	0.982	0.979	0.002
85–44 years	0.997	0.998	0.001	0.993	0.991	0.001	0.981	0.980	0.002	0.964	0.963	0.003	0.960	0.957	0.003
5–54 years	0.993	0.992	0.002	0.980	0.980	0.004	0.950	0.947	0.006	0.906	0.903	0.007	0.895	0.891	0.008
5–59 years	0.987	0.981	0.005	0.962	0.953	0.008	0.907	0.903	0.010	0.830	0.828	0.010	0.811	0.804	0.012
60–64 years	0.978	0.982	0.003	0.941	0.946	0.006	0.859	0.870	0.012	0.745	0.752	0.014	0.718	0.720	0.014
55–69 years	0.967	0.967	0.005	0.910	0.897	0.008	0.788	0.776	0.010	0.625	0.635	0.012	0.589	0.602	0.012
70–74 years	0.949	0.956	0.007	0.861	0.871	0.010	0.684	0.682	0.016	0.455	0.467	0.020	0.408	0.438	0.020
75–79 years	0.920	0.942	0.009	0.812	0.807	0.013	0.544	0.571	0.018	0.272	0.300	0.017	0.228	0.266	0.017
80–84 years	0.866	0.903	0.013	0.652	0.695	0.021	0.326	**0.411	0.021	0.106	**0.195	0.020	0.080	**0.168	0.018
85 years and over	0.775	0.812	0.019	0.475	0.551	0.030	0.152	**0.246	0.022	0.027	**0.107	0.015	0.018	**0.104	0.015
Black males															
18–24 years	0.995	0.999	0.001	0.985	0.993	0.005	0.966	0.982	0.006	0.950	0.965	0.007	0.947	0.959	0.009
25-34 years	0.992	0.995	0.003	0.977	0.990	0.004	0.946	0.963	0.012	0.918	0.942	0.015	0.911	0.940	0.016
35–44 years	0.985	0.990	0.005	0.960	0.969	0.009	0.909	0.926	0.011	0.851	0.862	0.017	0.839	0.851	0.017
15–54 years	0.973	0.981	0.008	0.927	0.953	0.013	0.835	0.880	0.017	0.727	**0.837	0.020	0.706	**0.808	0.016
55–59 years	0.959	0.961	0.020	0.888	0.919	0.029	0.754	0.808	0.042	0.617	0.686	0.041	0.586	0.656	0.041
60–64 years	0.939	0.947	0.020	0.842	0.859	0.034	0.665	0.591	0.038	0.488	0.451	0.041	0.454	0.428	0.038
65–69 years	0.920	0.879	0.028	0.791	0.806	0.032	0.567	0.542	0.047	0.373	0.393	0.057	0.337	0.352	0.053
70–74 years	0.887	0.941	0.022	0.720	0.847	0.045	0.462	0.477	0.064	0.246	0.354	0.052	0.212	0.283	0.051
75–79 years	0.847	0.847	0.042	0.627	0.607	0.078	0.319	0.335	0.076	0.141	0.168	0.060	0.115	0.134	0.057
30–84 years	0.773	0.913	0.044	0.489	0.549	0.107	0.190	0.172	0.072	0.059	0.108	0.056	0.045	0.051	0.036

See footnotes at end of table.

Table 5. Cumulative survival probabilities after 2, 5, 10, 15, and 16 years for the U.S. population, compared with those for the 1986 NHIS Linked Mortality File cohort, by race, sex, and age—Con.

		2 years			5 years			10 years			15 years			16 years	
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹												
Black females															
18–24 years	0.998	0.996	0.002	0.995	0.996	0.002	0.988	0.988	0.004	0.980	0.981	0.005	0.978	0.981	0.005
25–34 years	0.997	0.995	0.002	0.991	0.988	0.002	0.977	0.979	0.003	0.960	0.972	0.005	0.956	0.970	0.005
35–44 years	0.994	0.996	0.003	0.982	0.977	0.006	0.957	0.946	0.010	0.921	0.905	0.014	0.913	0.899	0.016
45–54 years	0.986	0.990	0.004	0.962	0.968	0.009	0.909	0.916	0.014	0.841	0.866	0.017	0.826	0.850	0.018
55–59 years	0.977	0.968	0.011	0.934	0.919	0.021	0.850	0.811	0.026	0.747	0.683	0.033	0.725	0.654	0.032
60–64 years	0.963	0.968	0.012	0.902	0.935	0.016	0.784	0.820	0.023	0.639	0.681	0.031	0.610	0.671	0.032
65–69 years	0.952	0.946	0.019	0.870	0.839	0.032	0.716	0.671	0.042	0.538	0.532	0.045	0.504	0.492	0.045
70–74 years	0.929	0.974	0.012	0.818	0.895	0.028	0.625	0.709	0.045	0.395	0.514	0.051	0.354	0.469	0.045
75–79 years	0.901	0.953	0.025	0.742	0.769	0.044	0.470	0.501	0.054	0.234	0.252	0.046	0.199	0.233	0.045
80–84 years	0.837	0.912	0.039	0.601	0.606	0.073	0.298	0.427	0.058	0.106	**0.260	0.061	0.084	0.217	0.069
85 years and over	0.749	0.775	0.061	0.453	0.596	0.084	0.161	0.329	0.090	0.037	0.085	0.043	0.027	0.085	0.043

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 6. Cumulative survival probabilities after 2, 5, 10, and 15 years for the U.S. population, compared with those for the 1987 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years			10 years			15 years	.
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹									
White males												
18–24 years	0.997	0.997	0.001	0.992	0.993	0.001	0.985	0.986	0.002	0.977	0.976	0.002
25–34 years	0.997	0.997	0.001	0.991	0.992	0.001	0.978	0.982	0.002	0.965	**0.971	0.002
35–44 years	0.995	0.996	0.001	0.985	0.989	0.001	0.964	**0.972	0.002	0.936	**0.945	0.003
45–54 years	0.988	0.988	0.002	0.966	0.966	0.002	0.917	0.914	0.004	0.850	0.856	0.005
55–59 years	0.975	0.977	0.004	0.932	0.929	0.006	0.842	0.843	0.009	0.731	0.740	0.010
60-64 years	0.961	0.966	0.004	0.896	0.902	0.007	0.766	0.766	0.009	0.614	0.607	0.011
65–69 years	0.943	0.938	0.006	0.848	0.847	0.009	0.670	0.671	0.011	0.475	0.494	0.011
70–74 years	0.911	0.910	0.008	0.773	0.772	0.012	0.535	0.529	0.014	0.303	0.311	0.012
75–79 years	0.866	0.867	0.012	0.671	0.670	0.016	0.367	0.394	0.017	0.149	0.180	0.013
80–84 years	0.796	0.818	0.016	0.528	0.580	0.021	0.203	**0.252	0.019	0.052	**0.103	0.015
85 years and over	0.696	0.735	0.025	0.365	0.442	0.030	0.085	0.126	0.020	0.012	**0.058	0.013
White females												
18–24 years	0.999	0.998	0.001	0.998	0.997	0.001	0.995	0.995	0.001	0.991	0.991	0.002
25–34 years	0.999	0.999	0.000	0.997	0.996	0.001	0.991	0.990	0.001	0.984	**0.980	0.002
35–44 years	0.997	0.997	0.001	0.993	0.994	0.001	0.982	0.985	0.001	0.964	0.967	0.002
45–54 years	0.993	0.992	0.001	0.980	0.978	0.002	0.951	0.944	0.004	0.907	0.901	0.005
55–59 years	0.986	0.987	0.002	0.962	0.962	0.004	0.907	0.910	0.007	0.831	0.840	0.009
60–64 years	0.978	0.982	0.003	0.941	0.941	0.005	0.859	0.865	0.007	0.746	0.749	0.009
65–69 years	0.968	0.975	0.003	0.911	0.922	0.005	0.790	0.806	0.009	0.626	0.638	0.011
70–74 years	0.949	0.953	0.005	0.863	0.875	0.007	0.685	0.684	0.010	0.456	0.451	0.011
75–79 years	0.920	0.935	0.007	0.788	**0.817	0.010	0.527	**0.568	0.012	0.266	**0.321	0.012
80–84 years	0.865	0.894	0.010	0.658	**0.720	0.016	0.328	**0.418	0.018	0.108	**0.186	0.013
85 years and over	0.772	**0.819	0.015	0.483	**0.572	0.021	0.154	**0.233	0.016	0.028	**0.136	0.013
Black males												
18–24 years	0.995	0.991	0.003	0.984	0.981	0.005	0.966	0.960	0.006	0.951	0.941	0.009
25–34 years	0.992	0.994	0.002	0.977	0.983	0.004	0.947	0.960	0.006	0.921	**0.943	0.006
35–44 years	0.985	0.991	0.004	0.960	0.974	0.005	0.910	0.932	0.008	0.852	**0.883	0.010
45–54 years	0.971	0.961	0.008	0.925	0.917	0.011	0.835	0.848	0.015	0.730	0.741	0.019
55–59 years	0.960	0.975	0.010	0.887	0.903	0.018	0.756	0.780	0.033	0.619	0.665	0.037
60–64 years	0.940	0.927	0.016	0.842	0.854	0.023	0.669	0.710	0.030	0.494	0.545	0.033
65–69 years	0.920	0.933	0.016	0.789	0.790	0.033	0.571	0.566	0.043	0.375	0.355	0.038
70–74 years	0.889	0.916	0.022	0.722	0.736	0.046	0.465	0.528	0.044	0.250	0.315	0.033
75–79 years	0.846	0.906	0.026	0.630	0.593	0.041	0.324	0.249	0.043	0.136	0.099	0.026
80–84 years	0.772	0.802	0.055	0.494	0.596	0.071	0.195	0.274	0.063	0.060	0.129	0.044
85 years and over	0.685	0.642	0.087	0.371	0.188	0.065	0.108	**0.013	0.014	0.024	0.013	0.014
Black females												
18–24 years	0.998	0.999	0.001	0.995	0.991	0.005	0.988	0.981	0.005	0.980	0.970	0.006
25–34 years	0.997	0.995	0.002	0.991	0.992	0.002	0.977	0.977	0.003	0.960	0.962	0.005
35–44 years	0.993	0.994	0.002	0.982	0.983	0.004	0.957	0.959	0.006	0.923	0.922	0.007
45–54 years	0.986	0.984	0.005	0.962	0.961	0.006	0.910	0.908	0.010	0.843	0.828	0.014
55–59 years	0.977	0.976	0.008	0.934	0.942	0.012	0.852	0.879	0.015	0.751	**0.811	0.020
60–64 years	0.963	0.974	0.008	0.903	0.912	0.013	0.786	0.797	0.023	0.643	0.663	0.026
65–69 years	0.952	0.947	0.013	0.870	0.878	0.019	0.715	0.754	0.022	0.538	0.558	0.025
70–74 years	0.930	0.962	0.016	0.820	0.864	0.028	0.612	0.669	0.038	0.390	**0.473	0.029
75–79 years	0.901	0.935	0.016	0.747	0.820	0.033	0.474	0.592	0.045	0.238	0.317	0.040
80–84 years	0.835	0.865	0.035	0.613	0.689	0.041	0.305	0.371	0.043	0.110	0.176	0.034
85 years and over	0.743	0.867	0.038	0.464	0.585	0.062	0.166	**0.308	0.058	0.039	**0.206	0.053

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 7. Cumulative survival probabilities after 2, 5, 10, and 14 years for the U.S. population, compared with those for the 1988 NHIS Linked Mortality File cohort, by race, sex, and age

