



# Problems Paying Medical Bills: Early Release of Estimates From the National Health Interview Survey, January 2011–June 2013

by Robin A. Cohen, Ph.D., and Whitney K. Kirzinger, M.P.H.

Division of Health Interview Statistics, National Center for Health Statistics

## Highlights

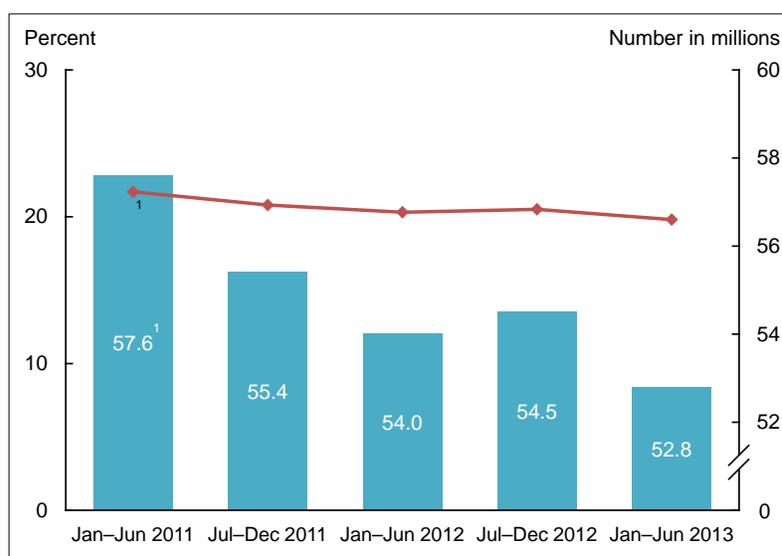
- The percentage of persons under age 65 who were in families having problems paying medical bills decreased from 21.7% (57.6 million) in the first 6 months of 2011 to 19.8% (52.8 million) in the first 6 months of 2013.
- Within each 6-month period from January 2011 through June 2013, children aged 0–17 years were more likely than adults aged 18–64 to be in families having problems paying medical bills.
- The percentage of children aged 0–17 years who were in families having problems paying medical bills decreased from 23.7% in the first 6 months of 2011 to 21.3% in the first 6 months of 2013.
- In the first 6 months of 2013, among persons under age 65, 34.3% of those who were uninsured, 24.7% of those who had public coverage, and 14.1% of those who had private coverage were in families having problems paying medical bills in the past 12 months.
- In the first 6 months of 2013, 28.6% of poor, 33.3% of near poor, and 14.3% of not poor persons under age 65 were in families having problems paying medical bills in the past 12 months.

## Introduction

Previous work has shown that in the first half of 2011 through the first half of 2012, more than one in five persons under age 65 were in families with problems paying medical bills in the past 12 months (1,2). This report provides updated estimates for the percentage of persons under age 65 who were in families having problems paying medical bills, by selected demographic variables, based on data from five consecutive 6-month periods from January–June 2011 to January–June 2013 of the National Health Interview Survey (NHIS). In this report, an NHIS “family” is defined as an individual or a group of two or more related persons living together in the same housing unit. Thus, a family can consist of only one person. In some instances, unrelated persons sharing the same household, such as an unmarried couple living together, may also be considered a family.

This report is produced by the NHIS Early Release (ER) Program, which releases selected preliminary estimates prior to final microdata release. These estimates are available from the NHIS website at <http://www.cdc.gov/nchs/nhis.htm>. For more information about NHIS and the ER Program, see the “[Technical Notes](#)” and “[Additional Early Release Program Products](#)” sections of this report.

Figure 1. Percentage and number of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by 6-month interval: United States, January 2011–June 2013



<sup>1</sup>Significant linear decrease from January–June 2011 through January–June 2013 ( $p < 0.05$ ).

