



Problems Paying Medical Bills Among Persons Under Age 65: Early Release of Estimates From the National Health Interview Survey, 2011–June 2016

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Highlights

- The percentage of persons under age 65 who were in families having problems paying medical bills decreased, from 21.3% (56.5 million) in 2011 to 16.2% (43.8 million) in the first 6 months of 2016.
- The percentage of children aged 0–17 years who were in families having problems paying medical bills decreased, from 23.2% in 2011 to 17.6% in the first 6 months of 2016.
- Within each year, from 2011 through June 2016, children aged 0–17 years were more likely than adults aged 18–64 to be in families having problems paying medical bills.
- In the first 6 months of 2016, among persons under age 65, 28.5% of those who were uninsured, 21.1% of those who had public coverage, and 12.6% 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 2016, 23.0% of poor, 24.9% of near-poor, and 12.6% of not-poor persons under age 65 were in families having problems paying medical bills in the past 12 months.

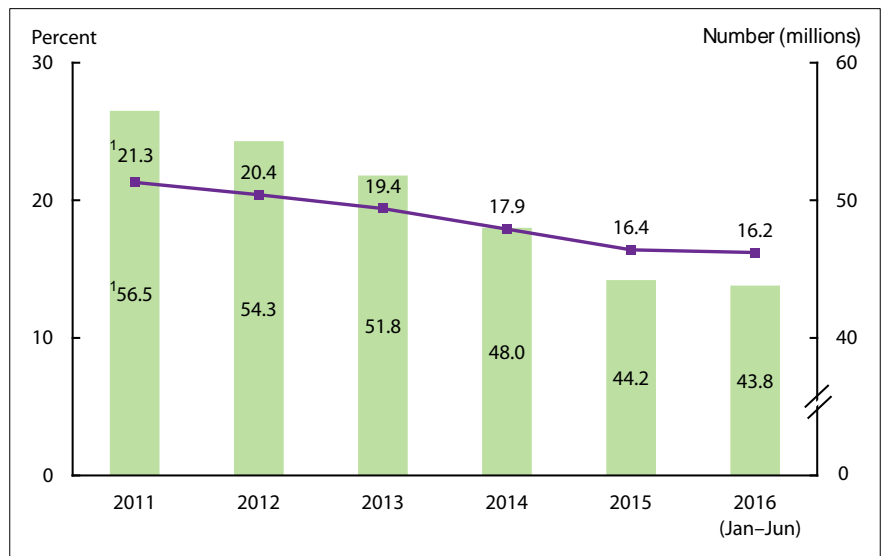
Introduction

This report provides updated estimates (1) from the National Health Interview Survey (NHIS) for the percentage of persons under age 65 who were in families having problems paying medical bills, by selected demographic variables and insurance status. Estimates for 2011–2015 are based on full years of data, and the 2016 estimates are based on data collected during the first 6 months of 2016. During this time period, there have been changes in the prevalence of uninsured persons. In the first 6 months of 2016, 28.1 million (10.4%) persons under age 65 were uninsured at the time of interview—17.8 million fewer persons than in 2011 (17.3%) but only 0.3 million fewer persons than in 2015 (a nonsignificant difference) (2).

In this report on families having problems paying medical bills, 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.

