Impact of Income Bracketing on Poverty Measures Used in the National Health Interview Survey's Early Release Program: Preliminary Data from the 2007 NHIS

by John R. Pleis, M.S. and Robin A. Cohen, Ph.D., Division of Health Interview Statistics, National Center for Health Statistics

Introduction

Income-related measures have been of special interest to public health researchers for many years due to the association of income with various dimensions of health. However, income has one of the highest item nonresponse rates in many surveys.¹ Analysis of data from 2001 comparing item nonresponse rates for income and education across several federal surveys showed that item nonresponse rates for household/family income ranged from 21%–39%, while item nonresponse rates for educational attainment ranged from 2%-4%.²

The National Health Interview Survey (NHIS) has high levels of income nonresponse. The NHIS, a nationally representative survey of the civilian noninstitutionalized household population of the United States, uses in-person interviews to collect health and demographic information on all members of sampled households. All NHIS interviews are conducted via Computer Assisted Personal Interviewing (CAPI). Since 1998, item nonresponse rates for an exact amount question on total family income have exceeded 30%. Although the NHIS included follow-up questions that asked for income within pre-set categories to try to obtain some measure of income from those who initially did not respond, these questions have not appreciably increased the usability of family income data or of the derived poverty measures in the NHIS. Considering the documented association between socioeconomic status (SES) and various health outcomes and measures of health care use, the relatively high income nonresponse rates reduce the analytic usefulness of NHIS income data.

The annual release of NHIS microdata includes unimputed family income data. In addition, the NHIS uses multiple imputation for income and personal earnings and publishes these files shortly after the release of annual microdata to address some of the concerns associated with high levels of income nonresponse.

In response to concerns about the quality of income data, a research agenda has been developed to better understand income nonresponse on the NHIS. Among the goals are nonresponse reduction through question redesign, bias assessment, and improvement of imputation strategies. During the second quarter of 2006 (April–June), a portion of the NHIS sample was selected to participate in a field test that evaluated an alternative way to ask respondents about family income in an attempt to reduce item nonresponse through question redesign.³ Based on the results of the 2006 field test,⁴ the NHIS family income questions were modified starting with the first quarter of 2007. This report examines how income estimates based on data collected during the fourth quarter of 2006 compare with income estimates based on data collected during the first quarter of 2007 for selected sociodemographic variables of interest used in the NHIS Early Release Program (http://www.cdc.gov/nchs/about/major/nhis/releases.htm). Of particular interest are the effects of the new questions on the proportion of the population in different poverty status categories, where poverty status is measured by the ratio of a family's income to the Federal poverty threshold.⁵

Methods

A summary of the family income questions used in the 1997-2006 NHIS follows:

- Exact amount;
- \geq \$20,000/< \$20,000 (if no reply to exact amount);
- Income intervals (if reply given to \geq \$20,000/< \$20,000).

The exact text of the first question was as follows: "Now I am going to ask about the total combined income {for you/of your family} in {last calendar year}, including income from all sources we have just talked about such as wages, salaries, Social Security or retirement benefits, help from relatives and so forth. Can you tell me that amount before taxes?" If the respondent did not provide an answer to the exact amount question, the respondent was asked to provide the family's income in relation to \$20,000. If an answer was given to this question, the respondent was shown a list of income intervals and asked to report the appropriate income interval. If the family's income was less than \$20,000, the respondent was shown a list of intervals in \$1,000 increments from \$0 to \$19,999. If the family's income was \$20,000 or more, the respondent was shown a list of income intervals in \$1,000 increments starting at \$35,000, up to a final category of \$75,000 and over.

In an attempt to gather more detailed income information from respondents who initially refuse to answer the exact amount question, the follow-up income questions used in the 1997-2006 NHIS were replaced with a series of unfolding bracket questions. The unfolding bracket method asks a series of closed-ended income range questions (e.g., "is it less than \$50,000?") if the respondent did not provide an answer to the exact income amount question.⁶ The closed-ended income range questions were constructed so that

each successive question establishes a smaller range for the amount of the family's income. A series of questions are asked to ascertain what income sources (e.g., wage/salary, Social Security, interest) were received by the family in the previous calendar year before respondents are asked about the amount of family income.

