NCHS Dataline

NEWS FROM THE NATIONAL HEALTH INTERVIEW SURVEY

The National Health Interview Survey (NHIS) is the oldest of the surveys conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). The NHIS is a large-scale household interview survey of a sample of the nation's civilian, non-institutionalized population. The survey has been in the field for almost a half century and continues to evolve to provide current and accurate estimates of the health status of the American population. NHIS data are also used to track progress toward achieving national health objectives, including the Healthy People 2010 objectives; to plan and evaluate health policies; and to conduct public health and other research. The data are disseminated to a wide range of users including researchers, policy makers, educators, students, government agencies, non-government organizations, the news media, and the general public.

New questionnaires, new collection methods, and new and faster data dissemination methods are highlights of the redesigned NHIS. Since the 1997 redesign, the survey has been able to gradually improve the timeliness of data dissemination. Two examples of improved data dissemination: (*a*) final microdata were available for the 2001 survey within 12 months from the end of the survey year, and (*b*) selected current and trend estimates (beginning with 1997 data and including data from the second quarter of 2002) are available on the Internet through the new early release program.

THE CURRENT NHIS

For 15 years, from 1982 to 1996, the NHIS survey questionnaire consisted of a set of basic health and demographic questions known as the core questionnaire and one or more sets of additional questions on special health topics. To better reflect the needs of health researchers and policy makers, the survey questionnaire was redesigned beginning with the 1997 survey. A major change is that the basic module or core survey questionnaire now includes information on a number of topics that previously had been collected in ad hoc supplements to the NHIS. These topics are of such importance that they are collected on an ongoing basis.

The core topics include: limitation of activities; injuries; health insurance; access to health care; health care utilization; health conditions; vaccinations; HIV/AIDS; and behavioral activities such as alcohol use, tobacco use, and leisure-time physical activity.

The basic module or core now has three components—the Family Core, the Sample Adult Core, and the Sample Child Core. The Family Core information is obtained by asking a respondent about characteristics of the family and some basic information on each family member. For the Sample Adult Core, one adult in the household is randomly selected to participate, and that adult must respond personally. Proxy responses from family members or caregivers are accepted in the very rare situations in which Sample Adults are physically or mentally unable to respond. For families with children younger than 18 years, one child in the household is randomly selected for the sample child questions. Information on that child is obtained from a knowledgeable adult. This represents a major change. Prior to 1997, information from the core was usually obtained from a single respondent who reported on the characteristics of all family members. Starting in 1997, only general information is included in the Family Core component when a single, sometimes proxy, respondent is used and information that is best obtained directly from adult subjects has been moved to the Sample Adult Core. The core remains basically unchanged from year to year to provide trend estimates. In addition, data from more than one year can be pooled to increase sample size for analytic purposes.

SPECIAL TOPICS

The NHIS continues to field supplemental questions on important topics. These are co-sponsored by NCHS and other agencies. The supplements for 2000 to 2004 are as follows:

- Cancer Control was the focus of the 2000 supplement, which was co-sponsored by the National Cancer Institute and CDC's National Center for Chronic Disease Prevention and Health Promotion. Detailed information was collected from the Sample Adults and is currently available on seven topics: Hispanic acculturation, diet and nutrition (including vitamins and herbal supplements), physical activity, tobacco, cancer screening, genetic testing, and family history.

- Children's Mental Health was the major supplement topic for the 2001 NHIS. Co-sponsored by the National Institute of Mental Health and the Substance Abuse and Mental Health Services Administration, the Strengths and Difficulties Questionnaire sought information on a broad range of childhood mental and emotional issues including depression, hyperactivity, speech problems, sleep problems, a child's relationship to other children and adults, and visits to mental health professionals. These questions followed the Sample Child Core, for which the respondent is usually a parent of the Sample Child or another knowledgeable adult in the household. The Children's Mental Health supplement is being repeated in 2002 through 2004 in part or in its entirety.
- Complementary and Alternative Medicine was the major supplement topic for 2002, co-sponsored by the National Center for Complementary and Alternative Medicine, National Institutes of Health. Detailed information was sought from the Sample Adults on a number of procedures such as acupuncture, chiropractic, and hypnosis as well as questions on special diets, including Atkins, Pritikin, and others.

In most years, additional supplementary questions are added to assist in monitoring the Healthy People 2010 goals.

RACE AND ETHNICITY

Ethnicity (Hispanic origin) and race are two important demographic variables used in analyzing NHIS data. For more than 20 years, all appropriate federally sponsored surveys have collected race and ethnicity information following guidelines set forth by the Office of Management and Budget. In response to changing demographics in the U.S., revised standards were published in 1997 for implementation by 2003

These standards include two major changes. The first is that the "Asian and Pacific Islander" category has been split into two categories: "Asian" and "Native Hawaiian and Other Pacific Islander." This standard was implemented in the NHIS in 1999. The second standard, that respondents can now report multiple races to describe themselves and their family members, had already been instituted into the NHIS in 1982, but additional information was also collected so those data were reported according to the 1997 standards. Derived variables have been developed and added to the data files to provide "bridges" where possible between the new race and ethnicity data and data from earlier years. However, for data confidentiality and methodological reasons, bridging will not always be possible. One such case involves the new "Asian" and "Native Hawaiian and Other Pacific Islander" categories. Data on the Native Hawaiian and Other Pacific Islander population cannot be released due to confidentiality protections. As a result, it is not possible to obtain estimates from public use files for the old category of "Asian and Pacific Islander." Data users are urged to thoroughly review the information presented in Appendix II of the 2000 survey documentation, which can be found on the NHIS website at www.cdc.gov/nchs/nhis.htm#2000_nhis.

