



## National Center for Health Statistics


# Impact of Medicare and Medicaid probe questions on health insurance estimates from the National Health Interview Survey, 2004

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## Introduction


The National Health Interview Survey (NHIS), a survey of the noninstitutionalized civilian population of the United States has been an important source of information about health and health care in the United States since it was first conducted in 1957. Health insurance information has been collected on the NHIS since 1960 and continuously since 1989. The health insurance section of the 2004 NHIS has a full range of data items addressing health insurance coverage. Given the ever-changing nature of the U.S. population and private and public health insurance coverage, the health insurance section of the NHIS questionnaire has periodically been revised. This report addresses the impact of changes made to in mid-2004 to improve information on Medicare and Medicaid coverage.





## Methods

The terms HIKIND, MCAREPRB, and MCAIDPRB refer to questions on the NHIS. The data on type of health insurance are collected through the HIKIND question *“What kind of health insurance or health care coverage does {person} have? INCLUDE those that pay for only one type of service (nursing home care, accidents, or dental care), EXCLUDE private plans that only provide extra cash while hospitalized.”* Respondents are shown a card with the following entries and asked to indicate all that apply: Private health insurance, Medicare, Medi-gap, Medicaid, SCHIP, Military health care, Indian Health Service, State-sponsored health plan, Other government program, Single service plan, and No coverage of any type. Respondents are also shown a second card which shows the Medicaid, SCHIP, and other State-sponsored health plans that are specific to their State of residence to aid in a respondent’s recall of these public programs. The health insurance section of the NHIS collects detailed information not only on private health insurance plans, but on public health coverage programs as well. For a complete discussion of items contained in the health insurance section of the NHIS, see the [2004 Survey Description Document](#)  [PDF – 1.2 MB]. The data used in this report are from the final data release of the 2004 NHIS.





Two additional questions were added to the health insurance section of the NHIS beginning with quarter 3 of 2004. One question, MCAREPRB, was asked of persons 65 years of age and over who had not indicated that they had Medicare through the HIKIND question. The MCAREPRB question is: *“People covered by Medicare have a card which looks like this. {Are/Is} {person} covered by Medicare?”* The other question, MCAIDPRB, was asked of persons under the age of 65 who had not indicated any type of coverage through the HIKIND question. The MCAIDPRB question is, *“There is a program called Medicaid that pays for health care for persons in need. In this state it is also called {state name}. {Are/Is} {person} covered by Medicaid?”* Respondents who originally classified themselves as uninsured, but whose classification was changed to Medicare or Medicaid on the basis of a “yes” response to either probe question, subsequently received appropriate followup questions concerning periods of noncoverage for insured respondents.


Two sets of estimates are presented in this report. “Method 1” estimates are based solely on one question (HIKIND). “Method 2” estimates are based on responses to three questions (HIKIND, MCAREPRB, and MCAIDPRB). Of the 892 people (unweighted) who were eligible to receive the MCAREPRB question in quarters 3 and 4 of 2004, 55.4% indicated that they were covered by Medicare. Of the 9,146 people (unweighted) who were eligible to receive the MCAIDPRB question in quarters 3 and 4 of 2004, 3.0% indicated that they were covered by Medicaid. There is no impact of the two additional questions on the estimates for private coverage; therefore, estimates of private health insurance coverage are not shown.



NCHS creates survey weights for each calendar quarter of the NHIS sample. The NHIS weighting procedure has been described in more detail in the [Survey Description Document](#)  [PDF – 1.2 MB]. Estimates were calculated using the survey weights, which are calibrated to census totals for sex, age, and race/ethnicity of the U.S. civilian noninstitutionalized population. The weights for 2004 NHIS data were derived from 2000 census-based population estimates (1).

Point estimates and estimates of their variances were calculated using SUDAAN software (2) to account for the complex sample design of the NHIS. The Taylor series linearization method was chosen for variance estimation. Differences between percentages were evaluated using two-sided significance tests at the 0.05 level. Terms such as “greater than” or “less than” indicate a statistically significant difference. Terms such as “similar” and “no difference” indicate that the estimates being compared were not significantly different. Lack of comments regarding the differences between any two estimates does not necessarily mean that the difference was tested and found to be not significant. Estimates that do not meet the NCHS standard of having a relative standard error of 30 percent or less are preceded by an “\*.” Estimates for quarters 3 and 4 combined ([Tables 1](#)  and [3](#) ) and for the full year ([Tables 2](#)  and [4](#) ) of 2004 are both shown.

## Results

For the period July through December 2004 (quarters 3 and 4 combined), the observed uninsured estimates (weighted) based on Method 2 were slightly lower than those based on Method 1 for persons under 18 years of age (from 10.4% to 9.4%), for persons 18–64 years of age (19.7% to 19.5%), and for persons 65 years of age and over (1.8% to 0.8%) ([Tables 1](#)  and [3](#) ). Similar results are observed with the full-year estimates ([Tables 2](#)  and [4](#) ). However, the differences for children and for adults 18–64 years of age based on half-year or full-year estimates were not statistically significant.


From July through December 2004, there was an observed increase in the rate of Medicaid coverage for children from 24.8% to 25.7% and for adults 18–64 years of age from 6.7% to 7.0% with the use of Method 2 ([Table 1](#)  [PDF – 72 KB]). The increase in Medicaid rates among children and adults is due to an increase in rates among persons who are poor and near poor. However, the differences were not statistically significant in either case.

From July through December 2004, Medicare rates among persons 65 years of age and over increased from 86.5% to 94.9% with the addition of the Medicare probe question ([Table 3](#)  [PDF – 72 KB]). Increases in Medicare rates for the last two quarters of 2004 occurred among all race and ethnic groups shown in [Table 3](#) and across all poverty groups. Similar increases in the Medicare estimates among elderly person due to the additional Medicare probe question are also observed in full-year 2004 estimates ([Table 4](#)  [PDF – 72 KB]).

## Discussion

These results indicate that the NHIS Medicare and Medicaid probe questions moved the estimates in the anticipated direction, although the differences for the uninsured were not significant for persons under 65 years of age. Estimates of Medicare coverage among adults aged 65 years and over were dramatically changed due to the over 50 percent affirmative response to the MCAREPRB question. For persons 65 years of age and over, the probe question is for the most part not picking up persons who would otherwise have been reported as uninsured but rather improving on the report of their Medicare coverage. Although the Medicaid probe question did not lead to any significant change between the Method 1 and Method 2 estimates for persons under 65 years of age, this does not necessarily mean that the addition of the Medicaid probe is unneeded. The use of the Medicaid and Medicare probe questions is part of ensuring that the NHIS produces the highest quality health insurance coverage estimates possible. This analysis will be repeated when more quarters of data with the additional probe questions are available.

## References

1. National Center for Health Statistics (2005) [Survey Description Document, 2004](#)  [PDF – 1.2 MB]. National Health Interview Survey, Hyattsville, Maryland.
2. Research Triangle Institute (2004). SUDAAN (Release 9.0.1) [Computer Software]. Research Triangle Park, NC: Research Triangle Institute.