## Face, sex, and age ## U.S. cohort (NHIS)* U.S. cohort U.S. U.S. Cohort U.S. U.S. Cohort U.S. U.			2 years			5 years			10 years			14 years	<u> </u>
18-24 years	Race, sex, and age	U.S.			U.S.			U.S.			U.S.		SE (NHIS) ¹
22-34 years 0.997 0.001 0.990 0.994 0.001 0.985 0.094 0.002 0.984 0.002 0.943 0.924 0.002 0.943 0.924 0.924 0.943 0.942 0.944 0.942 0.944 0.942 0.944 0.945 0.944 0.945 0.944 0.945 0.944 0.945 0.944 0.945 0.944 0.945 0.003 0.934 0.932 0.006 0.845 0.008 0.007 0.769 0.776 0.012 0.759 0.766 0.012 0.052 0.050 0.850 0.086 0.007 0.759 0.769 0.776 0.012 0.052 0.000 0.000 0.086 0.005 0.050	White males												
22-34 years 0.997 0.997 0.001 0.998 0.994 0.002 0.985 0.073 0 35-44 years 0.998 0.991 0.001 0.986 0.994 0.002 0.944 0.022 0.943 0.942 0.943 0.942 0.968 40.988 0.991 0.003 0.934 0.922 0.060 0.960 0.903 0.934 0.932 0.060 0.845 0.086 0.009 0.769 0.765 0.072 0.003 0.934 0.932 0.060 0.845 0.008 0.674 0.680 0.007 0.769 0.766 0.012 0.675 0.680 0.007 0.769 0.776 0.012 0.577 0.013 0.540 0.536 0.014 0.031 0.040 0.073 0.016 0.573 0.020 0.081 0.007 0.078 0.027 0.013 0.574 0.031 0.034 0.022 0.207 0.021 0.027 0.021 0.027 0.021 0.027 0.018	18–24 years	0.997	0.996	0.001	0.993	0.992	0.002	0.985	0.986	0.002	0.980	0.980	0.003
13-44 years													0.002
45-F4 years													0.003
55-59 years													0.005
80-84 years													0.010
88-89 years													0.012
772—74 years													0.011
775-79 years													0.014
83-B4 years	-												0.016
White females													0.016
## 18-24 years													0.014
18-24 years	•	0.090	0.763	0.025	0.370	0.469	0.031	0.000	0.139	0.020	0.019	0.074	0.014
25-34 years													
15-44 years 0.997 0.997 0.997 0.001 0.993 0.994 0.001 0.992 0.981 0.002 0.966 0.966 0.965 0.955-59 years 0.993 0.995 0.001 0.981 0.981 0.002 0.952 0.951 0.003 0.918 0.991 0.965 0.555-59 years 0.987 0.998 0.002 0.962 0.968 0.004 0.908 0.915 0.006 0.849 0.860 0.856-59 years 0.997 0.978 0.003 0.942 0.941 0.005 0.860 0.856 0.007 0.773 0.768 0.006 0.865 0.987 0.988 0.004 0.912 0.941 0.005 0.860 0.856 0.007 0.773 0.768 0.006 0.865 0.988 0.004 0.912 0.998 0.006 0.791 0.796 0.009 0.665 0.6677 0.767-74 years 0.950 0.954 0.005 0.865 0.868 0.008 0.866 0.698 0.010 0.505 0.525 0.0275-79 years 0.921 0.931 0.007 0.791 0.022 0.010 0.529 0.552 0.013 0.314 0.330 0.868 0.008 0.868 0.004 0.912													0.001
45-54 ývars 0.993 0.995 0.001 0.981 0.981 0.002 0.952 0.951 0.003 0.918 0.919 0.006 0.55-59 years 0.987 0.989 0.002 0.962 0.968 0.004 0.908 0.915 0.006 0.849 0.860 0.66-64 years 0.979 0.978 0.003 0.942 0.941 0.005 0.860 0.856 0.007 0.773 0.768 0.066-64 years 0.968 0.966 0.004 0.912 0.908 0.006 0.791 0.796 0.009 0.665 0.677 0.770 0.774 years 0.950 0.954 0.005 0.865 0.868 0.080 0.866 0.686 0.698 0.010 0.505 0.525 0.075-79 years 0.950 0.954 0.005 0.865 0.868 0.080 0.866 0.686 0.698 0.010 0.505 0.525 0.075-79 years 0.866 0.901 0.091 0.066 0.791 0.000 0.664 0.001 0.505 0.865 0.007 0.791 0.002 0.865 0.008 0.866 0.008 0	25–34 years												0.001
55-59 years					0.993					0.002	0.969	0.966	0.002
60-64 years	45–54 years	0.993	0.995	0.001	0.981	0.981	0.002	0.952	0.951	0.003	0.918	0.919	0.004
65-69 years	55–59 years	0.987	0.989	0.002	0.962	0.968	0.004	0.908	0.915	0.006	0.849	0.860	0.007
70-74 years	60–64 years	0.979	0.978	0.003	0.942	0.941	0.005	0.860	0.856	0.007	0.773	0.768	0.008
75–79 years	65–69 years	0.968	0.966	0.004	0.912	0.908	0.006	0.791	0.796	0.009	0.665	0.677	0.010
80-84 years	70–74 years	0.950	0.954	0.005	0.865	0.868	0.008	0.686	0.698	0.010	0.505	0.525	0.012
Black males 18–24 years 0.994 0.997 0.002 0.984 0.993 0.002 0.967 0.982 0.004 0.956 **0.974 0.955 0.989 0.003 0.949 **0.967 0.005 0.929 0.950 0.954 0.984 0.985 0.991 0.003 0.960 0.963 0.007 0.910 0.924 0.010 0.867 0.889 0.855-59 years 0.975 0.989 0.004 0.917 0.886 0.901 0.019 0.757 0.789 0.025 0.651 0.689 0.666 0.994 0.993 0.004 0.910 0.757 0.789 0.025 0.651 0.689 0.666 0.994 0.995 0.005 0.995 0.005 0.995 0.005 0.995 0.005 0.995 0.959 0.005 0.995 0.005 0.995 0.955 0.005 0.995 0.955 0.005 0.995 0.955 0.955 0.955 0.955 0.005 0.995 0.955 0.955 0.955 0.005 0.955 0.955 0.955 0.955 0.955 0.005 0.955 0.955 0.955 0.005 0.955 0.955 0.955 0.955 0.005 0.955 0.955 0.955 0.955 0.955 0.955 0.955 0.055 0.955 0.	75–79 years	0.921	0.931	0.007	0.791	**0.820	0.010	0.529	0.562	0.013	0.314	0.330	0.012
Black males 18-24 years 0.994 0.997 0.002 0.984 0.993 0.002 0.967 0.982 0.004 0.956 **0.974 0.955 0.925 0.949 (0.967 0.985 0.003 0.949 (0.967 0.985 0.005 0.929 0.950 0.950 0.955 0.949 (0.967 0.985 0.003 0.949 (0.967 0.985 0.005 0.929 0.950 0.955 0.955 0.949 (0.968 0.968 0.991 0.003 0.960 0.963 0.007 0.910 0.924 0.010 0.867 0.889 0.945 (0.968 0.991 0.993 0.995 0.991 0.993 0.995	80–84 years	0.866	**0.901	0.010	0.664	**0.754	0.016	0.331	**0.406	0.017	0.142	**0.207	0.016
18-24 years	85 years and over	0.774	**0.836	0.014	0.490	**0.552	0.021	0.156	**0.223	0.018	0.043	**0.116	0.014
25-34 years .	Black males												
35-44 years	18–24 years	0.994	0.997	0.002	0.984	0.993	0.002	0.967	0.982	0.004	0.956	**0.974	0.005
45-54 years	25–34 years	0.991	0.994	0.003	0.977	0.985	0.003	0.949	**0.967	0.005	0.929	0.950	0.007
55-59 years 0.959 0.959 0.011 0.886 0.901 0.019 0.757 0.789 0.025 0.651 0.689 0 60-64 years 0.941 0.917 0.017 0.844 0.841 0.022 0.675 0.693 0.026 0.536 0.550 0 66-69 years 0.920 0.932 0.015 0.789 0.802 0.028 0.571 0.581 0.030 0.414 0.437 0 70-74 years 0.890 0.871 0.032 0.724 0.711 0.044 0.469 0.515 0.060 0.292 0.376 0 75-79 years 0.847 0.839 0.040 0.634 0.645 0.044 0.329 0.361 0.048 0.168 0.171 0 80-84 years 0.775 0.828 0.051 0.537 0.062 0.201 0.224 0.060 0.081 0.080 85 years and over 0.690 0.783 0.066 0.380 0.599 0.085 0.113 0.139 0.058 0.034 0.105 18-24	35–44 years	0.985	0.991	0.003	0.960	0.963	0.007	0.910	0.924	0.010	0.867	0.889	0.012
55-59 years 0.959 0.959 0.011 0.886 0.901 0.019 0.757 0.789 0.025 0.651 0.689 0 60-64 years 0.941 0.917 0.017 0.844 0.841 0.022 0.675 0.693 0.026 0.536 0.550 0 65-69 years 0.920 0.932 0.015 0.789 0.802 0.028 0.571 0.581 0.030 0.414 0.437 0 70-74 years 0.890 0.871 0.032 0.724 0.711 0.044 0.469 0.515 0.060 0.292 0.376 0 75-79 years 0.847 0.839 0.040 0.634 0.645 0.044 0.329 0.361 0.048 0.188 0.171 0.088 0.181 0.080 0 0.081 0.088 0.018 0.080 0.081 0.080 0 0.081 0.080 0 0.081 0.088 0.018 0.080 0 0.081 0.080 0 0 0.081 0.080 0 0.081 0.080 0 0.08	45–54 years	0.975	0.989	0.004	0.931	0.956	0.008	0.841	0.880	0.013	0.760	**0.818	0.015
60-64 years		0.959	0.959	0.011	0.886	0.901	0.019	0.757	0.789	0.025	0.651	0.689	0.026
65-69 years 0.920 0.932 0.015 0.789 0.802 0.028 0.571 0.581 0.030 0.414 0.437 0 70-74 years 0.890 0.871 0.032 0.724 0.711 0.044 0.469 0.515 0.060 0.292 0.376 0 75-79 years 0.847 0.839 0.040 0.634 0.645 0.044 0.329 0.361 0.048 0.168 0.171 0 80-84 years 0.775 0.828 0.051 0.501 0.537 0.062 0.201 0.284 0.060 0.081 0.080 0 85 years and over 0.690 0.783 0.066 0.380 0.509 0.085 0.113 0.139 0.058 0.034 0.105 0 Black females 18-24 years 0.998 0.995 0.003 0.995 0.989 0.004 0.989 0.984 0.004 0.982 0.979 0 25-34 years 0.997 0.998 0.001 0.991 0.991 0.991 0.002 0.977		0.941	0.917	0.017	0.844	0.841	0.022	0.675	0.693	0.026	0.536	0.550	0.028
70–74 years . 0.890 0.871 0.032 0.724 0.711 0.044 0.469 0.515 0.060 0.292 0.376 0.75–79 years . 0.847 0.839 0.040 0.634 0.645 0.044 0.329 0.361 0.048 0.168 0.171 0.80–84 years . 0.775 0.828 0.051 0.501 0.537 0.062 0.201 0.284 0.060 0.081 0.080 0.85 years and over . 0.690 0.783 0.066 0.380 0.509 0.085 0.113 0.139 0.058 0.034 0.105 0.85 years and over . 0.998 0.995 0.003 0.995 0.989 0.004 0.989 0.984 0.004 0.982 0.979 0.25–34 years . 0.997 0.998 0.001 0.991 0.991 0.002 0.977 0.982 0.003 0.964 0.968 0.35–44 years . 0.993 0.989 0.003 0.982 0.982 0.004 0.957 0.967 0.005 0.931 **0.954 0.45–54 years . 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0.55–59 years . 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0.66–64 years . 0.964 0.988 0.005 0.985 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.66–69 years . 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70–74 years . 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75–79 years . 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80–84 years . 0.837 0.837 0.833 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.80													0.031
75–79 years 0.847 0.839 0.040 0.634 0.645 0.044 0.329 0.361 0.048 0.168 0.171 0.80–84 years 0.775 0.828 0.051 0.501 0.537 0.062 0.201 0.284 0.060 0.081 0.080 0.85 years and over 0.690 0.783 0.066 0.380 0.509 0.085 0.113 0.139 0.058 0.034 0.105 0.885 years and over 0.998 0.995 0.003 0.995 0.989 0.004 0.989 0.984 0.004 0.982 0.979 0.25–34 years 0.997 0.998 0.001 0.991 0.991 0.002 0.977 0.982 0.003 0.964 0.968 0.35–44 years 0.993 0.987 0.989 0.003 0.982 0.982 0.004 0.957 0.967 0.005 0.931 **0.954 0.45–54 years 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0.55–59 years 0.997 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0.60–64 years 0.994 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.65–69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70–74 years 0.930 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.579–79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80–84 years 0.837 0.873 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.080 0.800													0.057
80-84 years	-												0.027
Black females 18–24 years	•												0.030
18–24 years 0.998 0.995 0.003 0.995 0.989 0.004 0.989 0.984 0.004 0.982 0.979 0.25–34 years 0.997 0.998 0.001 0.991 0.991 0.002 0.977 0.982 0.003 0.964 0.968 0.35–44 years 0.993 0.989 0.003 0.982 0.982 0.004 0.957 0.967 0.005 0.931 **0.954 0.45–54 years 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0.55–59 years 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0.60–64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.65–69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70–74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75–79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80–84 years 0.837 0.837 0.833 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.80	•												0.059
25-34 years 0.997 0.998 0.001 0.991 0.991 0.002 0.977 0.982 0.003 0.964 0.968 0 35-44 years 0.993 0.989 0.003 0.982 0.982 0.004 0.957 0.967 0.005 0.931 **0.954 0 45-54 years 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0 55-59 years 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0 60-64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0 65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0 70-74 years 0.930 0.936 0.015 <	Black females												
35-44 years 0.993 0.989 0.003 0.982 0.982 0.004 0.957 0.967 0.005 0.931 **0.954 0 0 45-54 years 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0 55-59 years 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0 60-64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0 65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0 70-74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 75-79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.25	18–24 years	0.998	0.995	0.003	0.995	0.989	0.004	0.989	0.984	0.004	0.982	0.979	0.005
45–54 years 0.987 0.989 0.003 0.962 0.974 0.005 0.911 0.926 0.008 0.860 0.876 0 0.55–59 years 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0.60–64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.65–69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70–74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75–79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80–84 years 0.837 0.837 0.833 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.850	25–34 years	0.997	0.998	0.001	0.991	0.991	0.002	0.977	0.982	0.003	0.964	0.968	0.004
55-59 years 0.977 0.976 0.009 0.935 0.950 0.010 0.854 0.878 0.014 0.776 0.794 0 60-64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0 65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0 70-74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0 75-79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0 80-84 years 0.837 0.873 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0	35–44 years	0.993	0.989	0.003	0.982	0.982	0.004	0.957	0.967	0.005	0.931	**0.954	0.006
60-64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70-74 years 0.930 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75-79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80-84 years 0.837 0.837 0.833 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.800 0.001	45–54 years	0.987	0.989	0.003	0.962	0.974	0.005	0.911	0.926	0.008	0.860	0.876	0.011
60-64 years 0.964 0.988 0.005 0.905 **0.945 0.011 0.788 **0.857 0.016 0.676 **0.757 0.65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70-74 years 0.930 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75-79 years 0.899 0.943 0.014 0.751 0.817 0.029 0.477 0.522 0.037 0.281 **0.397 0.80-84 years 0.837 0.837 0.833 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.80-10-10-10-10-10-10-10-10-10-10-10-10-10	55–59 years	0.977	0.976	0.009	0.935	0.950	0.010	0.854	0.878	0.014	0.776	0.794	0.019
65-69 years 0.951 0.960 0.010 0.870 0.899 0.016 0.714 0.767 0.023 0.574 0.622 0.70-74 years 70-74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75-79 years 80-84 years 0.837 0.873 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.870	-												0.020
70-74 years 0.930 0.936 0.015 0.822 0.809 0.027 0.619 0.683 0.030 0.439 0.503 0.75-79 years 80-84 years 0.837 0.873 0.033 0.624 0.730 0.037 0.312 0.422 0.047 0.142 **0.250 0.047	-												0.030
75–79 years	-												0.032
80–84 years	-												0.038
·	-												0.036
85 years and over													0.030