In addition to the different income follow-up questions introduced in the 2007 NHIS, the wording for the first family income amount question was changed to the following: *"When answering the next question, please remember to include your income PLUS the income of all family members living in this household. What is your best estimate of {your total income/the total income of all family members} from all sources, before taxes, in {previous calendar year}?"* The 2007 NHIS income follow-up questions were designed to identify whether families have income below the poverty threshold. Among respondents reporting family income under \$35,000, the poverty threshold for the family is pre-filled by the CAPI instrument using information collected earlier in the interview on the family's size. Respondents are then asked about the family's income in relation to the pre-filled poverty threshold dollar amount. A flowchart demonstrating the path for the new income follow-up questions is shown in Figure 1.

This study compares the percentages of unknown responses when calculating the poverty ratio, the percentage distributions of the poverty ratio for selected sociodemographic characteristics, and the percentage distributions of selected sociodemographic characteristics by poverty ratio category, comparing results from Quarter 4 of the 2006 NHIS and Quarter 1 of the 2007 NHIS. The analysis focuses on estimates for selected population subgroups included in Early Release Program products of the NHIS. This analysis is based on 22,491 persons (unweighted) from Quarter 4 of

the 2006 NHIS and 18,839 persons (unweighted) from Quarter 1 of the 2007 NHIS. Family income information is provided by a family respondent and all persons in a family have the same family income (and the same poverty ratio). Although incomes of members of the same family are correlated, estimates in this report are presented for all persons as has been done in prior releases from the Early Release Program.

The estimates for 2007 are being released prior to final data editing and final weighting; therefore, they should be considered preliminary and may differ slightly from subsequent estimates using the final data files. For comparability, data analyzed from Quarter 4 of the 2006 NHIS are also from preliminary files. Estimates were generated using SUDAAN software,⁷ which properly accounts for the complex sample design of the NHIS. Estimates were weighted to reflect the U.S. civilian noninstitutionalized population. Statistical significance was evaluated at the 0.05 level, and results were not adjusted for multiple comparisons.

Results

Table 1 shows the percents (weighted) of unknown family income values when calculating a three-category poverty ratio variable for the two time periods of interest, across selected sociodemographic characteristics. For 2007, the percentage of unknown values for the poverty ratio variable is a function of the number of categories used in the analysis. In Table 1, a poverty ratio variable was used that had 3 categories: ratio < 100% (income below the poverty threshold), $100\% \leq$ ratio < 200%, and ratio \geq 200%, plus an "unknown" category. The percentage of unknown poverty ratio responses in 2007 would be higher if more categories were used (e.g., a four-category poverty ratio: ratio < 100%, $100\% \leq$ ratio < 200%, $200\% \leq$ ratio < 400%, ratio \geq 400%) or would be

lower if fewer categories were used (e.g., ratio < 100%, ratio \ge 100%). The finer the distinctions made by the poverty ratio categories, the less likely it is that the poverty ratio, which is known to be within a specific interval, can be identified as being in a unique poverty category. For example, assume that a single person family indicated that his/her income was at least \$35,000 but less than \$50,000. The poverty ratio for this family is contained in the interval (334%, 477%), where the endpoints are obtained by dividing the endpoints of the family income interval by the poverty threshold for the family. In the three-category poverty ratio variable described above, this family's income would be classified in the "ratio \ge 200%" categories: 200% \le ratio < 400% and ratio \ge 400%. In addition, even though the poverty ratio for 16.0% of persons was unknown for the three-category poverty ratio variable for Quarter 1 of 2007, some of these persons had partial income information. Of these 16.0%:

- 8.6% of persons did not have any family income information
- 2.6% of persons had some family income information but not enough to categorize their response into one of the 3 poverty ratio categories
- \circ 4.8% of persons had income at or above the poverty threshold but could not be differentiated any further (100% \leq ratio \leq 200%, ratio \geq 200%).

The rates of unknown poverty ratios are much lower across all sociodemographic characteristics for data collected during the 1st quarter of 2007 than for data collected during the 4th quarter of 2006. The differentials are not quite as large for persons at least 65 years of age, adults who were widowed, divorced, separated, or had never married, as well as adults who were uninsured at the time of the interview.