IMPROVING TIMELINESS

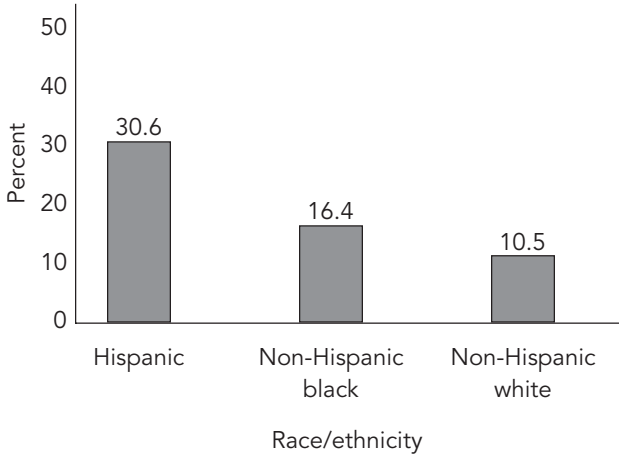
With the 1997 redesigned survey questionnaire, the NHIS began using computer-assisted personal interviewing (CAPI), which allows the interviewer to read the questions from and enter responses directly into a laptop computer during the interview. This ended the tradition of interviewers entering the information by hand on large and often complicated and unwieldy printed paper questionnaires. The respondent may spend less time with the interviewer under the new CAPI system, as a computerized questionnaire allows the interviewer to enter data quickly and administer the questionnaire using skip patterns that are controlled by the computer based on responses. The computer software also identifies some potential errors to the interviewer based on the responses as they are entered, providing possibilities for correction on the spot. NHIS staff are continuing to work on changing and updating the CAPI software to improve data entry, editing, and ultimately production of the final data.

An ongoing goal of the NHIS is to provide accurate data to the user in the shortest possible time. Because it is a complex sample survey, the NHIS requires extensive editing and weighting procedures. There are two major projects to improve the timeliness of providing data and estimates to users. The first is a major re-engineering effort, now underway, expected to improve timeliness of the full annual set of microdata for a survey year. The second—the Early Release program, fully in place—involves a new methodology for providing selected estimates on a quarterly basis.

RELEASE OF MICRODATA

The interval of time between the end of data collection and release of NHIS data to the public has been shrinking steadily for the past several years. Data from

Figure. Age- and sex-adjusted percent of U.S. population without health insurance coverage, by race/ethnicity, January–June 2002



the 1997 NHIS were released provisionally after 19 months, with a final release after 26 months. For the 2001 NHIS, final data were released in December 2002, less than 12 months after the close of the survey year.

EARLY RELEASE OF SELECTED ESTIMATES FROM NHIS

The Early Release Program is a dissemination mechanism developed to improve access to analytic results based on the most recent NHIS data. This program provides weighted estimates as quickly as possible; quarterly data on selected topics are provided on the NHIS website within six months of the close of the quarter. Figures and graphs, as well as the underlying estimates and interpretations, are available. As of December 2002, estimates were released on-line based on data from 1997 through the second quarter of 2002, and each quarter those estimates will be updated using another quarter of NHIS data.

Early release estimates for the first half (two quarters) of 2002 for the percent of persons of all ages without health insurance coverage are shown in the Figure. These estimates, adjusted for age and sex, indicate that 31% of the Hispanic population had no health insurance, either private or government provided. This is almost three times the estimate for the non-Hispanic white population (11%) and almost twice that for the non-Hispanic black population (16%).

Early release estimates are now available for 13 key health measurements, which address many of the current policy issues in public health and health care. Many of these are also Leading Health Indicators for monitoring Healthy People 2010 objectives and are of vital use to state and local agencies for comparison purposes. The topics currently covered are: health insurance coverage (including type of coverage), usual place to go for medical care, obtaining needed medical care, influenza vaccination, pneumococcal vaccination, obesity, leisure-time physical activity, current smoking, alcohol consumption, HIV testing, general health status, personal care needs, and prevalence of serious psychological distress. In each quarterly release, time trends are shown starting with 1997 estimates. The most current early release estimates are also provided by age, sex, and race/ethnicity. Each release provides tables, graphs, coordinates of all graphs, and highlights of the results. NHIS microdata and early release estimates as well as other NHIS information can be accessed from the survey's website, www.cdc.gov/nchs/nhis.htm.

Dataline was prepared by Mary Moien, MS, for the Public Affairs Office, National Center for Health Statistics, Centers for Disease Control and Prevention.