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 8. Cumulative survival probabilities after 2, 5, 10, and 13 years for the U.S. population, compared with those for the 1989 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years			10 years	3		13 years	3
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹
White males												
18–24 years	0.997	0.999	0.001	0.993	0.994	0.001	0.986	0.986	0.002	0.982	0.983	0.002
25–34 years	0.996	0.995	0.001	0.990	0.991	0.001	0.979	0.981	0.002	0.972	0.974	0.002
35–44 years	0.995	0.993	0.001	0.985	0.983	0.002	0.964	0.967	0.002	0.949	0.953	0.003
45–54 years	0.988	0.992	0.001	0.967	0.973	0.002	0.920	**0.931	0.004	0.884	**0.900	0.005
55–59 years	0.977	0.982	0.003	0.935	0.943	0.005	0.847	**0.873	0.008	0.785	0.801	0.010
60–64 years	0.963	0.965	0.004	0.899	0.909	0.006	0.772	0.790	0.009	0.686	0.698	0.012
65–69 years	0.945	0.953	0.005	0.852	0.857	0.008	0.678	0.669	0.011	0.564	0.569	0.011
70–74 years	0.915	0.911	0.009	0.781	0.770	0.012	0.546	0.537	0.014	0.403	0.405	0.015
75–79 years	0.871	0.895	0.011	0.681	0.701	0.016	0.379	0.364	0.016	0.233	0.234	0.013
80–84 years	0.805	0.801	0.019	0.537	0.534	0.025	0.211	0.235	0.019	0.100	0.126	0.015
85 years and over	0.708	0.722	0.026	0.375	0.433	0.029	0.091	0.125	0.019	0.031	**0.083	0.016
White females												
18–24 years	0.999	**0.998	0.001	0.998	**0.996	0.001	0.995	**0.992	0.001	0.993	**0.990	0.001
25–34 years	0.999	0.999	0.000	0.997	0.997	0.001	0.991	0.992	0.001	0.987	0.988	0.001
35–44 years	0.998	0.997	0.001	0.993	0.992	0.001	0.982	**0.977	0.002	0.973	0.967	0.002
45–54 years	0.993	0.994	0.001	0.981	0.981	0.002	0.952	0.945	0.003	0.928	**0.918	0.004
55–59 years	0.987	0.989	0.002	0.963	0.965	0.004	0.908	0.911	0.006	0.866	0.872	0.008
60–64 years	0.979	0.980	0.003	0.942	0.936	0.006	0.861	0.853	0.008	0.799	0.786	0.010
65–69 years	0.969	0.967	0.004	0.912	0.907	0.007	0.792	0.790	0.009	0.700	0.699	0.011
70–74 years	0.951	**0.964	0.004	0.866	**0.888	0.007	0.686	0.704	0.011	0.553	0.570	0.012
75–79 years	0.922	**0.946	0.006	0.793	0.818	0.011	0.530	**0.569	0.013	0.366	**0.408	0.014
80–84 years	0.872	**0.914	0.010	0.668	**0.743	0.017	0.334	**0.398	0.017	0.183	**0.251	0.014
85 years and over	0.784	**0.829	0.013	0.497	**0.571	0.020	0.160	**0.258	0.018	0.063	**0.159	0.015
Black males												
18–24 years	0.994	0.995	0.003	0.984	0.988	0.004	0.968	0.979	0.005	0.960	0.969	0.006
25–34 years	0.991	0.992	0.003	0.976	0.983	0.004	0.951	0.965	0.006	0.937	0.950	0.008
35–44 years	0.985	0.989	0.004	0.960	0.972	0.005	0.911	0.921	0.011	0.879	0.899	0.014
45–54 years	0.973	0.969	0.008	0.929	0.941	0.010	0.841	0.878	0.015	0.783	0.826	0.018
55–59 years	0.957	0.972	0.009	0.885	0.916	0.017	0.757	0.759	0.029	0.678	0.690	0.030
60-64 years	0.940	0.936	0.017	0.845	0.862	0.022	0.682	0.697	0.032	0.579	0.595	0.035
65–69 years	0.918	0.924	0.024	0.788	0.747	0.037	0.573	0.613	0.038	0.451	0.485	0.041
70–74 years	0.887	0.896	0.028	0.722	0.712	0.038	0.471	0.386	0.039	0.336	0.270	0.036
75–79 years	0.849	0.866	0.035	0.637	0.675	0.055	0.333	0.437	0.054	0.205	0.307	0.051
80–84 years	0.784	0.771	0.057	0.505	0.552	0.064	0.204	0.290	0.053	0.106	0.192	0.049
85 years and over	0.705	0.765	0.080	0.386	0.417	0.091	0.115	0.197	0.067	0.048	0.083	0.042
Black females												
18–24 years	0.998	0.999	0.001	0.995	0.996	0.002	0.989	0.986	0.004	0.985	0.981	0.005
25–34 years	0.997	0.996	0.002	0.990	0.992	0.003	0.978	0.983	0.003	0.969	**0.980	0.003
35–44 years	0.994	0.991	0.003	0.982	0.979	0.005	0.957	0.956	0.007	0.939	0.933	0.007
45–54 years	0.987	0.993	0.003	0.963	0.964	0.007	0.912	0.927	0.010	0.875	0.893	0.012
55–59 years	0.977	0.977	0.009	0.936	0.943	0.012	0.855	0.835	0.018	0.797	0.771	0.021
60–64 years	0.964	0.972	0.008	0.906	0.901	0.017	0.792	0.818	0.022	0.711	0.769	0.024
65–69 years	0.951	**0.988	0.006	0.869	0.908	0.015	0.712	0.732	0.025	0.607	0.599	0.031
70–74 years	0.932	0.943	0.014	0.823	0.844	0.026	0.621	0.610	0.035	0.487	0.448	0.033
75–79 years	0.903	0.917	0.023	0.753	0.793	0.027	0.479	0.551	0.041	0.328	0.382	0.036
80–84 years	0.850	0.900	0.027	0.630	0.712	0.042	0.314	0.419	0.056	0.179	0.249	0.044

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 9. Cumulative survival probabilities after 2, 5, 10, and 12 years for the U.S. population, compared with those for the 1990 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years			10 years	;		12 years	i
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS) ¹
White males												
18–24 years	0.997	0.998	0.001	0.993	0.995	0.001	0.986	0.988	0.002	0.984	0.985	0.002
25–34 years	0.996	0.996	0.001	0.990	0.990	0.001	0.980	0.982	0.002	0.975	0.976	0.002
35–44 years	0.995	0.996	0.001	0.985	0.988	0.001	0.964	0.968	0.002	0.954	0.959	0.002
45–54 years	0.988	0.991	0.001	0.967	0.971	0.002	0.921	0.927	0.004	0.898	0.903	0.004
55–59 years	0.975	0.978	0.003	0.934	0.937	0.006	0.848	0.864	0.008	0.809	0.817	0.009
60–64 years	0.963	0.962	0.004	0.900	0.896	0.007	0.776	0.761	0.010	0.720	0.708	0.011
65–69 years	0.945	0.951	0.005	0.853	0.866	0.008	0.678	0.698	0.012	0.604	0.618	0.012
70–74 years	0.916	0.930	0.007	0.784	0.800	0.011	0.550	0.566	0.014	0.455	0.478	0.014
75–79 years	0.874	0.896	0.009	0.685	0.719	0.015	0.383	0.402	0.017	0.282	0.311	0.016
80–84 years	0.808	0.826	0.017	0.540	0.580	0.021	0.215	0.246	0.017	0.134	0.163	0.016
85 years and over	0.712	0.757	0.023	0.377	0.427	0.031	0.093	**0.160	0.025	0.046	**0.130	0.021
White females												
18–24 years	0.999	0.998	0.001	0.998	0.997	0.001	0.995	0.994	0.001	0.994	0.993	0.001
25–34 years	0.999	0.998	0.000	0.996	0.997	0.001	0.991	0.990	0.001	0.989	0.987	0.001
35–44 years	0.998	0.997	0.001	0.993	**0.989	0.001	0.982	0.978	0.002	0.976	**0.970	0.002
45–54 years	0.993	0.994	0.001	0.981	0.981	0.002	0.953	0.953	0.003	0.938	0.936	0.003
55–59 years	0.987	0.987	0.002	0.963	0.963	0.004	0.909	0.913	0.006	0.882	0.886	0.007
60–64 years	0.979	0.976	0.004	0.942	0.943	0.006	0.862	0.865	0.008	0.821	0.829	0.009
65–69 years	0.969	0.968	0.004	0.913	0.910	0.006	0.792	0.787	0.009	0.732	0.724	0.010
70–74 years	0.951	0.960	0.005	0.866	0.876	0.008	0.687	0.699	0.010	0.600	0.611	0.011
75–79 years	0.924	**0.943	0.006	0.794	0.814	0.009	0.529	**0.564	0.012	0.419	**0.464	0.013
80–84 years	0.846	0.882	0.013	0.647	**0.700	0.016	0.325	**0.381	0.017	0.222	**0.284	0.016
85 years and over	0.792	**0.839	0.013	0.500	**0.600	0.020	0.162	**0.248	0.018	0.089	**0.169	0.017
Black males												
18–24 years	0.994	0.995	0.002	0.983	0.982	0.004	0.969	0.969	0.005	0.964	0.966	0.006
25–34 years	0.991	0.994	0.003	0.976	0.977	0.006	0.954	0.953	0.008	0.945	0.943	0.009
35–44 years	0.986	0.995	0.002	0.960	0.977	0.005	0.913	**0.939	0.008	0.893	**0.924	0.009
45–54 years	0.974	0.986	0.005	0.929	0.950	0.009	0.843	0.881	0.013	0.806	**0.864	0.014
55–59 years	0.956	0.974	0.009	0.885	0.924	0.014	0.758	0.757	0.023	0.706	0.718	0.026
60–64 years	0.939	0.963	0.012	0.846	0.874	0.021	0.688	0.739	0.031	0.620	0.662	0.031
65–69 years	0.916	0.943	0.017	0.787	0.829	0.027	0.574	0.649	0.030	0.493	**0.597	0.032
70–74 years	0.885	0.841	0.066	0.728	0.718	0.062	0.478	0.504	0.054	0.384	0.392	0.053
75–79 years	0.850	0.897	0.031	0.638	0.700	0.040	0.336	0.408	0.043	0.247	0.331	0.044
80–84 years	0.786	0.777	0.049	0.507	0.478	0.056	0.196	0.175	0.036	0.129	0.154	0.034
85 years and over	0.709	0.691	0.093	0.389	0.414	0.095	0.118	**0.322	0.085	0.067	**0.295	0.082
Black females												
18–24 years	0.998	0.998	0.001	0.995	**0.988	0.004	0.989	0.982	0.005	0.986	0.981	0.005
25–34 years	0.997	0.997	0.002	0.990	0.994	0.002	0.978	0.983	0.003	0.972	0.978	0.004
35–44 years	0.994	0.994	0.003	0.982	0.983	0.004	0.957	0.964	0.006	0.945	0.957	0.006
45–54 years	0.986	0.984	0.004	0.963	0.968	0.005	0.913	0.912	0.009	0.889	0.898	0.010
55–59 years	0.976	0.981	0.007	0.936	0.941	0.013	0.855	0.884	0.019	0.818	0.864	0.019
60–64 years	0.965	0.958	0.012	0.908	0.922	0.016	0.796	0.836	0.024	0.744	0.783	0.028
65–69 years	0.951	0.960	0.010	0.869	0.898	0.017	0.709	0.738	0.030	0.640	0.686	0.029
70–74 years	0.932	0.942	0.016	0.823	0.825	0.024	0.620	0.612	0.036	0.532	0.551	0.039
75–79 years	0.906	0.889	0.023	0.756	0.802	0.028	0.478	**0.620	0.035	0.377	0.469	0.038
80–84 years	0.857	0.901	0.025	0.636	0.664	0.043	0.316	0.369	0.037	0.222	0.303	0.039
85 years and over	0.785	**0.931	0.028	0.499	**0.685	0.044	0.177	**0.410	0.055	0.106	**0.369	0.053