Table 2 provides percentages of poverty ratio by method and quarter, for selected sociodemographic characteristics. For each poverty ratio category, results are presented for: Quarter 4 of 2006, Quarter 1 of 2007 based on only exact income, and Quarter 1 of 2007 based on exact income and the bracketed follow-up questions. Persons with unknown poverty ratio are excluded from Table 2. No significant differences were seen for the lowest poverty ratio category, less than 100%. Although a small number of significant differences were observed for the largest poverty ratio category, ratio \geq 200%, the greatest number of significant differences were seen for the middle poverty ratio category, $100\% \le$ ratio < 200%. The differences seen in the middle poverty ratio category could reflect only specifically asking about the poverty threshold boundaries for the lowest poverty ratio category. For the highest poverty ratio category, ratio $\geq 200\%$, the categories with significant differences for the different data collection methods were persons at least 65 years of age; persons who were currently married; persons with private health insurance; and persons who were non-Hispanic, and whose race was not white, not black, or not Asian or who were of more than one race. Note that while the highest poverty ratio category had some significant differences between the two data collection methods, the difference between the total percentages of persons in this category was not significant.

Table 3 provides percentage distributions of selected sociodemographic characteristics, by poverty ratio category, method, and quarter. For each poverty ratio category, results are presented for: Quarter 4 of 2006, Quarter 1 of 2007 based on only exact income, and Quarter 1 of 2007 based on exact income and the bracketed follow-up questions. As in Table 2, persons with unknown poverty ratio were excluded from Table

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3. No significant differences were seen for the lowest poverty ratio category, less than 100%, or for the highest poverty ratio category, ratio $\geq 200\%$. The only significant differences were seen in the middle poverty ratio category, 100% \leq ratio < 200%. When sociodemographic characteristics are examined for the middle poverty ratio category, 11% of persons in the middle poverty ratio category in Quarter 1 of 2007 were living with a partner compared with 8% of persons in the middle poverty ratio category in Quarter 4 of 2006 who were living with a partner. It is also worth noting that although this pattern was seen for the other poverty ratio categories, those differences were not significant. The other significant comparison in the middle poverty ratio category was for persons having private health insurance. Thirty-six percent of persons in the middle poverty ratio category in Quarter 1 of 2007 were privately insured compared with 42% of those in the middle poverty ratio category in Quarter 4 of 2006.

Conclusion

This analysis provides the first comparison of the revised NHIS income questions fielded in 2007 with the questions that were in place from 1997-2006. Preliminary results indicate that the revised 2007 NHIS income questions had the desired effect of significantly decreasing the amount of income item nonresponse. With respect to the ratio of the family's income in the last calendar year to the federal poverty threshold, these results indicate that differences between the poverty ratio responses across the two time periods (1997-2006, 2007) depend on the poverty ratio category. Analysts should consider these results when comparing poverty ratio estimates from the 2007 NHIS Early Release Program with poverty ratio estimates from the 1997-2006 NHIS Early Release Program. This analysis examined only one quarter of data from the 2007 NHIS,

however, and further analysis is needed to determine whether the same pattern emerges

as more 2007 NHIS data become available.

References

- 1. Moore JC, Stinson LL, Welniak, Jr. EJ. Income Measurement Error in Surveys: A Review. 2000. Journal of Official Statistics 16(4):331-61.
- Dahlhamer J, Dixon J, Doyle P, Eargle J, Griffin D, McGovern P. Quality at the Item Level: Terms, Methods, and Guidelines for Cross-Survey Comparisons. 2004. Proceedings of the 2003 Federal Committee on Statistical Methods Conference.
- Meyer PS, Dahlhamer JM, Pleis JR. Developing New Methods and Questions for Improving Response and Measurement on Sensitive Questions on the National Health Interview Survey. 2006 Proceedings of the American Statistical Association, Survey Research Methods Section [CD-ROM]. Alexandria, VA: American Statistical Association: 3426-29.
- Pleis JR, Dahlhamer JM, Meyer PS. Unfolding the Answers? Income Nonresponse and Income Brackets in the National Health Interview Survey. 2006 Proceedings of the American Statistical Association, Survey Research Methods Section [CD-ROM]. Alexandria, VA: American Statistical Association: 3540-47.
- 5. DeNavas-Walt C, Proctor BD, Lee CH. Income, Poverty, and Health Insurance Coverage in the United States: 2005. Current Population Reports, P60-231. U.S. Government Printing Office. Washington, DC.
- Moore JC, Loomis LS. Using Alternative Question Strategies to Reduce Income Nonresponse. 2000 Proceedings of the American Statistical Association, Survey Research Methods Section. Alexandria, VA: American Statistical Association: 947-52.
- Research Triangle Institute. SUDAAN (Release 9.0.1) [Computer Software]. 2005. Research Triangle Park, NC: Research Triangle Institute.