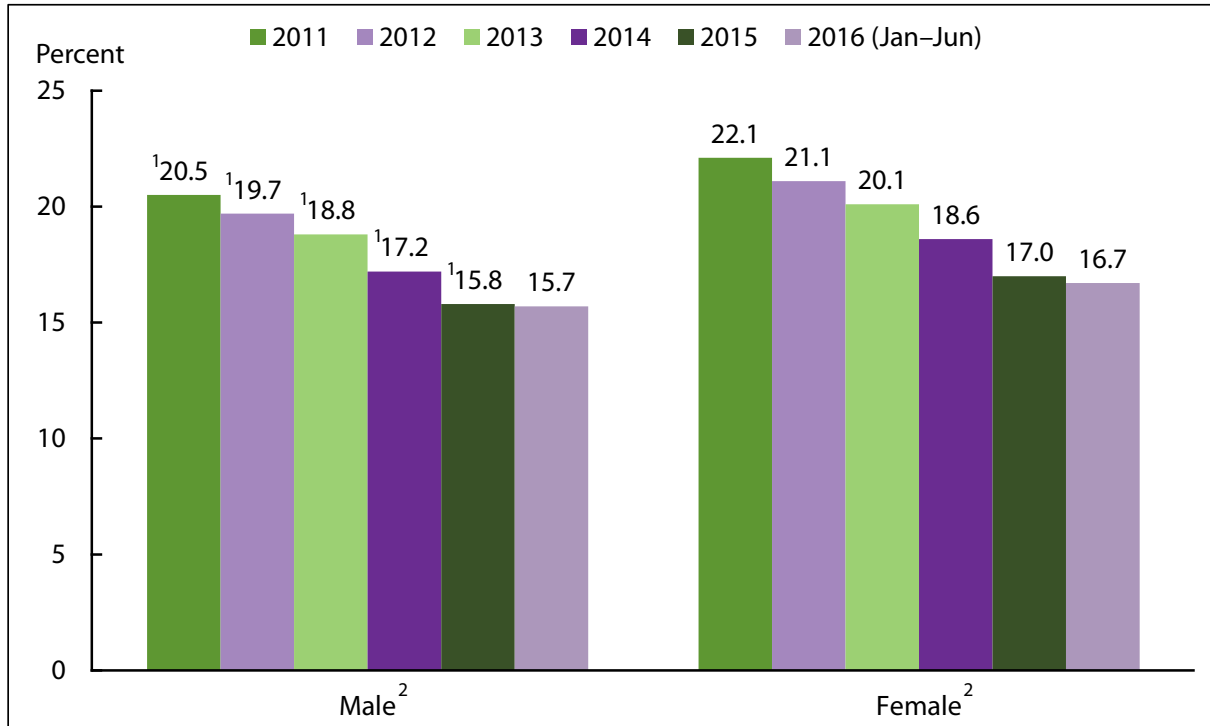
Figure 1. Percentage and number of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by year: United States, 2011–June 2016



¹Significant linear decrease from 2011 through June 2016 ($p < 0.05$).
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- Among persons under age 65, 16.2% (43.8 million) were in families having problems paying medical bills in the first 6 months of 2016 (Figure 1).
- The percentage of persons under age 65 who were in families having problems paying medical bills decreased, from 21.3% (56.5 million) in 2011 to 16.2% (43.8 million) in the first 6 months of 2016.
- The percentage of persons under age 65 who were in families having problems paying medical bills did not change significantly between 2015 (16.4% or 44.2 million) and the first 6 months of 2016 (16.2% or 43.8 million).

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 year: United States, 2011–June 2016



¹Significantly different from females within each year from 2011 through 2015 ($p < 0.05$).