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 10. Cumulative survival probabilities after 2, 5, 10, and 11 years for the U.S. population, compared with those for the 1991 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years			10 years	;	11 years		
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS)
White males												
18–24 years	0.997	0.998	0.001	0.993	0.994	0.001	0.987	0.989	0.002	0.986	0.988	0.002
25-34 years	0.996	0.997	0.001	0.989	0.991	0.001	0.980	0.979	0.002	0.977	0.977	0.002
35–44 years	0.994	0.996	0.001	0.984	0.985	0.002	0.964	0.964	0.002	0.959	0.959	0.002
15–54 years	0.989	0.991	0.001	0.967	0.970	0.002	0.922	**0.934	0.003	0.911	**0.923	0.004
55–59 years	0.980	0.977	0.003	0.939	0.944	0.006	0.855	0.851	0.009	0.836	0.834	0.009
60–64 years	0.964	0.965	0.004	0.902	0.902	0.007	0.779	0.776	0.010	0.752	0.750	0.010
5–69 years	0.945	0.954	0.006	0.854	0.865	0.008	0.682	0.682	0.010	0.646	0.646	0.010
0–74 years	0.918	0.935	0.006	0.787	0.792	0.010	0.556	0.557	0.015	0.510	0.511	0.015
5–79 years	0.877	0.889	0.010	0.690	0.711	0.014	0.387	0.424	0.018	0.335	0.358	0.017
0–84 years	0.812	0.802	0.016	0.543	0.579	0.021	0.219	**0.261	0.016	0.175	**0.225	0.017
	0.715	0.729	0.018		0.392	0.030	0.213	0.201	0.018	0.173	0.098	0.010
5 years and over	0.715	0.729	0.028	0.380	0.392	0.030	0.095	0.110	0.018	0.068	0.098	0.017
White females												
8–24 years	0.999	0.999	0.000	0.998	0.998	0.001	0.995	0.995	0.001	0.995	0.995	0.001
5–34 years	0.999	0.999	0.000	0.996	0.995	0.001	0.991	0.992	0.001	0.990	0.991	0.001
5–44 years	0.998	0.998	0.001	0.993	0.991	0.001	0.982	**0.978	0.002	0.979	**0.974	0.002
5–54 years	0.993	0.992	0.001	0.981	0.979	0.002	0.953	0.953	0.003	0.946	0.946	0.003
5–59 years	0.987	0.982	0.003	0.963	0.958	0.004	0.909	0.913	0.006	0.896	0.896	0.007
0–64 years	0.980	0.988	0.002	0.943	0.948	0.005	0.863	0.853	0.008	0.843	0.828	0.009
5–69 years	0.969	0.971	0.004	0.913	0.912	0.006	0.792	0.791	0.009	0.764	0.759	0.010
0–74 years	0.952	0.961	0.004	0.866	0.883	0.008	0.687	0.695	0.013	0.647	0.665	0.013
5–79 years	0.925	0.935	0.008	0.794	0.806	0.011	0.528	0.545	0.013	0.474	0.496	0.013
0–84 years	0.877	**0.908	0.009	0.670	**0.718	0.014	0.335	**0.409	0.015	0.281	**0.351	0.015
											**0.202	
5 years and over	0.794	0.822	0.014	0.500	0.529	0.021	0.162	**0.226	0.017	0.123	0.202	0.016
Black males												
8–24 years	0.994	0.993	0.003	0.983	0.987	0.004	0.970	0.972	0.006	0.968	0.970	0.006
5–34 years	0.991	0.992	0.002	0.976	0.983	0.003	0.956	**0.971	0.005	0.952	**0.968	0.005
5–44 years	0.985	**0.996	0.002	0.959	**0.980	0.004	0.914	**0.949	0.007	0.904	**0.942	0.007
5–54 years	0.974	0.980	0.006	0.929	0.953	0.008	0.845	**0.890	0.012	0.827	**0.873	0.013
5–59 years	0.957	0.967	0.013	0.886	0.885	0.021	0.760	0.769	0.026	0.735	0.750	0.027
0–64 years	0.941	0.961	0.013	0.850	0.866	0.021	0.695	0.715	0.030	0.661	0.682	0.033
5–69 years	0.918	0.927	0.017	0.790	0.812	0.029	0.579	0.649	0.039	0.539	0.595	0.041
0–74 years	0.887	0.950	0.018	0.717	**0.834	0.029	0.472	0.567	0.039	0.426	0.511	0.041
5–79 years	0.854	0.835	0.038	0.641	0.706	0.046	0.342	0.469	0.056	0.295	0.442	0.057
0–84 years	0.789	0.836	0.059	0.509	0.592	0.072	0.225	0.295	0.065	0.183	0.212	0.062
5 years and over	0.710	0.711	0.080	0.389	0.450	0.080	0.120	0.119	0.050	0.091	0.119	0.050
Black females												
8–24 years	0.998	0.999	0.001	0.995	0.994	0.003	0.989	0.990	0.004	0.988	0.988	0.004
5–34 years	0.997	0.999	0.001	0.990	0.995	0.002	0.979	0.985	0.003	0.976	0.981	0.004
5–44 years	0.993	0.996	0.002	0.982	0.989	0.003	0.957	0.971	0.005	0.951	0.967	0.005
5–54 years	0.987	0.987	0.004	0.963	0.964	0.006	0.914	0.905	0.010	0.903	0.898	0.011
5–59 years	0.976	0.965	0.010	0.936	0.932	0.014	0.856	0.870	0.016	0.838	0.857	0.018
0–64 years	0.966	0.958	0.010	0.910	0.911	0.017	0.800	0.809	0.021	0.776	0.796	0.010
5–69 years	0.952	0.954	0.011	0.869	0.860	0.017	0.709	0.726	0.021	0.776	0.790	0.021
-												
0–74 years	0.932	0.932	0.018	0.822	0.832	0.027	0.619	0.626	0.033	0.579	0.569	0.034
5–79 years	0.909	0.937	0.016	0.765	0.812	0.031	0.483	0.562	0.036	0.433	0.533	0.037
0–84 years	0.858	0.910	0.026	0.634	0.669	0.041	0.315	0.386	0.047	0.268	0.306	0.046
5 years and over	0.785	0.801	0.048	0.495	0.504	0.064	0.176	0.330	0.065	0.139	**0.319	0.065

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 11. Cumulative survival probabilities after 2, 5, and 10 years for the U.S. population, compared with those for the 1992 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years		10 years			
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS)	
White males										
8–24 years	0.997	0.996	0.001	0.993	0.992	0.001	0.987	0.986	0.002	
5–34 years	0.996	0.997	0.001	0.991	0.991	0.001	0.981	0.982	0.002	
5–44 years	0.994	0.995	0.001	0.984	0.985	0.002	0.964	0.967	0.002	
5–54 years	0.989	0.989	0.001	0.968	0.970	0.002	0.923	0.927	0.004	
5–59 years	0.978	0.980	0.003	0.938	0.940	0.005	0.857	0.867	0.008	
0–64 years	0.964	0.959	0.005	0.904	0.895	0.008	0.784	0.784	0.009	
5–69 years	0.945	0.942	0.005	0.855	0.853	0.009	0.685	0.664	0.012	
0–74 years	0.919	0.916	0.007	0.790	0.773	0.010	0.560	0.564	0.012	
5–79 years	0.878	0.879	0.012	0.692	0.687	0.016	0.392	0.372	0.012	
0–84 years	0.812	0.806	0.012	0.548	0.597	0.022	0.223	**0.287	0.020	
5 years and over	0.714	0.717	0.017	0.384	0.376	0.022	0.223	**0.143	0.020	
5 years and over	0.714	0.717	0.025	0.304	0.376	0.027	0.096	0.143	0.016	
White females										
8–24 years	0.999	0.998	0.001	0.998	**0.995	0.001	0.995	**0.992	0.001	
25-34 years	0.999	0.999	0.000	0.996	0.995	0.001	0.991	0.990	0.001	
35–44 years	0.997	0.998	0.001	0.993	0.993	0.001	0.982	0.979	0.002	
15-54 years	0.994	0.994	0.001	0.981	0.982	0.002	0.954	0.954	0.003	
55–59 years	0.987	0.990	0.002	0.963	0.968	0.004	0.911	0.908	0.006	
60–64 years	0.979	0.982	0.003	0.943	0.950	0.005	0.863	0.868	0.008	
65–69 years	0.969	0.970	0.004	0.913	0.917	0.006	0.793	0.783	0.008	
'0-74 years	0.951	0.958	0.005	0.867	0.885	0.007	0.687	0.707	0.010	
75-79 years	0.925	0.939	0.007	0.793	0.813	0.011	0.529	0.543	0.013	
30-84 years	0.876	**0.911	0.009	0.669	**0.732	0.014	0.337	**0.397	0.015	
35 years and over	0.793	**0.833	0.014	0.499	0.527	0.020	0.165	**0.221	0.016	
Black males										
8–24 years	0.993	0.996	0.002	0.984	0.989	0.005	0.971	0.982	0.006	
25–34 years	0.991	0.996	0.002	0.977	0.980	0.005	0.958	0.960	0.006	
35–44 years	0.985	0.991	0.003	0.959	0.970	0.008	0.917	0.942	0.010	
15–54 years	0.974	0.966	0.008	0.929	0.936	0.011	0.847	0.878	0.013	
55–59 years	0.957	0.959	0.013	0.886	0.916	0.017	0.763	0.808	0.023	
60–64 years	0.941	0.960	0.012	0.852	0.896	0.020	0.698	0.718	0.030	
65–69 years	0.920	0.911	0.019	0.794	0.800	0.031	0.587	0.653	0.038	
70–74 years	0.886	0.924	0.020	0.723	0.702	0.036	0.475	0.428	0.042	
75–79 years	0.854	0.860	0.040	0.644	0.565	0.053	0.346	0.321	0.042	
80–84 years	0.788	0.770	0.080	0.513	0.512	0.086	0.216	0.304	0.072	
5 years and over	0.711	0.578	0.088	0.396	0.404	0.084	0.123	0.127	0.046	
Black females										
8–24 years	0.998	0.997	0.002	0.995	0.992	0.002	0.990	0.986	0.002	
25–34 years	0.997	0.997	0.002	0.990	0.991	0.003	0.979	0.982	0.004	
35–44 years	0.993	0.992	0.002	0.981	0.980	0.004	0.957	0.961	0.005	
5–54 years	0.987	0.990	0.004	0.963	0.957	0.008	0.915	0.894	0.015	
5–59 years	0.977	0.978	0.007	0.936	0.944	0.011	0.857	0.876	0.016	
0–64 years	0.967	0.954	0.007	0.930	0.889	0.021	0.804	0.775	0.010	
5–69 years	0.952	0.965	0.010	0.870	0.897	0.021	0.712	0.734	0.024	
0–74 years	0.932	0.960	0.012	0.822	0.888	0.013	0.712	0.734	0.020	
5–79 years										
•	0.909	0.935	0.018	0.746	0.785	0.031	0.475	0.515	0.039	
80–84 years	0.857	0.872	0.029	0.635	0.670	0.051	0.319	0.405	0.052	
35 years and over	0.783	0.774	0.040	0.497	0.542	0.055	0.180	**0.323	0.050	