FIGURE 1





Table 1. Weighted percents of unknown responses for the poverty ratio, by selectedpopulation characteristics and time period: National Health Interview Survey, Quarter 4, 2006and Quarter 1, 2007¹

	Quarter 4, 2006	Quarter 1, 2007, using bracketed follow-	Percentage Point Decrease
Selected characteristic		ups ²	
Total	29.6%	16.0%	13.6
Age			
Under 65 years:	28.3%	15.0%	13.3
0 -17 years	27.8%	13.2%	14.6
18 - 64 years	28.5%	15.7%	12.8
65 years and over	39.3%	30.3%	9.0
Sex			
Male	29.1%	16.2%	12.9
Female	30.1%	17.5%	12.6
Hispanic origin and race ³			
Hispanic	32.3%	16.9%	15.4
Non-Hispanic white only	28.2%	16.4%	11.8
Non-Hispanic black only	31.7%	17.5%	14.2
Non-Hispanic Asian only	38.2%	25.5%	12.7
Non-Hispanic other	26.9%	12.0%	14.9
Region			
Northeast	33.9%	15.8%	18.1
Midwest	27.2%	16.7%	10.5
South	27.8%	15.9%	11.9
West	31.3%	19.3%	12.0
Education ⁴			
Less than high school diploma	30.4%	18.8%	11.6
High school diploma or GED ⁵	31.5%	20.2%	11.3
More than high school	25.9%	13.4%	12.5
Marital status ⁶			
Married	30.7%	16.6%	14.1
Widowed	38.1%	27.4%	10.7
Divorced or separated	24.9%	15.8%	9.1
Living with partner	30.2%	16.0%	14.2
Never married	27.3%	18.2%	9.1
Health Insurance ⁷			
Private	29.2%	13.5%	15.7
Public	28.4%	14.3%	14.1
Uninsured	29.4%	18.6%	10.8

¹The poverty ratio is based on family income and family size using the U.S. Census Bureau's poverty thresholds for the previous calendar year.

²Because of the follow-up questions used, the percentage of unknown values for the poverty ratio variable in 2007 is a function of the number of categories used in the analysis. In this table, a 3-category poverty ratio variable was used (ratio < 100%, 100% \leq ratio < 200%, ratio \geq 200%). But, the percentage of unknown responses would be higher if more categories were used (e.g., ratio < 100%, 100% \leq ratio < 200%, 200% \leq ratio < 400%, ratio \geq 400%) or would be lower if less categories were used (e.g., ratio < 100%, ratio \geq 100%). For example, assume a single person family indicated their income was at least \$35,000 but less than \$50,000. The poverty ratio variable described above, this family's income would be classified in the "ratio \geq 200%" category but in the 4 category poverty ratio variable this family's income could not be classified because the poverty ratio interval overlaps two categories: 200% \leq ratio < 400% and ratio \geq 400%.

³Persons of Hispanic origin may be of any race or combination of races. "Non-Hispanic other" includes non-Hispanic single race adults who did not identify as white, black or Asian as well as non-Hispanic persons of more than one race.

⁴Education is only shown for persons aged 18 years and over.

⁵GED is General Educational Development high school equivalency diploma.

⁶Marital status in only shown for persons aged 18 years and over.