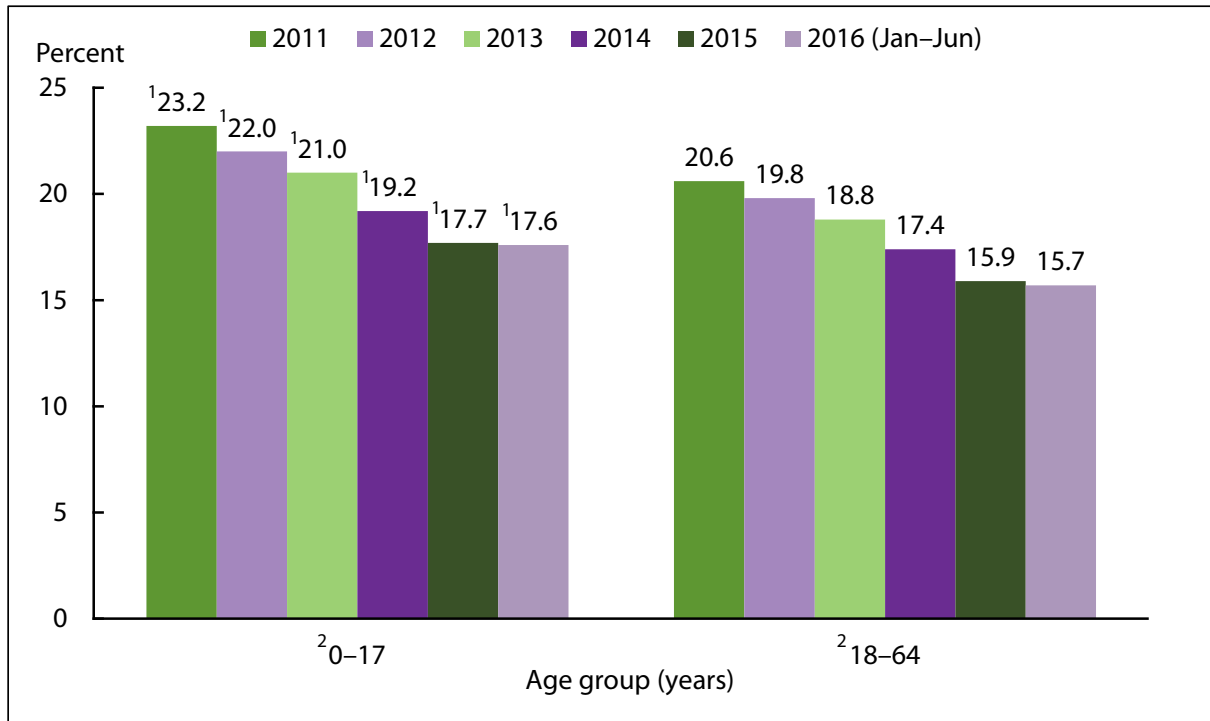
²Significant linear decrease from 2011 through June 2016 ($p < 0.05$).

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

SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- Among persons under age 65, the percentage of males who were in families having problems paying medical bills decreased, from 20.5% in 2011 to 15.7% in the first 6 months of 2016 (Figure 2). However, the observed decrease in the percentage of males having problems paying medical bills between 2015 (15.8%) and the first 6 months of 2016 (15.7%) was not significant.
- Among persons under age 65, the percentage of females who were in families having problems paying medical bills decreased, from 22.1% in 2011 to 16.7% in the first 6 months of 2016. However, the observed decrease in the percentage of females who were in families having problems paying medical bill between 2015 (17.0%) and the first 6 months of 2016 (16.7%) was not significant.
- Within each year from 2011 through 2015, females were more likely than males to have been in a family having problems paying medical bills. In the first 6 months of 2016, the observed difference between females (16.7%) and males (15.7%) was not significant.

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 year: United States, 2011–June 2016



¹Significantly different from those aged 18–64 within each year ($p < 0.05$).