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 12. Cumulative survival probabilities after 2, 5, and 9 years for the U.S. population, compared with those for the 1993 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years		9 years			
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS)	
White males										
8–24 years	0.997	0.998	0.001	0.993	0.994	0.001	0.988	0.990	0.002	
5–34 years	0.996	**0.998	0.000	0.991	0.994	0.001	0.983	0.987	0.001	
5-44 years	0.994	0.995	0.001	0.984	0.987	0.001	0.969	0.972	0.002	
5–54 years	0.989	0.991	0.001	0.968	0.972	0.003	0.934	0.938	0.004	
5–59 years	0.978	0.976	0.003	0.940	0.937	0.005	0.877	0.877	0.008	
0–64 years	0.964	0.966	0.005	0.905	0.918	0.007	0.812	0.825	0.009	
5–69 years	0.946	0.950	0.005	0.857	0.863	0.008	0.724	0.723	0.012	
0–74 years	0.920	0.927	0.008	0.792	0.799	0.011	0.613	0.627	0.013	
5–79 years	0.879	0.887	0.011	0.695	0.699	0.016	0.452	**0.494	0.016	
80–84 years	0.812	0.864	0.017	0.551	0.591	0.024	0.278	0.290	0.021	
5 years and over	0.712	0.735	0.023	0.388	0.401	0.028	0.137	0.164	0.022	
White females										
8–24 years	0.999	0.999	0.000	0.998	0.998	0.001	0.996	0.995	0.001	
25–34 years	0.999	0.998	0.000	0.996	0.996	0.001	0.993	0.991	0.001	
35–44 years	0.997	0.998	0.000	0.993	0.993	0.001	0.984	0.982	0.001	
15–54 years	0.994	0.993	0.001	0.981	0.978	0.002	0.960	0.956	0.001	
55–59 years	0.987	0.988	0.001	0.964	0.959	0.002	0.923	0.922	0.003	
60–64 years	0.979	0.981	0.003	0.943	0.935	0.006	0.882	0.870	0.007	
65–69 years	0.969	0.969	0.003	0.913	0.918	0.006	0.821	0.821	0.009	
	0.951	0.958	0.004	0.867	0.883	0.008	0.729	**0.769	0.003	
70–74 years	0.924								0.011	
75–79 years		0.937	0.007	0.792	0.801	0.012	0.584	0.600		
30–84 years	0.874 0.790	0.902 0.806	0.011 0.016	0.668 0.498	**0.727 0.516	0.015 0.019	0.397 0.215	**0.458 0.239	0.020 0.017	
Black males	0.7.00	0.000	0.0.0	000	0.0.0	0.0.0	0.2.0	0.200	0.017	
8–24 years	0.993	0.997	0.002	0.984	0.991	0.004	0.974	0.982	0.007	
-										
25–34 years	0.991	0.996	0.002	0.978	0.986	0.004	0.965	0.980	0.005	
35–44 years	0.984	0.984	0.005	0.961	0.962	0.006	0.929	0.927	0.010	
15–54 years	0.973	0.980	0.008	0.930	0.949	0.010	0.865	0.899	0.014	
55–59 years	0.958	0.971	0.010	0.888	0.914	0.021	0.791	0.838	0.028	
60–64 years	0.942	0.952	0.014	0.854	0.844	0.029	0.734	0.693	0.035	
65–69 years	0.922	0.910	0.024	0.800	0.794	0.031	0.636	0.580	0.041	
70–74 years	0.885	0.904	0.025	0.724	0.762	0.040	0.525	0.504	0.043	
75–79 years	0.855	0.919	0.029	0.648	0.718	0.048	0.403	0.378	0.056	
80–84 years	0.785 0.708	0.838 0.703	0.060 0.096	0.518 0.401	0.534	0.066 0.090	0.265	0.213 0.387	0.049 0.094	
35 years and over	0.708	0.703	0.090	0.401	0.522	0.090	0.161	0.367	0.034	
Black females	0.000	0.000	0.004	0.005	0.000	0.004	0.004	0.005	0.000	
8–24 years	0.998	0.999	0.001	0.995	0.999	0.001	0.991	0.995	0.003	
25–34 years	0.996	0.998	0.001	0.991	0.993	0.003	0.982	0.983	0.004	
5–44 years	0.993	0.998	0.002	0.982	0.991	0.003	0.963	**0.976	0.004	
5–54 years	0.987	0.986	0.005	0.963	0.960	0.008	0.926	0.919	0.013	
5–59 years	0.977	0.977	0.008	0.937	0.944	0.012	0.876	0.880	0.019	
0–64 years	0.967	0.964	0.012	0.914	0.905	0.018	0.830	0.849	0.022	
65–69 years	0.953	0.968	0.011	0.871	0.893	0.019	0.748	0.766	0.026	
'0-74 years	0.930	0.952	0.013	0.820	0.863	0.023	0.660	0.696	0.032	
'5-79 years	0.905	0.946	0.020	0.753	0.786	0.037	0.534	0.592	0.046	
30-84 years	0.854	0.858	0.039	0.635	0.691	0.040	0.374	0.470	0.044	
35 years and over	0.781	0.830	0.051	0.500	0.630	0.073	0.228	0.289	0.058	

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 13. Cumulative survival probabilities after 2, 5, and 8 years for the U.S. population, compared with those for the 1994 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years		8 years			
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS)	
White males										
8–24 years	0.997	0.998	0.001	0.993	0.991	0.002	0.990	0.987	0.002	
5–34 years	0.996	0.997	0.001	0.991	0.993	0.001	0.986	0.988	0.001	
5-44 years	0.994	0.995	0.001	0.985	0.987	0.001	0.974	0.978	0.002	
5–54 years	0.989	0.989	0.001	0.969	0.970	0.002	0.945	0.947	0.003	
5–59 years	0.979	0.978	0.003	0.941	0.941	0.005	0.897	0.896	0.007	
0–64 years	0.965	0.971	0.005	0.906	0.922	0.007	0.840	0.843	0.009	
5–69 years	0.947	0.947	0.006	0.859	0.848	0.010	0.763	0.750	0.011	
0–74 years	0.921	0.925	0.007	0.796	0.795	0.010	0.662	0.669	0.012	
5–79 years	0.882	0.890	0.012	0.699	0.710	0.015	0.515	0.514	0.017	
30–84 years	0.815	0.830	0.015	0.557	0.596	0.021	0.342	0.344	0.020	
35 years and over	0.716	0.728	0.029	0.393	0.394	0.030	0.186	0.228	0.024	
White females										
8–24 years	0.999	0.998	0.001	0.998	0.998	0.001	0.996	0.996	0.001	
5–34 years	0.999	0.998	0.001	0.996	0.996	0.001	0.994	**0.991	0.001	
35–44 years	0.997	0.997	0.001	0.993	0.991	0.001	0.987	0.985	0.001	
15–54 years	0.994	0.994	0.001	0.982	0.982	0.002	0.967	0.964	0.003	
55–59 years	0.987	0.989	0.002	0.964	0.969	0.004	0.935	0.939	0.005	
60–64 years	0.980	0.978	0.003	0.944	0.939	0.005	0.899	0.891	0.007	
65–69 years	0.969	0.970	0.004	0.914	0.916	0.006	0.847	0.846	0.009	
70–74 years	0.952	0.949	0.005	0.868	0.858	0.008	0.767	0.756	0.010	
75–79 years	0.924	0.932	0.007	0.793	0.813	0.011	0.639	0.650	0.014	
30–84 years	0.875	**0.900	0.009	0.668	**0.714	0.014	0.461	0.495	0.016	
35 years and over	0.790	0.827	0.014	0.500	0.554	0.021	0.274	0.299	0.019	
Black males										
8–24 years	0.994	0.991	0.005	0.985	0.987	0.005	0.978	0.977	0.007	
25–34 years	0.991	0.997	0.002	0.981	0.988	0.003	0.970	0.977	0.005	
35–44 years	0.985	0.991	0.003	0.964	0.972	0.006	0.941	0.957	0.007	
15–54 years	0.973	0.976	0.006	0.932	0.936	0.010	0.885	0.895	0.014	
55–59 years	0.959	0.970	0.011	0.891	0.908	0.023	0.820	0.846	0.028	
60-64 years	0.941	0.965	0.013	0.856	0.892	0.026	0.766	0.817	0.030	
65–69 years	0.925	0.927	0.021	0.808	0.816	0.026	0.686	0.701	0.034	
70–74 years	0.885	0.874	0.030	0.727	0.754	0.040	0.573	0.650	0.042	
75–79 years	0.858	0.819	0.039	0.652	0.648	0.052	0.465	0.494	0.054	
80–84 years	0.787	0.812	0.059	0.523	0.554	0.073	0.323	0.293	0.068	
55 years and over	0.711	0.655	0.082	0.405	0.440	0.078	0.210	0.331	0.089	
Black females										
8–24 years	0.998	0.998	0.002	0.996	0.996	0.002	0.993	0.993	0.003	
25–34 years	0.996	0.996	0.002	0.991	0.992	0.003	0.985	0.987	0.003	
35–44 years	0.993	0.991	0.003	0.982	0.982	0.004	0.969	0.973	0.005	
15–54 years	0.987	0.990	0.003	0.964	0.964	0.006	0.937	0.934	0.008	
55–59 years	0.977	0.973	0.009	0.938	0.935	0.012	0.894	0.879	0.017	
60–64 years	0.967	0.960	0.013	0.914	0.888	0.019	0.852	0.833	0.023	
65–69 years	0.954	0.949	0.015	0.874	0.862	0.023	0.785	0.731	0.030	
70–74 years	0.929	0.959	0.011	0.819	0.834	0.023	0.699	0.709	0.028	
75–79 years	0.907	0.918	0.023	0.754	0.734	0.038	0.591	0.612	0.042	
30–84 years	0.853	0.922	0.023	0.636	0.731	0.054	0.435	0.483	0.053	
				500		2.30.			5.000	

