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Reasons for Emergency Room Use Among U.S. Adults Aged 18–64: National Health Interview Survey, 2013 and 2014

by Renee M. Gindi, Ph.D., M.P.H.; Lindsey I. Black, M.P.H.; and Robin A. Cohen, Ph.D.,
Division of Health Interview Statistics

Abstract

Objective—This report examines the percentage of adults aged 18–64 who had an emergency room (ER) visit and their reasons for the most recent visit.

Methods—Using the 2013 and 2014 National Health Interview Survey, estimates of use in the past year and reasons for most recent ER visit are presented. A hierarchy was created to classify respondents' reasons for their last ER visit into three mutually exclusive categories: seriousness of the medical problem, doctor's office or clinic was not open, and lack of access to other providers.

Results—In 2014, 18% of adults visited the ER one or more times. Seriousness of the medical problem was the reason for the most recent ER visit for 77% of adults aged 18–64, 12% because their doctor's office was not open, and 7% because of a lack of access to other providers (4% did not select any reason). Percentages were similar in 2013. Controlling for other variables, adults with Medicaid were most likely to report that seriousness of the medical problem was the reason for the most recent ER visit. Adults with private coverage were most likely to have used the ER because the doctor's office was not open. Uninsured adults were more likely than adults with private coverage to have visited the ER because they lacked access to other providers. Differences in reasons for use between demographic groups were also identified.

Conclusions—Few changes in ER use were noted between 2013 and 2014. Differences persist in ER use and reasons for ER use at most recent visit by insurance type as well as sociodemographic characteristics.

Keywords: health • health insurance • health care access • health care utilization

Introduction

Approximately 20% of U.S. adults seek health care at the emergency room (ER) each year, a percentage that has remained largely unchanged in the last decade (1). Consistently, health insurance type has been associated with ER usage for adults, with the highest rates of use among adults with public health coverage such as Medicaid, relative to adults who were uninsured or had private health insurance (2). This higher rate of use may be related to more serious medical needs in the Medicaid population; analyses of national surveys indicate that adults aged 18–64 with Medicaid are generally in poorer health than people with private coverage and the uninsured, even when accounting for age (3) and income (4–6). Even so, there is a common perception that ER visits by adults with Medicaid tend to be nonemergency visits (7,8). Concerns about the high costs of ER care relative to office-based care—particularly among adults with Medicaid—have led some state legislatures to try to reduce the number of nonemergency ER visits by increasing cost sharing or other payment strategies (9,10). While differentiation between emergency and nonemergency visits is required before a program may increase cost sharing, multiple (and

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sometimes conflicting) methods of differentiation exist (10–13).

Since 2011, the National Health Interview Survey (NHIS) has collected detailed information on reasons for ER use (14), and preliminary estimates were produced from these questions in 2012 (15). While NHIS does not collect clinical information on a specific ER visit, the questions about the reasons for the ER visit might be useful in approximating avoidable and unavoidable ER use (16). In addition to health insurance type, NHIS also collects detailed demographic information on all respondents, allowing for an analysis of the relative impacts of insurance type on ER use among relevant population groups.

Between 2013 and 2014, 7.9 million adults aged 18–64 gained health care coverage (17). It has been difficult to predict the impact of the Affordable Care Act (ACA) and the expansion of both private and Medicaid coverage on ER use, as current research in the area shows mixed results. While research from Massachusetts and Oregon suggests that increased provision of health coverage may increase ER use (18,19), a recent study from California suggests that these effects may be short-lived (20). At a national level, expansion of private health insurance for young adults under ACA was associated with a small but statistically significant reduction in overall ER usage by those aged 19–25 (21). Even prior to ACA implementation, newly insured adults were shown to have higher rates of ER use (22). The changing composition of the Medicaid population may also influence ER use. The uninsured population eligible for Medicaid enrollment is less likely than current enrollees to have several chronic medical conditions (4), but it has higher rates of some health-risk behaviors (5).

This report examines the percentage of adults aged 18–64 using the ER in the past 12 months and the reasons for their most recent ER visit. These analyses use data from the 2013 and 2014 NHIS, the periods immediately before and after the full implementation of ACA. Estimates are presented for adults aged 18–64 overall, by health insurance coverage status, and selected demographic characteristics.

Methods

Data source

Data from the 2013 and 2014 NHIS were used to generate the estimates presented in this report. NHIS is a multipurpose health survey of the U.S. civilian noninstitutionalized population. It is conducted continuously for the Centers for Disease Control and Prevention's National Center for Health Statistics by trained interviewers from the U.S. Census Bureau. Data are collected in person at the respondent's home using computer-assisted personal interviewing, but follow-ups to complete interviews may be conducted over the telephone.

NHIS consists of both a core set of questions that remain relatively unchanged from year to year as well as supplemental questions that are not asked every year. The core consists of four main components: the Household Composition Section, the Family Core, the Sample Adult Core, and the Sample Child Core. The Household Composition Section collects basic demographic and relationship information about all members of all families living in a household. The Family Core Section collects demographic, health insurance information, and basic health information about all family members from a single family member (the "family respondent"). For the Sample Adult Core, one adult per family (the "sample adult") is randomly selected to respond to detailed health questions. For the Sample Child Core, one child per family (the "sample child") is randomly selected, and a knowledgeable adult (usually the parent) responds on the child's behalf. Further information on the survey can be found at: http://www.cdc.gov/nchs/nhis.htm.