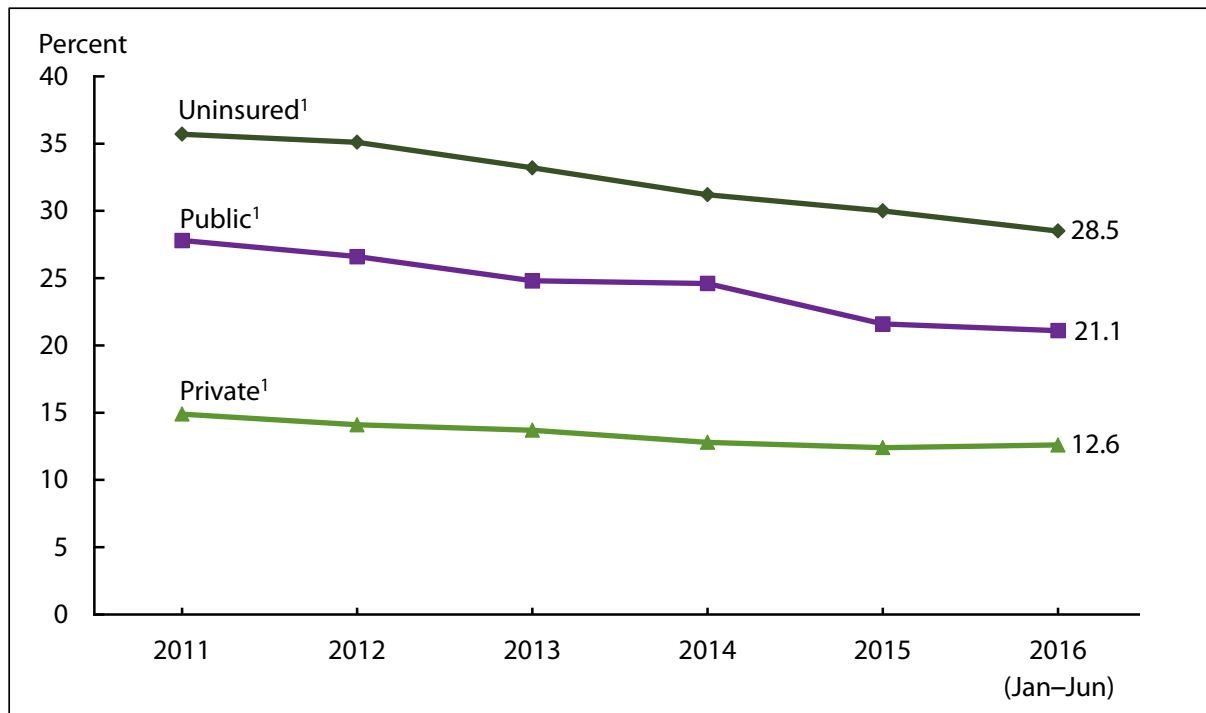
²Significant linear decrease from 2011 through June 2016 ($p < 0.05$).

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

SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- Among children aged 0–17 years, the percentage of those who were in families having problems paying medical bills decreased, from 23.2% in 2011 to 17.6% in the first 6 months of 2016 (Figure 3). However, the observed decrease in the percentage of children who were in families having problems paying medical bills between 2015 (17.7%) and the first 6 months of 2016 (17.6%) was not significant.
- Among adults aged 18–64, the percentage of those who were in families having problems paying medical bills decreased, from 20.6% in 2011 to 15.7% in the first 6 months of 2016. However, the observed decrease in the percentage of adults aged 18–64 who were in families having problems paying medical bills between 2015 (15.9%) and the first 6 months of 2016 (15.7%) was not significant.
- Within each year, 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 year: United States, 2011–June 2016