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 14. Cumulative survival probabilities after 2, 5, and 7 years for the U.S. population, compared with those for the 1995 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years		7 years			
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS)	
White males										
8–24 years	0.997	0.996	0.001	0.994	0.991	0.002	0.991	0.990	0.002	
5–34 years	0.997	0.998	0.001	0.992	0.995	0.001	0.989	0.991	0.001	
35–44 years	0.994	0.994	0.001	0.985	0.986	0.002	0.978	0.978	0.002	
5–54 years	0.989	0.988	0.002	0.969	0.969	0.003	0.954	0.952	0.004	
5–59 years	0.979	0.977	0.004	0.942	0.948	0.005	0.914	0.915	0.007	
0–64 years	0.966	0.970	0.005	0.908	0.901	0.009	0.866	0.859	0.010	
5–69 years	0.949	0.941	0.007	0.862	0.853	0.010	0.799	0.783	0.013	
0–74 years	0.921	0.922	0.008	0.795	0.803	0.011	0.708	0.715	0.012	
5–79 years	0.883	0.891	0.012	0.702	0.720	0.016	0.580	0.598	0.017	
0–84 years	0.817	0.817	0.018	0.559	0.564	0.025	0.411	0.402	0.025	
5 years and over	0.722	**0.799	0.022	0.398	0.388	0.030	0.248	0.228	0.025	
	0.722	0.700	0.022	0.000	0.000	0.000	0.2 10	0.220	0.020	
White females	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.004	
8–24 years	0.999	0.999	0.000	0.998	0.999	0.000	0.997	0.998	0.001	
5–34 years	0.999	0.999	0.000	0.997	0.998	0.001	0.995	0.995	0.001	
5–44 years	0.997	0.997	0.001	0.993	0.991	0.001	0.989	0.986	0.001	
5–54 years	0.994	0.994	0.001	0.982	0.983	0.002	0.972	0.974	0.002	
5–59 years	0.988	0.983	0.004	0.965	0.956	0.005	0.946	0.936	0.006	
0–64 years	0.980	0.983	0.004	0.944	0.945	0.006	0.916	0.913	0.007	
5–69 years	0.969	0.974	0.005	0.914	0.922	0.008	0.872	0.873	0.009	
0–74 years	0.952	0.956	0.006	0.868	0.884	0.009	0.803	0.821	0.011	
5–79 years	0.924	0.934	0.007	0.792	0.814	0.012	0.693	0.709	0.013	
0-84 years	0.875	**0.913	0.010	0.667	**0.751	0.015	0.528	**0.614	0.017	
5 years and over	0.791	0.808	0.016	0.502	0.516	0.021	0.343	0.367	0.019	
Black males										
8–24 years	0.994	0.991	0.006	0.986	0.991	0.006	0.981	0.982	0.007	
5–34 years	0.992	0.995	0.002	0.983	0.990	0.002	0.976	0.981	0.004	
5–44 years	0.986	0.988	0.005	0.967	0.971	0.006	0.952	0.958	0.007	
5–54 years	0.974	0.972	0.007	0.933	0.939	0.010	0.904	0.912	0.013	
5–59 years	0.960	0.959	0.011	0.893	0.898	0.025	0.848	0.852	0.028	
0–64 years	0.941	0.941	0.019	0.856	0.879	0.025	0.797	0.815	0.032	
5–69 years	0.928	0.936	0.010	0.813	0.832	0.029	0.732	0.760	0.032	
	0.886	0.919	0.020	0.729	0.749	0.023	0.732	0.637	0.032	
0–74 years										
5–79 years	0.858	**0.742	0.055	0.656	0.541	0.049	0.528	0.438	0.051	
0–84 years	0.790 0.719	0.698 0.673	0.081 0.097	0.527 0.387	0.503 0.482	0.088 0.103	0.387 0.254	0.447 0.396	0.086 0.109	
Black females										
8–24 years	0.998	0.999	0.001	0.996	0.997	0.002	0.994	0.994	0.003	
5–34 years	0.997	0.994	0.003	0.992	0.986	0.005	0.988	0.981	0.005	
5–44 years	0.993	0.996	0.003	0.982	0.984	0.003	0.974	0.974	0.003	
5–54 years	0.987	0.984	0.002	0.967	0.966	0.004	0.950	0.949	0.000	
5–59 years	0.978	0.982	0.003	0.940	0.941	0.007	0.930	0.949	0.008	
	0.967	0.962	0.009	0.940	0.882	0.014	0.873	0.868	0.017	
0–64 years										
5–69 years	0.955	0.960	0.015	0.876	0.901	0.017	0.819	0.824	0.025	
0–74 years	0.928	0.930	0.020	0.816	0.831	0.025	0.737	0.774	0.026	
5–79 years	0.907	0.961	0.018	0.753	0.780	0.037	0.646	0.667	0.038	
30-84 years	0.854	0.904	0.035	0.633	0.710	0.053	0.499	0.522	0.063	
5 years and over	0.782	0.806	0.039	0.497	0.434	0.056	0.349	0.258	0.053	

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 15. Cumulative survival probabilities after 2, 5, and 6 years for the U.S. population, compared with those for the 1996 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years			5 years		6 years			
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort ¹	SE (NHIS) ¹	
White males										
18–24 years	0.997	0.996	0.001	0.994	0.992	0.002	0.992	0.991	0.002	
25–34 years	0.997	0.997	0.001	0.993	0.994	0.001	0.991	0.992	0.002	
35–44 years	0.995	0.996	0.001	0.986	0.987	0.002	0.983	0.984	0.002	
15-54 years	0.989	0.992	0.002	0.970	0.971	0.003	0.963	0.963	0.003	
55–59 years	0.980	0.980	0.005	0.943	0.937	0.009	0.930	0.921	0.010	
60–64 years	0.967	0.972	0.006	0.911	0.925	0.009	0.890	0.903	0.011	
65–69 years	0.949	0.950	0.008	0.864	0.868	0.012	0.834	0.841	0.013	
70-74 years	0.922	0.937	0.009	0.799	0.816	0.014	0.756	0.778	0.014	
75–79 years	0.885	0.878	0.014	0.706	0.680	0.021	0.648	0.615	0.022	
30-84 years	0.817	0.861	0.018	0.562	0.591	0.026	0.486	0.496	0.027	
35 years and over	0.726	0.768	0.032	0.402	0.401	0.037	0.322	0.301	0.036	
White females										
18–24 years	0.999	0.998	0.001	0.998	0.995	0.002	0.997	**0.992	0.002	
25–34 years	0.999	0.998	0.001	0.997	0.995	0.001	0.996	0.994	0.001	
35–44 years	0.997	0.998	0.001	0.993	0.992	0.002	0.991	0.989	0.002	
15–54 years	0.994	0.994	0.001	0.982	0.979	0.003	0.978	0.973	0.003	
55–59 years	0.988	0.981	0.004	0.965	0.957	0.007	0.956	0.943	0.008	
60–64 years	0.980	0.968	0.006	0.944	0.933	0.008	0.931	0.920	0.009	
55–69 years	0.970	0.979	0.005	0.915	0.920	0.009	0.895	0.903	0.010	
70–74 years	0.952	0.962	0.006	0.868	0.876	0.012	0.837	0.848	0.013	
'5–79 years	0.925	0.942	0.008	0.793	0.828	0.014	0.747	0.776	0.017	
80–84 years	0.874	0.912	0.014	0.665	0.719	0.020	0.597	0.643	0.024	
35 years and over	0.791	0.827	0.020	0.501	0.520	0.025	0.419	0.438	0.023	
Black males										
8–24 years	0.994	0.996	0.004	0.987	0.988	0.006	0.984	0.985	0.006	
25–34 years	0.993	0.996	0.003	0.984	0.987	0.005	0.981	0.984	0.005	
35–44 years	0.988	0.990	0.004	0.970	0.972	0.008	0.963	0.967	0.008	
l5–54 years	0.975	0.988	0.006	0.935	0.940	0.014	0.922	0.928	0.014	
55–59 years	0.961	0.967	0.016	0.896	0.897	0.029	0.874	0.873	0.035	
60–64 years	0.942	0.906	0.026	0.858	0.806	0.037	0.829	0.785	0.038	
55–69 years	0.931	0.956	0.020	0.818	0.853	0.033	0.777	0.798	0.040	
'0–74 years	0.889	0.904	0.028	0.734	0.704	0.044	0.682	0.675	0.048	
'5–79 years	0.861	0.928	0.035	0.659	0.758	0.058	0.595	0.676	0.067	
80-84 years	0.795	0.828	0.070	0.533	0.682	0.086	0.459	0.682	0.086	
5 years and over	0.727	0.500	0.108	0.442	0.323	0.109	0.360	0.194	0.082	
Black females										
8–24 years	0.998	0.995	0.003	0.996	0.995	0.003	0.995	0.995	0.003	
25–34 years	0.997	1.000	0.000	0.992	0.996	0.002	0.990	0.994	0.002	
35–44 years	0.994	0.991	0.003	0.983	0.983	0.004	0.979	0.977	0.005	
15–54 years	0.987	0.988	0.004	0.962	0.958	0.012	0.954	0.944	0.012	
55–59 years	0.978	1.000	0.000	0.941	0.958	0.014	0.927	0.935	0.020	
60–64 years	0.967	0.964	0.015	0.915	0.916	0.022	0.895	0.875	0.025	
65–69 years	0.957	0.970	0.013	0.879	0.894	0.022	0.852	0.868	0.026	
'0–74 years	0.928	0.921	0.025	0.815	0.838	0.028	0.778	0.794	0.028	
75–79 years	0.908	0.940	0.025	0.752	0.824	0.043	0.704	0.776	0.043	
30–84 years	0.855	0.850	0.045	0.631	0.640	0.047	0.567	0.630	0.046	
	0.000	0.000	0.010	0.001	0.010	0.011	0.001			

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 16. Cumulative survival probabilities after 2 and 5 years for the U.S. population, compared with those for the 1997 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years		5 years				
Race, sex, and age	U.S.	NHIS cohort1	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS)		
White males								
–24 years	0.997	0.998	0.001	0.994	0.994	0.001		
–34 years	0.997	0.996	0.001	0.993	0.991	0.001		
–44 years	0.995	0.994	0.001	0.986	0.984	0.002		
–54 years	0.989	0.991	0.002	0.970	0.974	0.002		
-59 years	0.980	0.980	0.004	0.945	0.939	0.006		
-64 years	0.968	0.962	0.006	0.913	0.917	0.008		
-69 years	0.950	0.961	0.006	0.867	0.875	0.010		
-74 years	0.923	0.921	0.008	0.801	0.797	0.012		
–79 years	0.887	0.893	0.011	0.708	0.733	0.016		
–84 years	0.819	0.844	0.016	0.566	0.564	0.023		
years and over	0.728	0.757	0.028	0.407	0.399	0.027		
years and over	0.720	0.757	0.020	0.407	0.599	0.027		
White females								
3–24 years	0.999	**0.996	0.001	0.998	**0.993	0.002		
–34 years	0.999	0.999	0.000	0.997	0.995	0.001		
–44 years	0.997	0.997	0.001	0.993	0.990	0.001		
–54 years	0.994	0.993	0.001	0.982	0.982	0.002		
–59 years	0.988	0.987	0.003	0.966	0.962	0.005		
-64 years	0.980	0.981	0.004	0.945	0.931	0.007		
–69 years	0.970	0.966	0.005	0.916	0.908	0.009		
–74 years	0.952	0.967	0.005	0.868	0.870	0.009		
-79 years	0.925	0.932	0.007	0.793	0.819	0.012		
–84 years	0.874	0.876	0.011	0.667	0.678	0.016		
years and over	0.792	0.823	0.017	0.504	0.516	0.022		
Black males								
–24 years	0.995	0.994	0.004	0.987	0.989	0.004		
–34 years	0.994	0.996	0.002	0.985	0.987	0.004		
–44 years	0.989	0.994	0.003	0.972	0.984	0.004		
–54 years	0.976	0.976	0.006	0.936	0.950	0.009		
–59 years	0.962	0.981	0.008	0.898	0.914	0.021		
-64 years	0.943	0.948	0.017	0.860	0.885	0.021		
-69 years	0.933	0.952	0.017	0.818	0.836	0.020		
–74 years	0.893	0.885	0.030	0.739	0.752	0.033		
–79 years	0.863	0.902	0.031	0.658	0.718	0.041		
⊢84 years	0.797	0.773	0.065	0.538	0.440	0.043		
years and over	0.727	0.698	0.096	0.420	0.440	0.075		
Black females								
24 veers	0.999	0.997	0.002	0.996	0.996	0.002		
i–24 years	0.997	0.995	0.002	0.993	0.992	0.002		
–34 years	0.994	0.990	0.002	0.983	0.978	0.002		
–54 years	0.994	0.990	0.003	0.965	0.964	0.003		
•					0.924			
-59 years	0.978	0.972	0.011	0.942		0.017		
-64 years	0.968	0.972	0.011	0.915	0.927	0.021		
–69 years	0.957	0.943	0.014	0.881	0.852	0.023		
–74 years	0.929	0.950	0.015	0.819	0.828	0.024		
	0.908	0.925	0.022	0.753	0.754	0.039		
i–79 years	0.855	0.857	0.033	0.637	0.637	0.042		