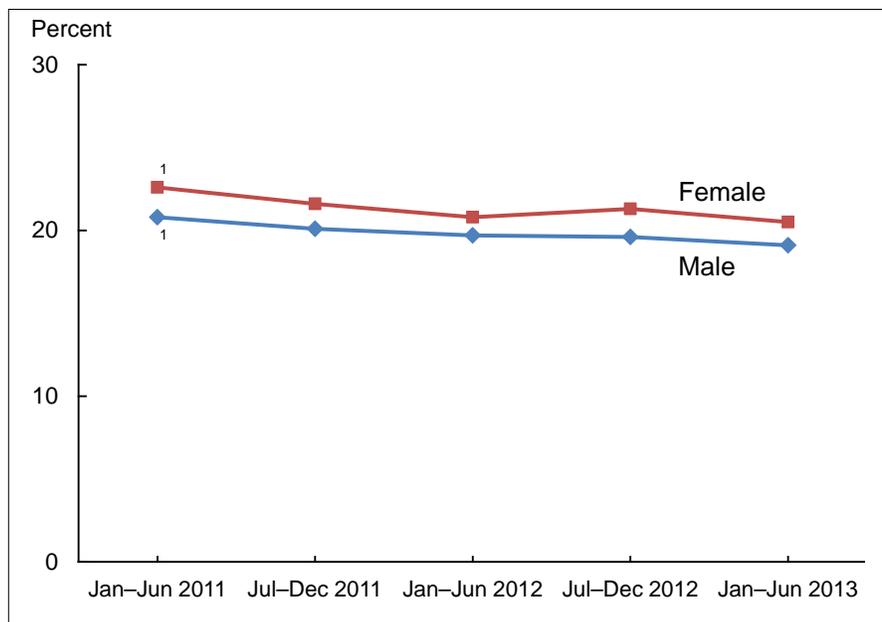
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.



- Among persons under age 65, 19.8% (52.8 million) were in families having problems paying medical bills in the first 6 months of 2013 (Figure 1).
- The percentage of persons under age 65 who were in families having problems paying medical bills decreased from 21.7% (57.6 million) in the first 6 months of 2011 to 19.8% in the first 6 months of 2013.

Figure 2. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by sex and 6-month interval: United States, January 2011–June 2013



<sup>1</sup>Significant linear decrease from January–June 2011 through January–June 2013 ( $p < 0.05$ ).

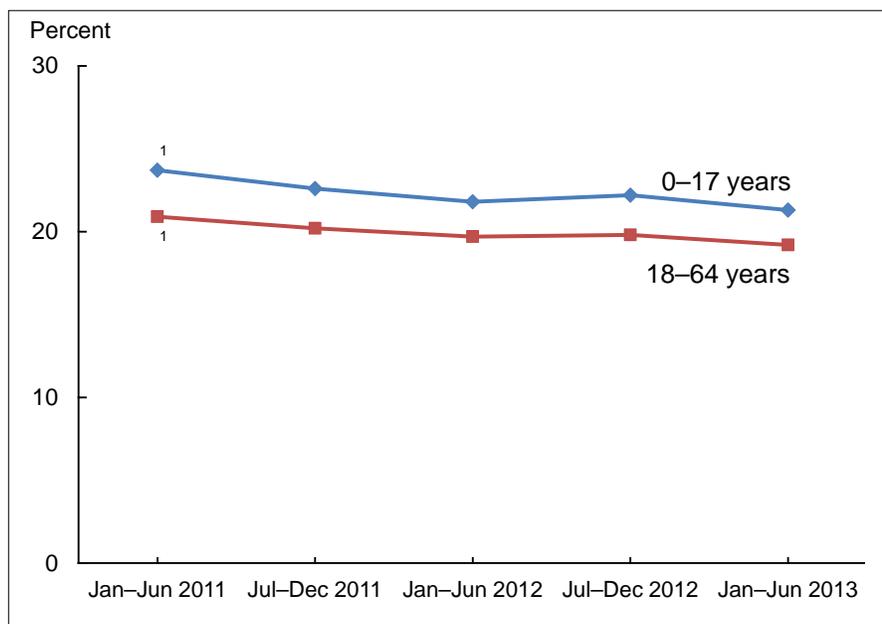
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.