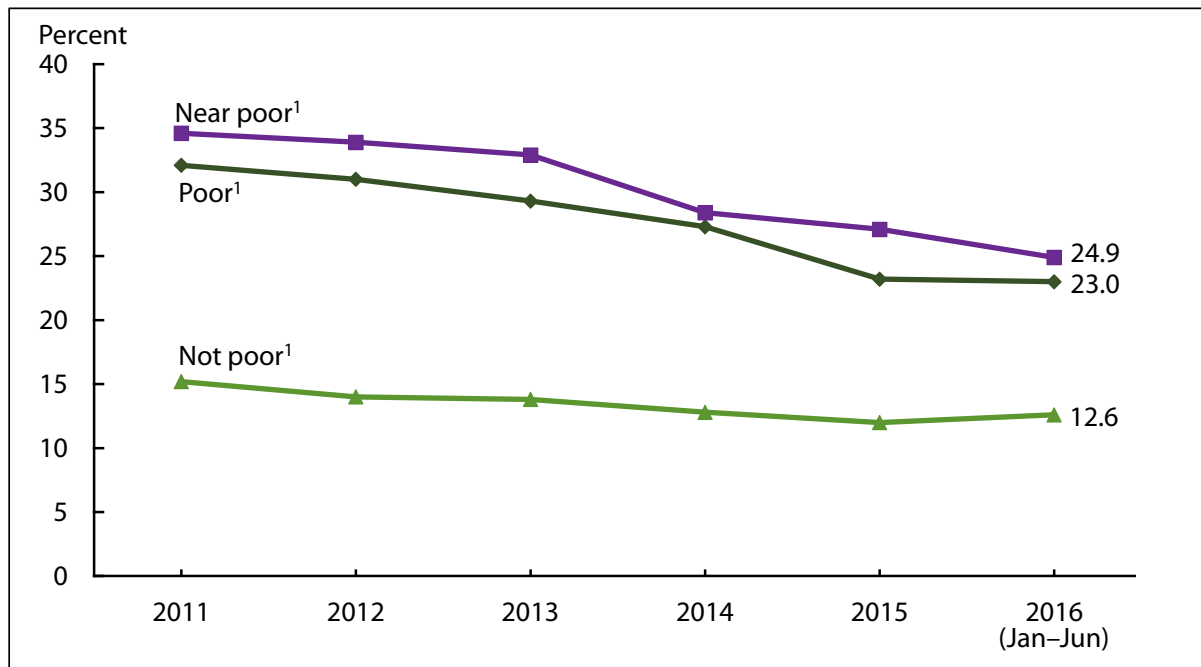
¹Significant linear decrease from 2011 through June 2016 ($p < 0.05$).

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

SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- In the first 6 months of 2016, among persons under age 65, 28.5% of those who were uninsured, 21.1% of those with public coverage, and 12.6% of those who had private coverage were in families having problems paying medical bills in the past 12 months (Figure 4).
- Among persons under age 65 who were uninsured, the percentage of persons who were in families having problems paying medical bills decreased, from 35.7% in 2011 to 28.5% in the first 6 months of 2016.
- The percentage of persons under age 65 with public coverage who were in families having problems paying medical bills decreased, from 27.8% in 2011 to 21.1% in the first 6 months of 2016.
- The percentage of persons under age 65 with private coverage who were in families having problems paying medical bills decreased, from 14.9% in 2011 to 12.6% in the first 6 months of 2016.
- Among persons under age 65 who were uninsured, had public coverage, or had private coverage, there was no significant change in the percentage of those who were in families having problems paying medical bills between 2015 and the first 6 months of 2016.
- Within each year, persons under age 65 who were uninsured were more likely than those who had public or private coverage to be in families having problems paying medical bills.
- Within each year, persons under age 65 who had public coverage were more likely than those who had private 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 year: United States, 2011–June 2016