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 17. Cumulative survival probabilities after 2 and 4 years for the U.S. population, compared with those for the 1998 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years		4 years				
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS)		
White males								
–24 years	0.997	0.996	0.001	0.995	0.993	0.002		
-34 years	0.997	0.998	0.001	0.994	0.997	0.001		
–44 years	0.995	0.996	0.001	0.989	0.991	0.001		
–54 years	0.990	0.990	0.002	0.978	0.976	0.002		
-59 years	0.980	0.976	0.005	0.958	0.945	0.007		
-64 years	0.969	0.966	0.005	0.934	0.930	0.008		
-69 years	0.951	0.954	0.006	0.898	0.900	0.009		
-74 years	0.925	0.930	0.008	0.846	0.851	0.011		
–79 years	0.889	0.898	0.012	0.774	0.786	0.016		
-84 years	0.820	0.832	0.017	0.651	0.629	0.022		
years and over	0.728	0.758	0.027	0.504	0.553	0.022		
years and over	0.720	0.730	0.027	0.504	0.555	0.031		
White females								
3–24 years	0.999	1.000	0.000	0.998	0.997	0.001		
–34 years	0.999	0.997	0.001	0.997	**0.995	0.001		
–44 years	0.997	**0.995	0.001	0.994	**0.990	0.001		
–54 years	0.994	0.994	0.001	0.987	0.986	0.002		
–59 years	0.988	0.984	0.003	0.974	0.976	0.004		
–64 years	0.980	0.976	0.004	0.958	0.948	0.006		
-69 years	0.970	0.961	0.005	0.935	0.923	0.008		
–74 years	0.952	0.959	0.006	0.899	0.903	0.009		
–79 years	0.925	0.939	0.008	0.841	0.862	0.011		
–84 years	0.873	**0.908	0.011	0.737	0.774	0.016		
years and over	0.790	0.799	0.016	0.594	0.626	0.020		
Black males								
–24 years	0.995	0.993	0.004	0.990	0.984	0.010		
–34 years	0.994	0.994	0.003	0.989	0.983	0.005		
–44 years	0.990	0.987	0.004	0.979	0.982	0.005		
–54 years	0.977	0.984	0.005	0.952	0.968	0.006		
-59 years	0.961	0.979	0.011	0.922	0.938	0.015		
-64 years	0.945	0.928	0.023	0.891	0.854	0.027		
-69 years	0.932	0.919	0.022	0.859	0.856	0.030		
–74 years	0.897	0.896	0.028	0.795	0.801	0.034		
–79 years	0.861	0.909	0.032	0.724	0.799	0.034		
9–84 years	0.799	0.830	0.041	0.622	0.678	0.040		
years and over	0.726	0.835	0.077	0.511	0.662	0.101		
Black females								
24 veers	0.999	1.000	0.000	0.997	1.000	0.000		
i–24 years	0.997	0.998	0.002	0.994	0.995	0.000		
–44 years	0.994	0.992	0.002	0.987	0.982	0.002		
–54 years	0.988	0.982	0.005	0.973	0.968	0.004		
–59 years	0.978	0.980	0.009	0.956	0.940	0.007		
–69 years	0.978	**0.920	0.009	0.935	**0.867	0.016		
–69 years								
,	0.957	0.942	0.015	0.908	0.895	0.023		
–74 years	0.930	0.920	0.021	0.859	0.829	0.027		
-79 years	0.904	0.933	0.021	0.804	0.836	0.032		
)–84 years	0.852	0.864	0.034	0.709	0.794	0.039		

^{**}The probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 18. Cumulative survival probabilities after 2 and 3 years for the U.S. population, compared with those for the 1999 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years		3 years				
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹	U.S.	NHIS cohort1	SE (NHIS)		
White males								
3–24 years	0.997	0.998	0.001	0.996	0.996	0.001		
5–34 years	0.997	0.996	0.001	0.996	0.995	0.001		
5–44 years	0.995	0.996	0.001	0.992	0.993	0.001		
-54 years	0.989	0.990	0.001	0.984	0.983	0.002		
-59 years	0.980	0.979	0.004	0.970	0.970	0.005		
-64 years	0.969	0.965	0.005	0.953	0.946	0.006		
-69 years	0.952	0.951	0.006	0.927	0.927	0.008		
–74 years	0.926	0.933	0.008	0.888	0.890	0.011		
–79 years	0.890	0.906	0.011	0.832	0.853	0.013		
-84 years	0.823	0.806	0.018	0.738	0.729	0.020		
years and over	0.731	0.748	0.026	0.614	0.621	0.030		
White females								
–24 years	0.999	0.999	0.001	0.999	0.998	0.001		
i–34 years	0.999	0.999	0.001	0.998	0.997	0.001		
–44 years	0.997	0.996	0.001	0.996	0.995	0.001		
–54 years	0.994	0.992	0.001	0.990	0.988	0.001		
	0.988	0.986	0.003	0.981	0.978	0.002		
–59 years	0.981	0.983	0.003	0.970	0.976	0.004		
–69 years	0.970	0.971	0.005	0.953	0.956	0.006		
–74 years	0.953	0.960	0.006	0.927	0.937	0.006		
–79 years	0.924	0.944	0.007	0.884	0.903	0.009		
–84 years	0.872	0.899	0.012	0.806	0.844	0.014		
years and over	0.788	0.829	0.017	0.690	0.740	0.021		
Black males								
–24 years	0.995	1.000	0.000	0.993	1.000	0.000		
–34 years	0.995	0.992	0.004	0.992	0.989	0.004		
–44 years	0.990	0.980	0.006	0.985	0.977	0.006		
-54 years	0.977	0.979	0.005	0.965	0.964	0.008		
-59 years	0.962	0.959	0.018	0.943	0.947	0.019		
-64 years	0.947	0.950	0.017	0.921	0.914	0.022		
-69 years	0.933	0.920	0.024	0.895	0.889	0.027		
–74 years	0.900	0.853	0.030	0.849	0.817	0.036		
–79 years	0.860	0.826	0.039	0.788	0.770	0.043		
–84 years	0.804	0.835	0.060	0.713	0.689	0.073		
years and over	0.732	0.954	0.045	0.617	0.772	0.096		
Black females								
–24 years	0.999	0.995	0.002	0.998	0.995	0.002		
-34 years	0.997	0.996	0.002	0.996	0.994	0.002		
-44 years	0.994	0.995	0.002	0.991	0.990	0.003		
-54 years	0.987	0.989	0.005	0.981	0.983	0.005		
–59 years	0.979	0.978	0.010	0.967	0.967	0.012		
-64 years	0.969	0.974	0.011	0.952	0.950	0.016		
-69 years	0.957	0.942	0.019	0.932	0.923	0.021		
–74 years	0.932	0.946	0.020	0.898	0.894	0.027		
-79 years	0.901	0.931	0.023	0.853	0.851	0.039		
,								
–84 years	0.852	0.877	0.043	0.784	0.854	0.047		

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

NOTES: For the NHIS cohort, age is age at interview. For the U.S. population, age is the midpoint of the age group. NHIS is National Health Interview Survey. U.S. is the U.S. population. SE is standard error.

Table 19. Cumulative survival probabilities after 2 years for the U.S. population, compared with those for the 2000 NHIS Linked Mortality File cohort, by race, sex, and age

		2 years	
Race, sex, and age	U.S.	NHIS cohort ¹	SE (NHIS) ¹
White males			
24 years	0.997	0.998	0.001
34 years	0.997	0.996	0.001
44 years	0.995	0.993	0.001
54 years	0.989	0.989	0.002
59 years	0.980	0.981	0.004
64 years	0.970	0.973	0.005
69 years	0.954	0.944	0.008
74 years	0.928	0.930	0.009
79 years	0.890	0.900	0.011
34 years	0.826	0.867	0.016
ears and over	0.736	0.712	0.030
eats and over	0.730	0.712	0.030
White females			
24 years	0.999	0.999	0.000
34 years	0.999	0.999	0.000
44 years	0.997	0.996	0.001
54 years	0.994	0.992	0.001
59 years	0.988	0.990	0.003
64 years	0.981	0.979	0.004
69 years	0.970	0.979	0.004
74 years	0.953	0.961	0.006
79 years	0.925	0.934	0.008
84 years	0.874	0.902	0.010
ears and over	0.792	0.833	0.016
Black males			
24 years	0.995	1.000	0.000
34 years	0.995	0.997	0.002
44 years	0.991	0.993	0.003
54 years	0.978	0.983	0.005
59 years	0.963	0.974	0.010
	0.950	0.960	0.016
64 years	0.931	0.955	0.018
69 years			
74 years	0.900	0.922	0.027
79 years	0.860	0.848	0.046
84 years	0.804 0.735	0.880 0.651	0.048 0.095
ears and over	0.735	0.051	0.095
Black females			
24 years	0.999	0.997	0.002
34 years	0.998	0.997	0.001
44 years	0.994	0.996	0.002
54 years	0.988	0.988	0.003
59 years	0.979	0.976	0.008
64 years	0.970	0.963	0.012
69 years	0.956	0.944	0.020
74 years	0.935	0.938	0.016
79 years	0.903	0.946	0.018
•	0.903	0.857	0.038
84 years			
years and over	0.789	0.912	0.033

¹Cumulative survival probabilities and standard errors were obtained by the Kaplan-Meier product limit method. The sample weights (adjusted for exclusion of ineligible NHIS participants) and the survey design were incorporated.

Table 20. Percent distribution of the size of the differences between the NHIS and U.S. cumulative survival probabilities, by NHIS cohort, race, sex, statistical significance, and size of the differences: 1986–2000 NHIS Linked Mortality Files

					Differe	ence bet	ween NH	IS and U	J.S. surviv	al probab	oilities ¹				
		All differences ² Statistically significant differences ²					ces ²	Nonsignificant differences ²							
	Size of differences ³				Size of differences ³				Size of differences ³						
NHIS cohort, race, and sex	Total	< 0.01	0.01 to < 0.05	0.05 to < 0.10	≥ 0.10	Total	< 0.01	0.01 to < 0.05	0.05 to < 0.10	≥ 0.10	Total	< 0.01	0.01 to < 0.05	0.05 to < 0.10	≥ 0.10
1986–1987 ⁴															
White males	100.0	71.6	21.6	6.8	0.0	8.0	3.4	2.3	2.3	0.0	92.0	68.2	19.3	4.5	0.0
White females	100.0	63.6	22.7	12.5	1.1	17.0	1.1	3.4	11.4	1.1	82.9	62.5	19.3	1.1	0.0
Black males	100.0	21.6	52.3	17.0	9.1	4.5	0.0	2.3	1.1	1.1	95.5	21.6	50.0	15.9	8.0
Black females	100.0	40.9	33.0	14.8	11.4	5.7	0.0	0.0	2.3	3.4	94.4	40.9	33.0	12.5	8.0
1988–1992 ⁵															
White males	100.0	65.5	29.7	4.8	0.0	6.6	0.0	3.0	3.6	0.0	93.4	65.5	26.7	1.2	0.0
White females	100.0	68.5	20.6	10.3	0.6	24.8	4.8	9.1	10.3	0.6	75.2	63.7	11.5	0.0	0.0
Black males	100.0	33.9	49.7	12.7	3.6	5.4	0.0	4.2	0.0	1.2	94.5	33.9	45.5	12.7	2.4
Black females	100.0	48.5	36.4	8.5	6.7	6.0	0.6	1.2	0.6	3.6	94.1	47.9	35.2	7.9	3.1
1993–1997 ⁶															
White males	100.0	78.2	20.0	1.8	0.0	1.8	0.9	0.0	0.9	0.0	98.2	77.3	20.0	0.9	0.0
White females	100.0	71.8	24.5	3.6	0.0	6.3	1.8	2.7	1.8	0.0	93.6	70.0	21.8	1.8	0.0
Black males	100.0	44.5	40.0	10.0	5.5	0.9	0.0	0.0	0.0	0.9	99.1	44.5	40.0	10.0	4.6
Black females	100.0	58.2	30.0	9.1	2.7	0.0	0.0	0.0	0.0	0.0	100.0	58.2	30.0	9.1	2.7
1998–2000 ⁷															
White males	100.0	78.8	21.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	78.8	21.2	0.0	0.0
White females	100.0	78.8	21.2	0.0	0.0	6.0	3.0	3.0	0.0	0.0	94.0	75.8	18.2	0.0	0.0
Black males	100.0	45.5	42.4	6.1	6.1	0.0	0.0	0.0	0.0	0.0	100.1	45.5	42.4	6.1	6.1
Black females	100.0	60.6	36.4	0.0	3.0	3.0	0.0	3.0	0.0	0.0	97.0	60.6	33.4	0.0	3.0

¹The total number of differences computed for a given NHIS cohort-race-sex group is used as the denominator for all percentages in a given row. Note that the denominators differ by NHIS cohort group as outlined below. The numerators for the "Statistically significant differences" percentages are counts only of statistically significant differences; the numerators for the "Nonsignificant differences" percentages are counts of all computed differences (the statistically significant differences plus the nonsignificant differences) for the given NHIS cohort-race-sex group.

NOTE: NHIS is National Health Interview Survey. Percentages may not sum to 100 due to rounding.

²The survival probabilities for the NHIS cohort and the U.S. population are considered to be statistically significantly different if the probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability.

³The absolute differences between the NHIS and U.S. survival probabilities have been categorized according to size of the difference.

⁴The number of differences computed for each race-sex group in the combined 1986–1987 cohorts is 2 survey years (1986–1987) x 11 age groups x 4 lengths of follow-up (2, 5, 10, and 15 years) = 88. The denominator for all of the percentages in this section is 88.