- Among persons under age 65, the percentage of females who were in families having problems paying medical bills decreased from 22.6% in the first 6 months of 2011 to 20.5% in the first 6 months of 2013 (Figure 2).
- Among persons under age 65, the percentage of males who were in families having problems paying medical bills decreased from 20.8% in the first 6 months of 2011 to 19.1% in the first 6 months of 2013.
- Generally, females were more likely than males to have been in a family having problems paying medical bills. However, in the first 6 months of 2012, there was no significant difference between females and males who were in families having problems paying medical bills.



Figure 3. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by age group and 6-month interval: United States, January 2011–June 2013



<sup>1</sup>Significant linear decrease from January–June 2011 through January–June 2013 ( $p < 0.05$ ).

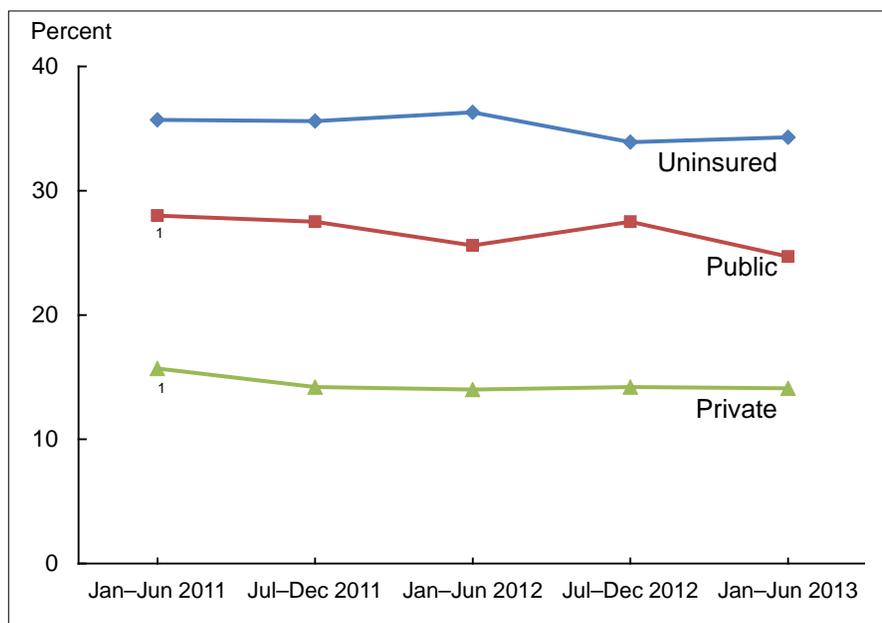
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.

- Among children aged 0–17 years, the percentage of those who were in families having problems paying medical bills decreased from 23.7% in the first 6 months of 2011 to 21.3% in the first 6 months of 2013 (Figure 3).
- Among adults aged 18–64, the percentage of those who were in families having problems paying medical bills decreased from 20.9% in the first 6 months of 2011 to 19.2% in the first 6 months of 2013.
- Within each 6-month interval from January 2011 through June 2012, children were more likely than adults aged 18–64 to be in families having problems paying medical bills.



Figure 4. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by health insurance coverage status and 6-month interval: United States, January 2011–June 2013



<sup>1</sup>Significant linear decrease from January–June 2011 through January–June 2013 ( $p < 0.05$ ).

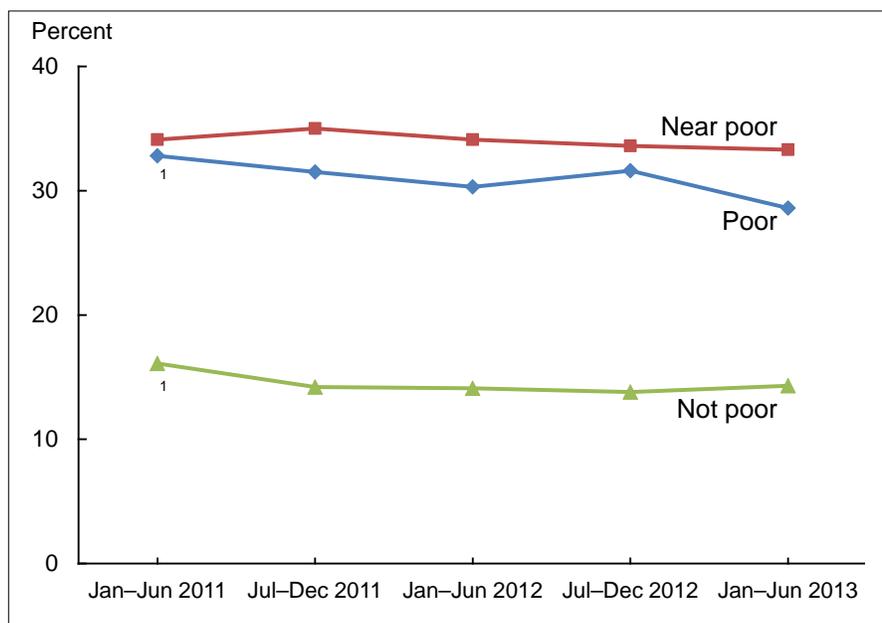
NOTES: Health insurance pertains to the sample person, whereas “problems paying medical bills” refers to the family as reported by the family respondent. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.

