



A Comparison of Estimates of Health Insurance Coverage, by Type of Coverage from the National Survey of Family Growth (2002) and the National Health Interview Survey (April 2002–March 2003)

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Introduction

This report examines comparability of health insurance coverage estimates by type of coverage based on the 2002 National Survey of Family Growth Cycle 6 (NSFG) with those based on the April 2002–March 2003 National Health Interview Survey (NHIS). The NSFG is a periodic national survey of the civilian noninstitutionalized population aged 15–44 years. The NSFG data used for this report is the most recent publicly available data. The NHIS is an annual survey of the civilian noninstitutionalized population of all ages. Health insurance information is collected on the NSFG to facilitate identification of associations between health insurance and health- and fertility-related factors affecting childbearing, marriage, and parenthood. It is not collected on the NSFG to produce national estimates of coverage. The health insurance information collected on the NHIS is used for two purposes: 1) to provide estimates of health insurance coverage of the U.S. population and 2) to facilitate, among other things, the identification of associations between health insurance coverage and health care utilization, health behaviors, and morbidity. This E-Stat briefly describes the similarities and differences in distributions of type of health insurance coverage from these two national surveys. Although the two surveys are designed to collect information on different facets of health and life experiences, both collect information on health insurance status, albeit for different purposes.

The NSFG is a periodic survey of women and men aged 15–44 years, designed to respond to Section 306 of the Public Health Services Act that mandated, “NCHS [National Center for Health Statistics]...shall collect statistics on family formation, growth, and dissolution.” Questions on health insurance coverage are included as a measure of access to the health care system. The NSFG has been conducted six times. The first survey was conducted in 1973 and was restricted to ever-married women aged 15–44 years. Since that time, the target population has been expanded to include all women and men aged 15–44 years. This study uses data for respondents interviewed between March 2002 and March 2003, which is the latest year for which NSFG data are available (See “Notes” no. 1). NSFG asks respondents a limited number of health insurance questions compared with the health insurance section of the NHIS. The NSFG series of health insurance questions begin by asking the respondent to look at a card listing 10 types of insurance (See “Notes” no. 2) and indicate whether in the past 12 months there was “...any time that you did not have any health insurance or coverage?” and, if yes, a followup question asks for the number of months of noncoverage. The respondent is then asked about ALL types of coverage he/she had in the last 12 months and ALL current types of health insurance coverage.

Health insurance information has been collected by NHIS since 1960 and continuously since 1989. NHIS is an important source of information about health and health care in the United States. The main objective of the NHIS is to monitor the health of the U.S. population through the collection and analysis of data on a broad range of health topics. NHIS has an entire section devoted to collecting detailed information on both private health insurance plans and public health coverage programs (See “Notes” no. 3). One adult in the family is delegated as the family respondent and answers for all family members (although any family member 17 years of age and older who are at home at the time of the interview may respond for him- or herself). For each family member, the family respondent is asked for coverage information beginning with the question: “What kind of health insurance or health care coverage does {subject name} have? INCLUDE those that pay for only one type of service (nursing home care, accidents, or dental care), exclude private plans that provide extra cash while hospitalized.” As with the NSFG, the respondent is shown a card listing health insurance coverage types and asked to indicate



all that apply. The 10 types of health insurance on the card are the same as for the NSFG, although in a slightly different order, and the NHIS card has an additional item “no coverage of any type.” Respondents are also shown a second card that shows the name(s) of the Medicaid, State Children’s Health Insurance Program (SCHIP), and other state-sponsored health plans that are specific to their state of residence (See “Notes” no. 4). For persons who were considered insured at the time of interview, additional questions concerning periods of noncoverage in the past year for the subject were asked of the family respondent. For persons who did not have health insurance at the time of interview, a question concerning the length of time since the subject had coverage was asked.

Data and methods

Results presented in this report are based on Cycle 6 (March 2002–March 2003) NSFG data and on the quarterly NHIS data files that best approximate the dates of the Cycle 6 NSFG field work period (April 2002–March 2003). For this analysis a specially combined file from quarters 2–4 of 2002 NHIS and quarter 1 of 2003 NHIS was constructed. This analysis was based on a total of 39,856 persons aged 15–44 years. NSFG analysis was based on a total of 12,571 persons aged 15–44 years.


For both the NHIS and NSFG, a health insurance hierarchy of four mutually exclusive categories was used. Persons with more than one type of health insurance were assigned to the first appropriate category in the hierarchy listed below:

- Private coverage–Includes persons who had any comprehensive private health insurance plan. These plans include those obtained through an employer or purchased directly.
- Medicaid–Includes persons who do not have private coverage, but have Medicaid, or state-sponsored health plans, including SCHIP.
- Other coverage–Includes persons who do not have private coverage or Medicaid (or other public coverage), but have any type of military health plan (includes TRICARE, CHAMP-VA, and VA) or Medicare. This category also includes persons who are covered by other government programs.
- Uninsured–Includes person who have not indicated that they are covered at the time of interview under private health insurance, Medicare, Medicaid, SCHIP, a state-sponsored health plan, other government programs, or military health plan. This category also includes persons who are only covered by Indian Health Service or only have a plan that pays for one type of coverage such as accidents or dental care (See “Notes” no. 5).