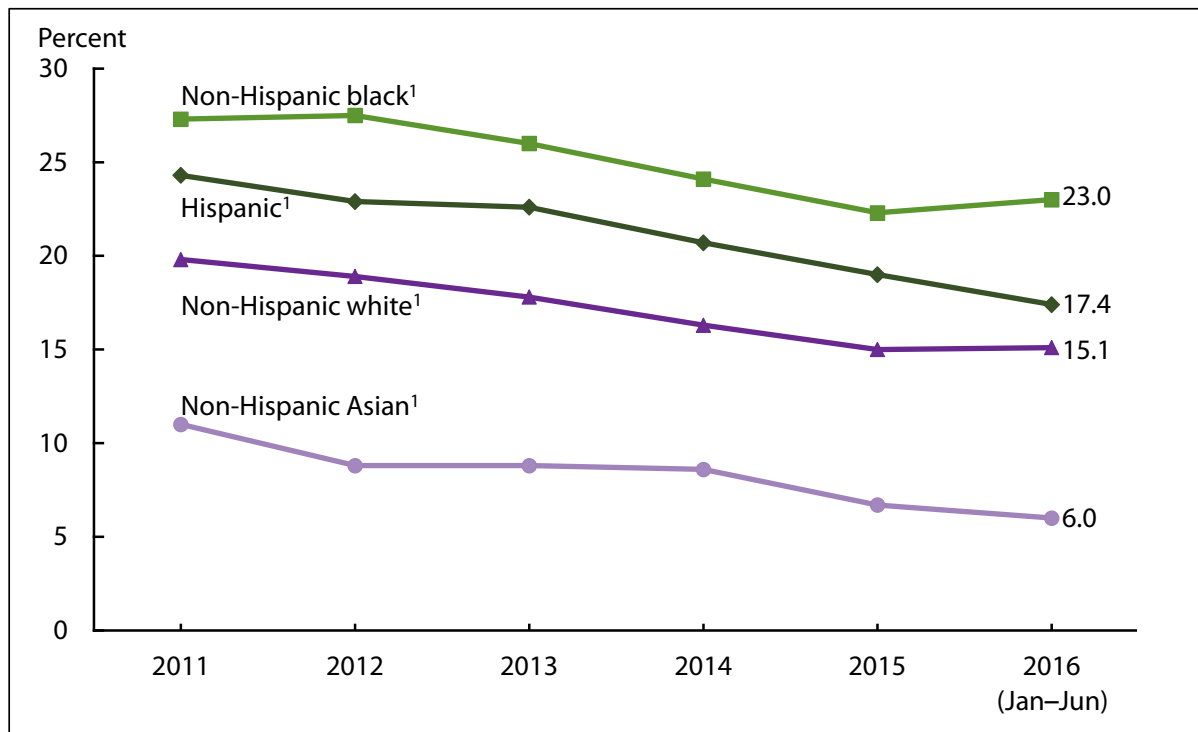
¹Significant linear decrease from 2011 through June 2016 ($p < 0.05$).

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

SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- In the first 6 months of 2016, among persons under age 65, 23.0% of those who were poor, 24.9% of those who were near poor, and 12.6% of those who were not poor were in families having problems paying medical bills in the past 12 months (Figure 5).
- The percentage of poor persons under age 65 who were in families having problems paying medical bills decreased, from 32.1% in 2011 to 23.0% in the first 6 months of 2016.
- The percentage of near-poor persons under age 65 who were in families having problems paying medical bills decreased, from 34.6% in 2011 to 24.9% in the first 6 months of 2016.
- The percentage of not-poor persons under age 65 who were in families having problems paying medical bills decreased, from 15.2% in 2011 to 12.6% in the first 6 months of 2016.
- Among persons under age 65 who were poor, near poor, or not poor, there was no significant change in the percentage of those who were in families having problems paying medical bills between 2015 and the first 6 months of 2016.
- Within each year, persons under age 65 who were poor or near poor were about twice as likely as those who were not poor to be in families having problems paying medical bills.

Figure 6. Percentage of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by race and ethnicity and year: United States, 2011–June 2016



¹Significant linear decrease from 2011 through June 2016 ($p < 0.05$).

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

SOURCE: NCHS, National Health Interview Survey, 2011–2016.

- In the first 6 months of 2016, among persons under age 65, 17.4% of Hispanic, 15.1% of non-Hispanic white, 23.0% of non-Hispanic black, and 6.0% of non-Hispanic Asian persons were in families having problems paying medical bills in the past 12 months (Figure 6).
- The percentage of Hispanic persons under age 65 who were in families having problems paying medical bills decreased, from 24.3% in 2011 to 17.4% in the first 6 months of 2016.
- The percentage of non-Hispanic white persons under age 65 who were in families having problems paying medical bills decreased, from 19.8% in 2011 to 15.1% in the first 6 months of 2016.
- The percentage of non-Hispanic black persons under age 65 who were in families having problems paying medical bills decreased, from 27.3% in 2011 to 23.0% in the first 6 months of 2016.
- The percentage of non-Hispanic Asian persons under age 65 who were in families having problems paying medical bills decreased, from 11.0% in 2011 to 6.0% in the first 6 months of 2016.
- Among all race and ethnicity groups shown, there was no significant change in the percentage of persons under age 65 who were in families having problems paying medical bills between 2015 and the first 6 months of 2016.
- Within each year from 2011 to the first 6 months of 2016 among persons under age 65, non-Hispanic black persons were the most likely and non-Hispanic Asian persons were the least likely to be in families having problems paying medical bills.
- Within each year from 2011 through 2015 among persons under age 65, Hispanic persons were more likely than non-Hispanic white persons to be in families having problems paying medical bills. In the first 6 months of 2016, the observed difference in the percentage of Hispanic (17.4%) and non-Hispanic white (15.1%) persons who were in families having problems paying medical bills was not significant.