- In the first 6 months of 2013, among persons under age 65, 34.3% of those who were uninsured, 24.7% of those with public coverage, and 14.1% of those who had private coverage were in families having problems paying medical bills in the past 12 months (Figure 4).
- The percentage of persons under age 65 with private coverage who were in families having problems paying medical bills decreased from 15.7% in the first 6 months of 2011 to 14.1% in the first 6 months of 2013. The percentage of persons with public coverage who were in families having problems paying medical bills decreased from 28.0% in the first 6 months of 2011 to 24.7% in the first 6 months of 2013.
- Among persons under age 65 who were uninsured, the percentage of persons who were in families having problems paying medical bills did not change significantly during this 30-month period.
- During this 30-month period, persons under age 65 who were uninsured were more than twice as likely as those who had private coverage to be in families having problems paying medical bills.
- During this 30-month period, persons under age 65 who were uninsured were more likely than those who had public coverage to be in families having problems paying medical bills.



Figure 5. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by poverty status and 6-month interval: United States, January 2011–June 2013



<sup>1</sup>Significant linear decrease from January–June 2011 through January–June 2013 ( $p < 0.05$ ).

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.

- In the first 6 months of 2013, among persons under age 65, 28.6% of those who were poor, 33.3% of those who were near poor, and 14.3% of those who were not poor were in families having problems paying medical bills in the past 12 months (Figure 5).
- The percentage of not poor persons under age 65 who were in families having problems paying medical bills decreased from 16.1% in the first 6 months of 2011 to 14.3% in the first 6 months of 2013.
- The percentage of poor persons under age 65 who were in families having problems paying medical bills decreased from 32.8% in the first 6 months of 2011 to 28.6% in the first 6 months of 2013.
- Among persons under age 65 who were near poor, the percentage of persons who were in families having problems paying medical bills did not change significantly during this 30-month period.
- During this 30-month period, persons under age 65 who were poor and near poor were twice as likely as those who were not poor to be in families having problems paying medical bills.



**Table. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by selected demographic characteristics and 6-month interval: United States, January 2011–June 2013**