⁷"Private" includes persons who had any comprehensive private health insurance plan. These plans include those obtained through an employer or purchased directly but do not include private health insurance plans that cover only one type of service (e.g., dental care). "Public" includes persons without private health insurance but having any of the following: Medicaid, Medicare, State Children's Health Insurance Program (S-CHIP), military health care, or any other state-sponsered or other government plan. "Uninsured" includes persons not covered by private health insurance, Medicare, Medicaid, S-CHIP, a state-sponsered health plan, other government programs, or military health care coverage. This category also includes persons who have only Indian Health Service coverage or have only a plan that covers one type of service. A small percentage of persons, approximately 1-2%, have both private and public insurance.

		Ratio	< 100%			100% ≤ R	atio < 200%			Ratio	≥ 200%	
	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.
Selected characteristic	[A] ²	[B] ²	[c] ²	[A] - [C]	[A] ²	[B] ²	[c] ²	[A] - [C]	[A] ²	[B] ²	[c] ²	[A] - [C]
Total	13.4	14.0	14.2	-0.8	20.0	19.5	17.4	2.6*	66.6	66.5	68.5	-1.9
Age Age	101	115	116	00	0.01	101	16.0	** 0	67.2	67.7	808	c 7
	- L		0.4	0, T	0.00	1 1	0.01	- L V •	0.70	7.70	0.00	
0 -17 years 18 - 64 wears	C.71 C.71	19.Z	19.0 12.6	- 2.1	6.77 V 71	16.6 16.6	21.4 1.10	ט.ד זאי	0.90	1.80	09.U	0.0
65 vears and over	10.4	10.2	0.9	0.5	29.4	29.3	22.7	6.7*	60.2 60.2	60.5 60.5	67.4	-7.2*
Sex												
Male	12.5	13.4	12.9	-0.4	19.4	18.0	16.9	2.5*	68.2	68.6	70.2	-2.0
Female	14.3	15.6	15.4	-1.1	20.7	18.8	17.8	2.9*	65.0	65.7	66.8	-1.8
Hispanic origin and race ³												
Hispanic	25.4	25.0	25.0	0.4	32.2	29.2	29.4	2.8	42.4	45.9	45.7	-3.3
Non-Hispanic white only	8.8	9.1	8.6	0.2	16.6	14.8	14.1	2.5*	74.6	76.0	77.3	-2.7
Non-Hispanic black only	25.3	28.0	29.2	-3.9	27.0	23.0	20.2	6.8*	47.7	49.0	50.6	-2.9
Non-Hispanic Asian only	9.4	8.5	8.6	0.8	14.7	12.1	10.7	4.0	75.9	79.4	80.7	-4.8
Non-Hispanic other	19.5	29.5	29.1	-9.6	19.8	27.9	27.2	-7.4	60.8	42.6	43.7	17.1*
Region												
Northeast	12.1	12.6	13.2	-1.1	14.0	13.5	12.5	1.5	73.9	74.0	74.4	-0.5
Midwest	12.2	14.0	14.2	-2.0	20.5	19.4	18.5	2.0	67.3	66.6	67.3	0.0
South	14.8	16.5	15.5	-0.7	22.3	18.7	18.1	4.2*	62.9	20.2	66.4	-3.5
West	13.1	13.0	12.6	0.5	20.8	20.2	18.7	2.1	66.0	66.8	68.6	-2.6
Education ⁴												
Less than high school diploma	27.6	28.6	29.2	-1.6	34.9	31.0	31.1	3.8	37.6	40.5	39.7	-2.1
High school diploma or GED ⁵	11.0	13.1	12.5	-1.5	23.3	20.0	19.8	3.5*	65.7	67.0	67.6	-1.9
More than high school	8.1	8.7	7.7	0.4	12.4	11.8	10.2	2.2*	79.5	79.5	82.0	-2.5
Marital status ⁶												
Married	6.4	6.4	6.0	0.4	15.9	13.1	12.6	3.3*	7.77	80.5	81.4	-3.7*
Widowed	16.3	21.1	16.6	-0.3	33.3	28.1	26.5	6.8*	50.3	50.8	56.9	-6.6
Divorced or separated	18.5	19.8	19.9	-1.4	24.1	22.7	21.6	2.5	57.4	57.4	58.5	-1.1
Living with partner	11.9	13.6	14.9	-3.0	19.3	20.1	19.9	-0.6	68.8	66.3	65.2	3.6
Never married	22.9	22.7	23.4	-0.5	21.4	20.0	18.2	3.2	55.7	57.3	58.4	-2.7
Health Insurance ⁷												
Private	4.7	4.5	4.3	0.4	13.1	10.4	10.1	3.0*	82.2	85.1	85.6	-3.4*
Public	26.4	40.1	29.9	-3.5	31.1	31.5	27.6	3.5	42.5	28.4	42.5	0.0
Uninsured	26.0	24.9	26.4	-0.4	33.4	36.4	35.0	-1.6	40.6	38.7	38.6	2.0