Estimates shown in Table 1 were calculated using appropriate weights for each survey. These weights are calibrated to census totals for sex, age, and race or ethnicity of the U.S. civilian noninstitutionalized (household) population. The 2000 census-based population estimates are used as the baseline for both NSFG and NHIS (See “Notes” no. 6). Descriptions of the weighting procedures can be found in the [Series 2 Report](#)  [PDF – 3.7 MB] for the NSFG and the [Survey Description Document](#)  [PDF – 544 KB] for the 2002 and 2003 NHIS.

Point estimates and estimates of their variances were calculated using SUDAAN software (1) to account for the complex sample designs of the NSFG and the NHIS. Variances were estimated using the Taylor series linearization method. Differences between percentages were evaluated using two-tailed tests of significance at the 0.05 level. All estimates shown in this report meet the standards for statistical reliability by having a relative standard error of less than 30%.

Results

Overall, approximately 69% of persons aged 15–44 years in both NSFG and NHIS were covered by private health insurance in 2002–03, and an additional 8% were covered by Medicaid, SCHIP, or state-sponsored health plans (Table 1  [PDF – 21 KB]). There were no statistically significant differences between the percentages of NSFG and NHIS respondents covered by private health insurance or Medicaid (includes SCHIP and state plans), either for the total population or by gender.

There were significant differences between NSFG and NHIS in the percentages who had other insurance (Medicare, military health care, or other government health care) or no coverage (currently without health insurance, only Indian Health Service coverage, or only single-service plans). Respondents in NSFG were more likely to have other insurance, and respondents in NHIS were more likely to be uninsured. This may be due, in part, to the NHIS question’s instruction to EXCLUDE private plans that only provide extra cash while hospitalized. NSFG does not specify exclusion of these types of plans. Differences between NSFG and NHIS in the estimates of the percentages reporting being uninsured or covered by “other” insurance may attribute, in part, to:

- Differences in sequences of questions. NSFG asks first about periods of noncoverage in the last 12 months and then, for those with 1–12 months of coverage, type of insurance, ending with current insurance status and type. NHIS asks for type of current insurance coverage, followed by questions about lapses in coverage.
- Differences in the number of questions asked. Detailed follow-up questions and probing for information is standard in the NHIS instrument, whereas the NSFG health insurance section is limited to 3–5 questions.
- Differences in review and editing of verbatim responses given by respondents. As noted previously, NHIS allows respondents to elaborate on the type of health insurance he or she reports; NSFG does not collect verbatim responses. The additional information obtained in the NHIS is used to edit and reclassify health insurance status and type of coverage.
- Differences in the person reporting coverage. NSFG data are from self report of insurance coverage only, which includes persons 15 and 16 years of age. These young respondents may not be familiar enough to accurately report their health insurance coverage. This may have led to increased reporting of “other coverage” and decreased reporting of being uninsured. In contrast, NHIS data are from an adult family respondent who reports on all family members (self and proxy), although any person 17 years of age or over may choose to participate and report on their own coverage.
- Differences in question wording/instructions to respondent. NHIS specifically states, “... exclude private plans that only provide extra cash while hospitalized.” NSFG does not include this in the question.
- Differences in respondent materials. NHIS provides an additional card listing the Medicaid, SCHIP, and state-sponsored health programs for the respondent’s state of residence. These names are shown on-screen for NSFG and can be read to or verified by the respondent, but the respondent does not see the list.
- Differences in survey editing. NHIS health insurance data undergoes an insurance coverage verification process based on an examination of plan names and other verbatim fields in the insurance section. NSFG does not go through an equivalent process.




Conclusion

As noted previously, NHIS health insurance questions are designed to provide data to track health insurance coverage and noncoverage for the civilian noninstitutionalized U.S. population, while the NSFG data are not. However, analysts using NSFG data frequently include health insurance coverage as a covariate of other health and fertility measures. This analysis suggests that, given the similarity of reported health insurance coverage estimates between these two surveys, researchers can use the NSFG insurance information as an independent or predictor variable in analyses examining the effect of types of health insurance on an outcome comfortably. If, however, health insurance is dichotomized into insured/not insured, interpretations of differences should be more cautious as, compared with NHIS, the NSFG reports fewer persons with no coverage and more respondents with “other” insurance coverage.

References

1. Research Triangle Institute. SUDAAN (Release 9.0.1) [Computer Software]. Research Triangle Park, NC: Research Triangle Institute. 2004.

Notes

1. For a complete description of the NSFG, see the [NSFG Survey Description](#).
2. Types of insurance listed on the card are: private health plan; Medicaid; Medicare; Medi-Gap; Military health care; Indian Health Service; Children’s Health Insurance Program (CHIP); single-service plan; state-sponsored health plan; and other government health care. State-specific names of the Medicaid, CHIP, and other state-sponsored health plans are stored in the computer and presented on-screen, allowing the interviewer to confirm a health insurance program mentioned by the respondent.
3. For a complete discussion of items in the health insurance section of the 2002 and 2003 NHIS, see the [2002 Survey Description Document](#)  [PDF – 577 KB] and [2003 Survey Description Document](#)  [PDF – 1 MB].
4. State-specific health insurance plans are displayed on-screen on the NSFG. The interviewer can confirm a state program by name if a respondent mentions it.
5. We followed the [Census Bureau’s standard of considering Indian Health Service coverage as uninsured](#) . Persons with only single-service plans are considered to be uninsured as these plans do not normally provide for comprehensive or routine health care services.

6. In previous publications using 2002 NHIS data, weights were calibrated based on 1990 census estimates.

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