Selected characteristic	January–June 2011	July–December 2011	January–June 2012	July–December 2012	January–June 2013
	Percent (standard error)				
Total	21.7 (0.46)	20.8 (0.45)	20.3 (0.42)	20.5 (0.47)	19.8 (0.48)
Sex					
Male	20.8 (0.48)	20.1 (0.47)	19.7 (0.44)	19.6 (0.49)	19.1 (0.52)
Female	22.6 (0.53)	21.6 (0.48)	20.8 (0.46)	21.3 (0.50)	20.5 (0.49)
Age group					
0–17 years	23.7 (0.63)	22.6 (0.65)	21.8 (0.64)	22.2 (0.67)	21.3 (0.70)
18–64 years	20.9 (0.45)	20.2 (0.43)	19.7 (0.41)	19.8 (0.45)	19.2 (0.46)
Race/ethnicity					
Hispanic	25.2 (1.07)	23.4 (0.83)	23.1 (0.88)	22.7 (0.85)	22.9 (0.79)
Non-Hispanic white only	20.1 (0.59)	19.4 (0.57)	18.7 (0.57)	19.0 (0.61)	18.2 (0.63)
Non-Hispanic black only	27.9 (1.11)	26.6 (1.10)	27.4 (1.02)	27.6 (1.10)	26.1 (1.05)
Non-Hispanic Asian only	10.3 (1.17)	11.7 (1.27)	7.7 (0.95)	9.9 (1.14)	9.2 (1.24)
Non-Hispanic other races	26.8 (2.16)	26.5 (2.79)	26.8 (2.12)	25.5 (2.18)	24.6 (2.49)
Health insurance coverage status by age group					
Under age 65					
Uninsured <sup>1</sup>	35.7 (1.00)	35.6 (0.93)	36.3 (0.84)	33.9 (0.91)	34.3 (0.96)
Private <sup>2</sup>	15.7 (0.46)	14.2 (0.43)	14.0 (0.45)	14.2 (0.47)	14.1 (0.58)
Public <sup>3</sup>	28.0 (0.80)	27.5 (0.86)	25.6 (0.80)	27.5 (0.87)	24.7 (0.82)
0–17 years					
Uninsured <sup>1</sup>	37.9 (2.41)	37.6 (2.44)	37.9 (2.51)	35.5 (2.45)	38.7 (2.40)
Private <sup>2</sup>	17.9 (0.73)	15.5 (0.73)	15.7 (0.81)	14.9 (0.77)	15.2 (0.89)
Public <sup>3</sup>	29.6 (1.02)	29.1 (1.12)	27.4 (1.07)	29.7 (1.10)	26.6 (1.13)
18–64 years					
Uninsured <sup>1</sup>	35.4 (0.98)	35.4 (0.91)	36.2 (0.85)	33.7 (0.91)	33.7 (0.92)
Private <sup>2</sup>	15.0 (0.43)	13.7 (0.40)	13.6 (0.42)	14.0 (0.43)	13.7 (0.54)
Public <sup>3</sup>	26.3 (0.86)	26.0 (0.87)	23.9 (0.85)	25.4 (0.92)	22.8 (0.80)
Poverty status <sup>4</sup> by age group					
Under age 65 years					
Poor	32.8 (1.25)	31.5 (1.23)	30.3 (1.10)	31.6 (1.19)	28.6 (1.27)
Near poor	34.1 (1.06)	35.0 (1.12)	34.1 (1.12)	33.6 (1.16)	33.3 (1.16)
Not poor	16.1 (0.55)	14.2 (0.47)	14.1 (0.48)	13.8 (0.50)	14.3 (0.59)
0–17 years					
Poor	33.0 (1.66)	32.4 (1.68)	30.0 (1.48)	30.6 (1.64)	27.8 (1.65)
Near poor	34.4 (1.56)	34.2 (1.46)	31.7 (1.60)	33.7 (1.56)	33.1 (1.63)
Not poor	16.6 (0.83)	14.2 (0.73)	15.0 (0.77)	14.3 (0.78)	14.9 (0.95)
18–64 years					
Poor	32.6 (1.24)	31.0 (1.26)	30.6 (1.20)	32.2 (1.16)	29.1 (1.28)
Near poor	33.9 (1.02)	35.4 (1.15)	35.4 (1.09)	33.5 (1.13)	33.4 (1.13)
Not poor	16.0 (0.53)	14.2 (0.48)	13.9 (0.46)	13.7 (0.48)	14.1 (0.53)
Out-of-pocket medical expenses <sup>5</sup>					
Less than \$2,000	18.2 (0.46)	17.4 (0.47)	16.9 (0.43)	17.3 (0.48)	16.4 (0.43)
\$2,000 and more	33.3 (1.09)	32.1 (1.08)	31.0 (1.06)	31.5 (1.16)	30.7 (1.18)

<sup>1</sup>Includes persons without private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

<sup>2</sup>Includes persons who had any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, or purchased through local or community programs. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

<sup>3</sup>Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare (disability), and military plans. A small number of persons were covered by both public and private plans and were included in both categories.