Table 2. Percentage distributions of poverty ratio, by method and quarter, for selected characteristics: National Health Interview Survey (NHIS), Quarter 4, 2006 and Quarter 1, 2007

*p < 0.05, based on t-test of the hypothesis that the difference is zero.

The poverty ratio is based on family income and family size using the U.S. Census Bureau's poverty thresholds for the previous calendar year. When calculating percents, unknowns were excluded from the denominators.

³Within each row, 3 separate percentage distributions are displayed. All columns with the same letter add to 100% for each row. That is, the three [A]s add to 100%, the three [B]s add to 100%, and the three [C]s add to 100%. ³Persons of Hispanic origin may be of any race or combination of races. "Non-Hispanic other" includes non-Hispanic single race adults who did not identify as white, black or Asian as well as non-Hispanic persons of more than one race.

⁴Education is only shown for persons aged 25 years and over.

⁵GED is General Educational Development high school equivalency diploma.

⁶Marital status is only shown for persons aged 18 years and over.

Medicaid, Medicare, State Children's Health Insurance Program (S-CHIP), military health care, or any other state-sponsered or other government plan. "Uninsured" includes persons not covered by private health insurance, Medicare, Medicaid, S-CHIP, a state-sponsered health plan, other government programs, or military health care coverage. This category also includes persons who ⁷"Private" includes persons who had any comprehensive private health insurance plan. These plans include those obtained through an employer or purchased directly but do not include private health insurance plans which only cover a single type of service (e.g., vision care, dental care). "Public" includes persons without private health insurance but having any of the following: are only covered by Indian Health Service coverage or only have a plan which only covers a single type of service (e.g., vision care, dental care).