Table. Percentage (standard error) of persons under age 65 who were in families having problems paying medical bills in the past 12 months, by selected demographic characteristics and year: United States, 2011–June 2016

Selected characteristic	2011	2012	2013	2014	2015	2016 (Jan-Jun)
Total	21.3 (0.37)	20.4 (0.33)	19.4 (0.38)	17.9 (0.35)	16.4 (0.31)	16.2 (0.46)
Sex						
Male	20.5 (0.38)	19.7 (0.34)	18.8 (0.40)	17.2 (0.35)	15.8 (0.33)	15.7 (0.48)
Female	22.1 (0.41)	21.1 (0.36)	20.1 (0.40)	18.6 (0.39)	17.0 (0.34)	16.7 (0.51)
Age group (years)						
0–17	23.2 (0.51)	22.0 (0.49)	21.0 (0.54)	19.2 (0.48)	17.7 (0.46)	17.6 (0.60)
18–64	20.6 (0.36)	19.8 (0.32)	18.8 (0.37)	17.4 (0.34)	15.9 (0.30)	15.7 (0.48)
Race and ethnicity						
Hispanic	24.3 (0.72)	22.9 (0.64)	22.6 (0.64)	20.7 (0.73)	19.0 (0.62)	17.4 (1.14)
Non-Hispanic, white only	19.8 (0.47)	18.9 (0.46)	17.8 (0.47)	16.3 (0.44)	15.0 (0.42)	15.1 (0.55)
Non-Hispanic, black only	27.3 (0.85)	27.5 (0.73)	26.0 (0.88)	24.1 (0.85)	22.3 (0.80)	23.0 (1.36)
Non-Hispanic, Asian only	11.0 (0.87)	8.8 (0.72)	8.8 (0.83)	8.6 (0.76)	6.7 (0.70)	6.0 (0.95)
Non-Hispanic other races	26.7 (1.69)	26.2 (1.58)	23.6 (1.73)	23.1 (1.49)	21.1 (1.69)	20.6 (2.13)
Health insurance coverage status by age group (years)						
Under age 65:						
Uninsured ¹	35.7 (0.76)	35.1 (0.63)	33.2 (0.69)	31.2 (0.81)	30.0 (0.84)	28.5 (1.07)
Private ²	14.9 (0.33)	14.1 (0.33)	13.7 (0.42)	12.8 (0.34)	12.4 (0.30)	12.6 (0.46)
Public ³	27.8 (0.62)	26.6 (0.63)	24.8 (0.61)	24.6 (0.61)	21.6 (0.58)	21.1 (0.88)
0–17:						
Uninsured ¹	37.7 (1.76)	36.7 (1.65)	36.2 (1.73)	32.7 (1.85)	33.9 (2.21)	31.6 (3.92)
Private ²	16.7 (0.52)	15.3 (0.57)	14.7 (0.65)	13.3 (0.54)	13.3 (0.52)	12.4 (0.57)
Public ³	29.3 (0.80)	28.6 (0.81)	26.7 (0.82)	25.6 (0.76)	21.9 (0.73)	23.1 (1.19)
18–64:						
Uninsured ¹	35.4 (0.74)	34.9 (0.64)	32.8 (0.67)	31.0 (0.78)	29.5 (0.83)	28.1 (0.85)
Private ²	14.4 (0.31)	13.8 (0.31)	13.4 (0.40)	12.6 (0.33)	12.1 (0.29)	12.7 (0.49)
Public ³	26.2 (0.64)	24.6 (0.65)	23.0 (0.61)	23.7 (0.67)	21.4 (0.66)	19.4 (0.97)
Poverty status ⁴ by age group (years)						
Under age 65:						
Poor	32.1 (0.93)	31.0 (0.84)	29.3 (0.95)	27.3 (0.96)	23.2 (0.92)	23.0 (1.40)
Near poor	34.6 (0.78)	33.9 (0.85)	32.9 (0.86)	28.4 (0.81)	27.1 (0.85)	24.9 (1.14)
Not poor	15.2 (0.39)	14.0 (0.36)	13.8 (0.41)	12.8 (0.37)	12.0 (0.33)	12.6 (0.53)
0–17:						
Poor	32.7 (1.23)	30.3 (1.13)	28.4 (1.22)	26.7 (1.23)	21.9 (1.09)	23.6 (1.86)
Near poor	34.3 (1.08)	32.7 (1.14)	32.9 (1.20)	27.0 (1.02)	27.0 (1.21)	24.2 (1.51)
Not poor	15.4 (0.59)	14.6 (0.54)	14.2 (0.65)	13.2 (0.56)	12.5 (0.52)	13.1 (0.64)
18–64:						
Poor	31.8 (0.93)	31.4 (0.87)	29.8 (0.94)	27.7 (0.98)	24.0 (0.95)	22.6 (1.37)
Near poor	34.7 (0.79)	34.5 (0.84)	33.0 (0.83)	29.0 (0.84)	27.2 (0.79)	25.2 (1.18)
Not poor	15.1 (0.38)	13.8 (0.34)	13.7 (0.39)	12.6 (0.36)	11.9 (0.32)	12.4 (0.54)
Out-of-pocket medical expenses ⁵						
Less than \$2,000	17.9 (0.36)	17.2 (0.34)	16.1 (0.36)	15.3 (0.35)	13.3 (0.34)	13.4 (0.53)
\$2,000 or more	32.7 (0.79)	31.2 (0.78)	30.3 (0.80)	27.2 (0.79)	26.3 (0.75)	25.1 (0.99)