<sup>4</sup>Based on family income and family size, using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those below the poverty threshold; "near poor" persons have incomes of 100% to less than 200% of the poverty threshold; and "not poor" persons have incomes of 200% of the poverty threshold or greater. The percentages of respondents with unknown poverty status were 11.5% in 2011, 11.4% in 2012, and 9.9% in the first two quarters of 2013. Estimates for persons with unknown poverty status are not shown separately. For more information on the unknown income and poverty status categories, see the Survey Description Document for the 2012 National Health Interview Survey, available from: <http://www.cdc.gov/nchs/nhis.htm>. The estimates shown in this report may differ from estimates based on both reported and imputed income.

<sup>5</sup>Out-of-pocket medical expenses are based on the following question: "The next question is about money that [you have/your family has] spent out of pocket on medical care. We do not want you to count health insurance premiums, over-the-counter drugs, or costs that you will be reimbursed for. In the past 12 months, about how much did [you/your family] spend for medical care and dental care?"

NOTES: Problems paying medical bills in past 12 months is based on the following question: "In the past 12 months did [you/anyone in the family] have problems paying or were unable to pay any medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, nursing home, or home care." Health insurance pertains to the sample person, whereas "problems paying medical bills" refers to the family as reported by the family respondent. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: CDC/NCHS, National Health Interview Survey, 2011–2013.



## Technical Notes

The Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) is releasing selected estimates of problems paying medical bills for the past 12 months for the civilian noninstitutionalized U.S. population based on data from the 2011, 2012, and 2013 National Health Interview Survey (NHIS).

The estimates are being released prior to final data editing and final weighting to provide access to the most recent information from NHIS. Differences between estimates calculated using preliminary data files and final data files are typically less than 0.1 percentage point. However, preliminary estimates of persons without health insurance coverage are generally 0.1–0.3 percentage points lower than the final estimates due to the editing procedures used for the final data files. Estimates for 2011, 2012, and 2013 are stratified by 6-month time intervals, sex, age group, race/ethnicity, poverty status, health insurance coverage status, and out-of-pocket medical expenses.

### Data source

Data used to produce this Early Release (ER) report are derived from the NHIS Family Core and Supplemental components from January 2011 through June 2013. These components collect information on all family members in each household. Data analysis was based on information collected on 226,835 persons in the Family Core and Supplemental components. Visit the NHIS website at <http://www.cdc.gov/nchs/nhis.htm> for more information about the design, content, and use of NHIS.

### Estimation procedures

NCHS creates survey weights for each calendar quarter of the NHIS sample. The NHIS data weighting procedure is described in more detail at [http://www.cdc.gov/nchs/data/series/sr\\_02/sr02\\_130.pdf](http://www.cdc.gov/nchs/data/series/sr_02/sr02_130.pdf). Estimates were calculated using the NHIS survey weights, which are calibrated to census totals for sex, age, and race/ethnicity of the U.S. civilian noninstitutionalized population. Weights for the 2011 NHIS were derived from 2000 census-based population estimates. Weights for the 2012 and 2013 NHIS data were derived from 2010 census-based population estimates.

Point estimates, and estimates of their variances, were calculated using SUDAAN software to account for the complex sample design of NHIS. The Taylor series linearization method was chosen for variance estimation.

Unless otherwise noted, all estimates shown meet the NCHS standard of having less than or equal to 30% relative standard error. Differences between percentages or rates were evaluated using two-sided significance tests at the 0.05 level. Terms such as “more likely” and “less likely” indicate a statistically significant difference. Terms such as “similar” and “no difference” indicate that the estimates being compared were not significantly different. Lack of comment regarding the difference between any two estimates does not necessarily mean that the difference was tested and found to be not significant.

### Definitions of selected terms

**Health insurance coverage at interview**—The “private health insurance coverage” category includes persons who had any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, or purchased through local or community programs. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. The “public health plan coverage” category includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plans, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories. A person was defined as uninsured if he or she did not have, at the time of the interview, any private health insurance, Medicare, Medicaid, CHIP, state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care. The analyses excluded persons with unknown health insurance status (about 1% of respondents each year). Data on health insurance status were edited using an automated system based on logic checks and keyword searches. For comparability, the estimates for all years were created using these same procedures. Health insurance information is collected for all persons in a family and is reported on an individual basis.