					2007	_						
		Ratio	< 100%			100% ≤ R	atio < 200%			Ratio	≥ 200%	
	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.	Quarter 4, 2006 (%)	Quarter 1, 2007, exact income only (%)	Quarter 1, 2007, using bracketed follow-ups (%)	Percentage Point Diff.
Selected characteristic	[A] ²	[B] ²	[c] ²	[A] - [C]	[A] ²	[B] ²	[c] ²	[A] - [C]	[A] ²	[B] ²	[c] ²	[A] - [C]
All ages												
Under 65 years:	91.9	92.5	92.9	-1.0	84.6	84.6	86.7	-2.0	90.5	90.7	90.0	0.6
0 -17 years	33.5	35.7	36.0	-2.5	29.2	30.4	32.0	-2.8	22.9	22.8	22.4	0.5
18 - 64 years	58.4	56.8	56.9	1.5	55.4	54.2	54.7	0.7	67.6	67.9	67.6	0.0
65 years and over	8.1	7.5	7.1	1.0	15.4	15.4	13.3	2.1	9.5	9.3	10.0	-0.5
Under 65 years of age												
YAC	!							1				
Male	47.3	46.4	45.8	1.5	49.0	49.1	49.5	-0.5	50.7	51.3	51.0	-0.3
Female	52.7	53.6	54.2	-1.5	51.0	50.9	50.5	0.5	49.3	48.7	49.0	0.3
Hispanic origin and race ³												
Hispanic	28.5	26.9	27.6	0.9	25.6	24.8	27.9	-2.3	9.8	10.6	10.6	-0.8
Non-Hispanic white only	43.6	41.5	39.0	4.6	51.9	53.0	49.7	2.2	75.0	74.3	73.4	1.6
Non-Hispanic black only	22.5	22.9	25.0	-2.5	17.3	14.9	15.1	2.2	8.8	8.7	9.3	-0.5
Non-Hispanic Asian only	2.3	2.1	2.4	-0.1	2.9	2.4	2.5	0.4	4.4	4.3	4.7	-0.3
Non-Hispanic other	3.1	6.6	6.0	-2.9	2.4	4.9	4.8	-2.4	2.1	2.0	2.0	0.1
Region												
Northeast	16.4	14.2	16.0	0.4	13.0	12.0	12.0	1.0	20.7	18.0	19.0	1.7
Midwest	19.1	23.6	23.3	-4.2	21.0	25.8	24.5	-3.5	22.2	24.2	23.0	-0.8
South	43.2	42.9	40.4	2.8	43.1	38.5	38.8	4.3	35.9	36.4	36.1	-0.2
West	21.4	19.3	20.3	1.1	22.9	23.7	24.7	-1.8	21.2	21.4	22.0	-0.8
Education ⁴												
Less than high school diploma	32.9	30.0	31.8	1.1	25.0	24.6	26.4	-1.4	7.7	7.5	7.3	0.4
High school diploma or GED ⁵	26.2	28.5	29.6	-3.4	34.0	33.0	33.5	0.5	26.3	25.7	25.7	0.6
More than high school	40.9	41.6	38.6	2.3	41.0	42.4	40.1	0.9	66.0	66.8	67.1	-1.1
Marital status ⁶												
Married	30.6	28.7	28.0	2.6	47.5	43.8	43.9	3.6	64.0	63.3	64.4	-0.4
Widowed	2.2	3.0	3.1	-0.9	2.1	3.0	2.8	-0.7	1.3	1.3	1.4	-0.1
Divorced or separated	16.2	17.6	16.6	-0.4	13.7	15.2	14.7	-1.0	9.0	0.0	8.5	0.5
Living with partner	6.9	9.1	9.5	-2.6	7.6	10.2	10.6	-3.0*	6.8	7.9	7.0	-0.2
Never married	44.2	41.6	42.8	1.4	29.1	27.8	28.1	1.0	18.9	18.6	18.7	0.2
Health Insurance ⁷												
Private	23.1	20.7	20.2	2.9	42.4	37.8	36.1	6.3*	83.5	84.2	84.9	-1.4
Public	47.7	53.7	53.5	-5.8	30.1	33.3	33.8	-3.7	8.2	8.2	7.7	0.5
Uninsured	30.6	26.9	27.4	3.2	28.6	31.0	32.0	-3.4	9.8	9.0	8.6	1.2

Table 3. Percentage distributions of selected characteristics, by poverty ratio category, method, and quarter: National Health Interview Survey (NHIS), Quarter 4, 2006 and Quarter 1,

*p < 0.05, based on t-test of the hypothesis that the difference is zero.

The poverty ratio is based on family income and family size using the U.S. Census Bureau's poverty thresholds for the previous calendar year. When calculating percentages, unknowns were excluded. Percentages within selected characteristics may not add to 100% because of rounding.

²Within each sociodemographic characteristic, estimates from each column labeled [A], [B], or [C] add to 100%.

³Persons of Hispanic origin may be of any race or combination of races. "Non-Hispanic other" includes non-Hispanic single race adults who did not identify as white, black or Asian as well as non-Hispanic persons of more than one race.

⁴Education is only shown for persons aged 18 years and over.

⁵GED is General Educational Development high school equivalency diploma.

 6 Marital status is only shown for persons aged 18 years and over.

Medicare, Medicaid, S-CHIP, a state-sponsered health plan, other government programs, or military health care coverage. This category also includes persons who have only Indian Health Service health insurance plans that cover only one type of service (e.g., dental care). "Public" includes persons without private health insurance but having any of the following: Medicard, Medicare, State Children's Health Insurance Program (S-CHIP), military health care, or any other state-sponsered or other government plan. "Uninsured" includes persons not covered by private health insurance, ⁷"Private" includes persons who had any comprehensive private health insurance plan. These plans include those obtained through an employer or purchased directly but do not include private coverage or have only a plan that covers one type of service (e.g., dental care). A small percentage of persons, approximately 1-2%, have both private and public insurance. Thus, the column percents will not add to 100%.