⁵The number of differences computed for each race-sex group in the combined 1988–1992 cohorts is 5 survey years (1988–1992) x 11 age groups x 3 lengths of follow-up (2, 5, and 10 years) = 165. The denominator for all of the percentages in this section is 165.

⁶The number of differences computed for each race-sex group in the combined 1993–1997 cohorts is 5 survey years (1993–1997) x 11 age groups x 2 lengths of follow-up (2 and 5 years) = 110. The denominator for all of the percentages in this section is 110.

⁷The number of differences computed for each race-sex group in the combined 1998–2000 cohorts is 3 survey years (1998–2000) x 11 age groups x 1 length of follow-up (2 years) = 33. The denominator for all of the percentages in this section is 33.

Table 21. Number and percentage of statistically significant differences between the cumulative survival probabilities for the NHIS Linked Mortality Files and those for the U.S. population, by length of follow-up and NHIS cohort: 1986–2000 NHIS Linked Mortality Files

	Length of follow-up											
•	2 ye	ears	5 ye	ears	10 y	rears	15 y	rears				
NHIS cohort	Number	Percent	Number	Percent	Number	Percent	Number	Percent				
1986	_	_	_	_	2	4.5	5	11.4				
1987	1	2.3	3	6.8	7	15.9	13	29.5				
1988	3	6.8	5	11.4	7	15.9						
1989	6	13.6	4	9.1	7	15.9						
1990	3	6.8	5	11.4	8	18.2						
1991	2	4.5	3	6.8	8	18.2						
1992	2	4.5	2	4.5	6	13.6						
1993	1	2.3	1	2.3								
1994	1	2.3	1	2.3								
1995	3	6.8	1	2.3								
1996	_	_	_	_								
1997	1	2.3	1									
1998	3	6.8										
1999	_	_										
2000	-	_										

⁻ Quantity zero.

NOTES: For each NHIS cohort and length of follow-up, cumulative survival probabilities were estimated for 44 age-race-sex groups, so all of the percentages in this table are calculated as the number of statistically significant differences divided by 44. The survival probabilities for the NHIS cohort and the U.S. population are considered to be statistically significantly different if the probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability. NHIS is National Health Interview Survey.

^{...} Category not applicable.

Table 22. Number and percentage of statistically significant differences between the cumulative survival probabilities for the NHIS cohorts and those for the U.S. population, by NHIS cohort, race, and sex: 1986–2000 NHIS-NDI Linked Mortality Files

NHIS cohort, race, and sex	Length of follow-up									
	2 years		5 years		10 years		15 years			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
1986 and 1987 ¹										
Total	1	1.1	3	3.4	9	10.2	18	20.5		
White males	_	_	_	_	2	9.1	5	22.7		
White females	1	4.5	3	13.6	5	22.7	6	27.3		
Black males	_	_	_	_	1	4.5	3	13.6		
Black females	-	-	-	-	1	4.5	4	18.2		
1988 through 1992 ²										
Total	16	7.2	19	8.6	36	16.4				
White males	1	1.8	1	1.8	9	16.4				
White females	12	21.8	13	23.6	16	29.1				
Black males	1	1.8	2	3.6	6	10.9				
Black females	2	3.6	3	5.5	5	9.1				
1993 through 1997 ³										
Total	6	2.7	4	1.8						
White males	2	3.6	_	_						
White females	3	5.5	4	7.3						
Black males	1	1.8	_	_						
Black females	-	-	-	-						
1998 through 2000 ⁴										
Total	3	2.3								
White males	-	-								
White females	2	6.1								
Black males	-	-								
Black females	1	3.0								

⁻ Quantity zero.

NOTES: The survival probabilities for the NHIS cohort and the U.S. population are considered to be statistically significantly different if the probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability. NHIS is National Health Interview Survey.

^{. . .} Category not applicable.

¹Statistically significant differences aggregated for survey years 1986–1987 (denominator for total percentages is 2 x 44 = 88, and denominator for race-sex percentages is 22).

²Statistically significant differences aggregated for survey years 1988–1992 (denominator for total percentages is 5 x 44 = 220, and denominators for race-sex percentages is 55).

³Statistically significant differences aggregated for survey years 1993–1997 (denominator for total percentages is 5 x 44 = 220, and denominators for race-sex percentages is 55).

⁴Statistically significant differences aggregated for survey years 1998–2000 (denominators for total percentages is 3 × 44 = 132, and denominator for race-sex percentages is 33).

Table 23. Number and percentage of statistically significant differences between the cumulative survival probabilities based on the NHIS Linked Mortality File and those based on the U.S. population, by NHIS cohort, age at NHIS interview, and length of follow-up: 1986–2000 NHIS Linked Mortality Files

NUUS sehert and age at	Length of follow-up									
	2 years		5 years		10 years		15 years			
NHIS cohort and age at NHIS interview	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
1986–1987 ¹										
all ages	1	1.1	3	3.4	9	10.2	18	20.5		
8–24 years	-	_	-	_	_	-	-	27.5		
5–34 years	_	_	_	_	_	12.5	3 2	37.5		
5–44 years	_	_	_	_	1 –	12.5	1	25.0 12.5		
5–54 years	_	_	_	_	_	_	1	12.5		
0–64 years	_	_	_	_	_	_	-	12.0		
5–69 years	_	_	_	_	_	_	_	_		
0–74 years	_	_	_	_	_	_	1	12.5		
5–79 years	_	_	1	12.5	1	12.5	1	12.5		
0–84 years	_	_	1	12.5	3	37.5	4	50.0		
5 years and over	1	12.5	1	12.5	4	50.0	5	62.5		
1988–1992²	·	.2.0	•	12.0	·	00.0		02.0		
1966–1992- .ll ages	16	7.3	19	8.6	38	17.3				
8–24 years	1	5.0	3	15.0	2	10.0				
5–34 years	-	-	_	-	2	10.0				
5–44 years	1	5.0	2	10.0	4	20.0				
5–54 years	_	3.0	_	10.0	3	15.0				
	_	_	_	_	1	5.0				
5–59 years	_	_	1	5.0	1	5.0				
0–64 years	1	5.0	_	5.0	-	5.0				
5–69 years	1	5.0	2	10.0	_	_				
0–74 years	2									
5–79 years	4	10.0 20.0	1 5	5.0	3 8	15.0				
0–84 years	6	30.0	5 5	25.0 25.0	0 12	40.0 60.0				
	O	50.0	J	20.0	12	00.0				
1993–1997 ³ Il ages	6	2.7	4	1.8						
8–24 years	1	5.0	1	5.0						
5–34 years	1	5.0	_	-						
-	· -	-	_	_						
5–44 years	_	_	_	_	• • •					
5–54 years	_	_	_	_	• • •		• • •			
5–59 years	_	_	_	_						
0–64 years	_	_	_	_						
5–69 years	_	_	_	_	• • •		• • •			
0–74 years	1	5.0	_	_	• • •					
5–79 years	2	10.0	3	15.0	• • •					
0–84 years	1	5.0	-	13.0						
1998–2000 ⁴		0.0			• • •					
ll ages	3	2.3								
8–24 years	_	_								
5–34 years		_								
	1	8.3								
5–44 years	_	0.5								
5–54 years	_	_		• • • •						
5–59 years	_ 1									
0–64 years	-	8.3								
5–69 years		-								
0–74 years	-	_								
5–79 years	_	_								
0–84 years	1	8.3								
35 years and over	_	_								

⁻ Quantity zero.

^{...} Category not applicable.

¹Statistically significant differences aggregated for survey years 1986–1987 (denominator for total percentages is 2 x 44 = 88, and denominator for age group percentages is 8).

²Statistically significant differences aggregated for survey years 1988–1992 (denominator for total percentages is 5 x 44 = 220, and denominator for age group percentages is 20).

³Statistically significant differences aggregated for survey years 1993–1997 (denominator for total percentages is 5 x 44 = 220, and denominator for age group percentages is 20).

⁴Statistically significant differences aggregated for survey years 1998–2000 (denominator for total percentages is 3 x 44 = 132, and denominator for age group percentages is 12).

NOTES: The survival probabilities for the NHIS cohort and the U.S. population are considered to be statistically significantly different if the probability for the U.S. population falls outside the 99% confidence interval around the NHIS probability. NHIS is National Health Interview Survey.

Vital and Health Statistics series descriptions

- SERIES 1. Programs and Collection Procedures—These reports describe the data collection programs of the National Center for Health Statistics. They include descriptions of the methods used to collect and process the data, definitions, and other material necessary for understanding the data.
- SERIES 2. **Data Evaluation and Methods Research**—These reports are studies of new statistical methods and include analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory. These studies also include experimental tests of new survey methods and comparisons of U.S. methodology with those of other countries.
- SERIES 3. Analytical and Epidemiological Studies—These reports present analytical or interpretive studies based on vital and health statistics. These reports carry the analyses further than the expository types of reports in the other series.
- SERIES 4. **Documents and Committee Reports**—These are final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.
- SERIES 5. International Vital and Health Statistics Reports—These reports are analytical or descriptive reports that compare U.S. vital and health statistics with those of other countries or present other international data of relevance to the health statistics system of the United States.
- SERIES 6. Cognition and Survey Measurement—These reports are from the National Laboratory for Collaborative Research in Cognition and Survey Measurement. They use methods of cognitive science to design, evaluate, and test survey instruments.
- SERIES 10. Data From the National Health Interview Survey—These reports contain statistics on illness; unintentional injuries; disability; use of hospital, medical, and other health services; and a wide range of special current health topics covering many aspects of health behaviors, health status, and health care utilization. They are based on data collected in a continuing national household interview survey.
- SERIES 11. Data From the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey—Data from direct examination, testing, and measurement on representative samples of the civilian noninstitutionalized population provide the basis for (1) medically defined total prevalence of specific diseases or conditions in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics, and (2) analyses of trends and relationships among various measurements and between survey periods.
- SERIES 12. **Data From the Institutionalized Population Surveys**Discontinued in 1975. Reports from these surveys are included in Series 13.
- SERIES 13. Data From the National Health Care Survey—These reports contain statistics on health resources and the public's use of health care resources including ambulatory, hospital, and long-term care services based on data collected directly from health care providers and provider records.

- SERIES 14. Data on Health Resources: Manpower and Facilities—
 Discontinued in 1990. Reports on the numbers, geographic distribution, and characteristics of health resources are now included in Series 13.
- SERIES 15. **Data From Special Surveys**—These reports contain statistics on health and health-related topics collected in special surveys that are not part of the continuing data systems of the National Center for Health Statistics.
- SERIES 16. Compilations of Advance Data From Vital and Health
 Statistics—Advance Data Reports provide early release of
 information from the National Center for Health Statistics'
 health and demographic surveys. They are compiled in the
 order in which they are published. Some of these releases
 may be followed by detailed reports in Series 10–13.
- SERIES 20. **Data on Mortality**—These reports contain statistics on mortality that are not included in regular, annual, or monthly reports. Special analyses by cause of death, age, other demographic variables, and geographic and trend analyses are included.
- SERIES 21. **Data on Natality, Marriage, and Divorce**—These reports contain statistics on natality, marriage, and divorce that are not included in regular, annual, or monthly reports. Special analyses by health and demographic variables and geographic and trend analyses are included.
- SERIES 22. **Data From the National Mortality and Natality Surveys**—
 Discontinued in 1975. Reports from these sample surveys,
 based on vital records, are now published in Series 20 or 21.
- SERIES 23. Data From the National Survey of Family Growth—These reports contain statistics on factors that affect birth rates, including contraception, infertility, cohabitation, marriage, divorce, and remarriage; adoption; use of medical care for family planning and infertility; and related maternal and infant health topics. These statistics are based on national surveys of women and men of childbearing age.
- SERIES 24. Compilations of Data on Natality, Mortality, Marriage, and Divorce—These include advance reports of births, deaths, marriages, and divorces based on final data from the National Vital Statistics System that were published as National Vital Statistics Reports (NVSR), formerly Monthly Vital Statistics Report. These reports provide highlights and summaries of detailed data subsequently published in Vital Statistics of the United States. Other special reports published here provide selected findings based on final data from the National Vital Statistics System and may be followed by detailed reports in Series 20 or 21.

For answers to questions about this report or for a list of reports published in these series, contact:

Information Dissemination Staff
National Center for Health Statistics
Centers for Disease Control and Prevention
3311 Toledo Road, Room 5412
Hyattsville, MD 20782

1-800-232-4636 E-mail: cdcinfo@cdc.gov Internet: http://www.cdc.gov/nchs

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention National Center for Health Statistics 3311 Toledo Road Hyattsville, MD 20782

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300 MEDIA MAIL
POSTAGE & FEES PAID
CDC/NCHS
PERMIT NO. G-284