**Family**—Defined as an individual or a group of two or more related persons who are living together in the same occupied housing unit (i.e., household) in the sample. In some instances, unrelated persons sharing the same household, such as an unmarried couple living together, may also be considered one family.

**Poverty status**—Based on the ratio of the family's income in the previous calendar year to the appropriate poverty threshold (given the family's size and number of children) defined by the U.S. Census Bureau for that year (3–5). Persons categorized as



“poor” have a poverty ratio less than 100% (i.e., their family income was below the poverty threshold); “near poor” persons have incomes of 100% to less than 200% of the poverty threshold; and “not poor” persons have incomes that are 200% of the poverty threshold or greater. The percentage of respondents with unknown poverty status from January 2011 through June 2013 averaged 11.2%. For more information on unknown income and unknown poverty status, see the NHIS Survey Description Document for 2012: <http://www.cdc.gov/nchs/nhis.htm>.

NCHS provides imputed income files, which are released a few months after the annual release of NHIS microdata and are not available for the ER updates. Therefore, estimates stratified by poverty status in this ER report are based on reported income only and may differ from similar estimates produced later that are based on both reported and imputed income.

**Problems paying medical bills in past 12 months**—Based on the following question: “In the past 12 months, did [you/ anyone in the family] have problems paying or were unable to pay any medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, nursing home, or home care.” This question was answered by the family respondent on behalf of everyone in the family.

## Additional Early Release Program Products

Additional reports are published through the Early Release (ER) Program. *Early Release of Selected Estimates Based on Data From the National Health Interview Survey* is published quarterly and provides estimates of 15 selected measures of health. Measures of health include estimates of health insurance, having a 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, serious psychological distress, diagnosed diabetes, and asthma episodes and current asthma.

*Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey* is published quarterly and provides detailed estimates of health insurance coverage.

*Wireless Substitution: Early Release of Estimates From the National Health Interview Survey* is published biannually and provides selected estimates of telephone coverage in the United States.

In addition to these reports, preliminary microdata files containing selected National Health Interview Survey (NHIS) variables are produced as part of the ER Program. For the 2013 NHIS, these files were made available three times: in September 2013, December 2013, and March 2014. NHIS data users can analyze these files through the National Center for Health Statistics Research Data Center without having to wait for the final annual NHIS microdata files to be released.

New measures may be added as work continues and in response to changing data needs. Feedback on these releases is welcome ([nhislist@cdc.gov](mailto:nhislist@cdc.gov)).

Announcements about Early Releases, other new data releases, publications, or corrections related to NHIS will be sent to members of the HISUSERS e-mail list. To join, visit the Centers for Disease Control and Prevention website at <http://www.cdc.gov/subscribe.html>.

## References

1. Cohen RA, Gindi RM, Kirzinger WK. Financial burden of medical care: Early release of estimates from the National Health Interview Survey, January–June 2011. National Center for Health Statistics. 2012. Available from: <http://www.cdc.gov/nchs/nhis/releases.htm>.
2. Cohen RA, Kirzinger WK, Gindi RM. Problems paying medical bills: Early release of estimates from the National Health Interview Survey, January 2011–June 2012. National Center for Health Statistics. 2013. Available from: <http://www.cdc.gov/nchs/nhis/releases.htm>.
3. DeNavas-Walt C, Proctor BD, Smith JC. Income, poverty, and health insurance coverage in the United States: 2010. U.S. Census Bureau. Current Population Reports P60–239. Washington, DC: U.S. Government Printing Office. 2011.
4. DeNavas-Walt C, Proctor BD, Smith JC. Income, poverty, and health insurance coverage in the United States: 2011. U.S. Census Bureau. Current Population Reports P60–243. Washington, DC: U.S. Government Printing Office. 2012.
5. DeNavas-Walt C, Proctor BD, Smith JC. Income, poverty, and health insurance coverage in the United States: 2012. U.S. Census Bureau. Current Population Reports P60–245. Washington, DC: U.S. Government Printing Office. 2013.



## Suggested citation

Cohen RA, Kirzinger WK. Problems paying medical bills: Early release of estimates from the National Health Interview Survey, January 2011–June 2013. National Center for Health Statistics. 2014. Available from: <http://www.cdc.gov/nchs/nhis/releases.htm>.