¹Includes persons without private health insurance, Medicare, Medicaid, Children’s Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military health 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.

²Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. 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.

³Includes 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

⁴Based 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, 10.2% in 2013, 8.8% in 2014, 8.8% in 2015, and 7.9% in the first 2 quarters of 2016. 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 2015 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.

⁵Based on the following survey 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: Having problems paying medical bills in the past 12 months is based on the following survey 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: NCHS, National Health Interview Survey, 2011–2016.

Technical Notes

The 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 January 2011–June 2016 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. Estimates for 2011 through June 2016 are stratified by year, sex, age group, race and ethnicity, poverty status, health insurance coverage status, and out-of-pocket medical expenses. All estimates in this report are based on preliminary data files.

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 2016. These components collect information on all family members in each household. Data analysis was based on information collected on 579,376 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_165.pdf. Estimates were calculated using the NHIS survey weights, which are calibrated to census totals for sex, age, and race and ethnicity of the U.S. civilian noninstitutionalized population. Weights for the 2011 NHIS data were derived from 2000 census-based population estimates. Weights for the 2012, 2013, 2014, 2015, and 2016 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. Trends were evaluated using logistic regression analysis.

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. 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, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. 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 only a private plan that paid for one type of service, such as accidents or dental care. 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 (4–9). 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 2016 averaged 9.9%. For more information on unknown income and unknown poverty status, see the NHIS *Survey Description* document for 2015: <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 the 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 2016 NHIS, these files are made available in September 2016, November 2016, February 2017, and May 2017. 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).

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>.

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