Analyses in this report were based on data collected on 26,825 sample adults aged 18–64 in 2013 and 28,053 sample adults aged 18–64 in 2014. The overall response rate for sample adults (of all ages) was 61.2% in 2013 and 58.9% in 2014.

Emergency room questions

Questions regarding an adult's ER use are included in the Sample Adult Core, as part of the Adult Health Care Access and Utilization section of the 2013 and 2014 NHIS. Respondents are asked, "During the past 12 months, how many times have you gone to a hospital ER about your own health?" Among those with at least one ER visit in the past 12 months, a series of detailed questions was asked about the respondent's most recent ER visit. Respondents were asked if their most recent ER visit was on a night or weekend and if their most recent visit resulted in a hospital admission. Next, respondents were asked whether their most recent visit to the ER was due to any of a list of eight reasons (Table A). Respondents could select more than one reason or none of the reasons listed. For this report, a hierarchy was created to classify respondents' reasons for their last ER visit into three mutually exclusive categories (Table A).

The "seriousness of the medical problem" category attempts to capture medical emergency visits and includes respondents who reported at least one of the following reasons: "health provider advised to go," "problem was too serious for the doctor's office or clinic," "only a hospital could help," or "arrived by ambulance or other emergency vehicle."

Among those who had not selected a reason reflecting the seriousness of the medical problem, those who selected "doctor's office or clinic was not open" as a reason for the visit were placed in the "doctor's office or clinic was not open" category. While these visits were not described by respondents as being associated with serious medical conditions, these respondents were indicating a medical need at a time when their usual health professional was unavailable.

Among those whose most recent visit was not due to the seriousness of the medical problem and was not because the doctor's office was not open, respondents were placed in the "lack of access to other providers" category if they reported at least one of the following reasons: "didn't have another place to go," "emergency room is the closest provider," or "get most of their care at the

Table A. Reason for most recent emergency room visit and categorization in a hierarchical variable

Reason for visit	Category	Classification
Health provider advised to go Problem was too serious for the doctor's office or clinic Only a hospital could help Arrived by ambulance or other emergency vehicle	1	Seriousness of the medical problem
Doctor's office or clinic was not open	2	Doctor's office or clinic was not open
Didn't have another place to go Emergency room is the closest provider Get most of care at the emergency room	3	Lack of access to other providers

SOURCE: National Health Interview Survey, 2013 and 2014.

emergency room." Respondents in this category provided reasons for the most recent ER visit that reflected only a lack of access to providers other than the ER, rather than a medical emergency or an inability to see a regular provider.

Approximately 4% of respondents did not select any of the reasons and were not classified into one of the three mutually exclusive categories.

Health insurance

Questions regarding an individual's health insurance coverage are included in the Family Core component. The family respondent was asked about the health insurance coverage for each family member at the time of the interview. For this report, a hierarchy was created to classify health insurance into three mutually exclusive categories: private, Medicaid, and uninsured.

Private health insurance includes 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 Medicaid insurance coverage category includes those without private insurance who reported Medicaid, Children's Health Insurance Program (CHIP), and other state-sponsored health plans. Adults were defined as uninsured if they did not have any private insurance, Medicare, Medicaid, CHIP, state-sponsored or other government-sponsored health plan, or military plan at the time of interview. Adults also were defined as uninsured if they had only Indian Health Service coverage or only had a private insurance plan that paid for one type of service, such as accidents or dental care.

Estimates are shown for these specific health insurance coverage types. Adults with other types of health insurance (other government-sponsored or military health plans) were classified as having "Other" insurance, and are included in the totals but not shown separately.

Demographic variables

Demographic characteristics of adults presented in this report include: age, sex, race and ethnicity, and metropolitan status of residence. All demographic characteristics with the exception of area of residence are based on the family respondent's report.

Age was categorized into three groups (18–29, 30–44, and 45–64) to reflect the different health care needs in these age groups. Previous research has shown that young adults receive a greater proportion of their care at an ER compared with other age groups (23). The 18–29 age group is one noted for transitions between youth and adulthood, and a time when patterns of health care access and health behaviors are developing (24). At the other end of the spectrum, adults aged 45–64 were grouped together because they have a higher prevalence of chronic conditions (25).

Estimates are shown for some specific race and ethnicity groups: non-Hispanic white (single race), non-Hispanic black (single race), and Hispanic. Non-Hispanic persons of other or multiple races are not shown separately due to insufficient sample sizes but are included in the totals.

Area of residence was classified in two categories: metropolitan or nonmetropolitan, based on the household residence location. Metropolitan is defined as being located within a metropolitan statistical area, defined as a county or group of contiguous counties that contains at least one urbanized area of 50,000 population or more. Surrounding counties with strong economic ties to the urbanized area are also included as a metropolitan area of residence. Nonmetropolitan is defined as an area that does not include a large urbanized area and is generally thought of as more rural.

Statistical analyses

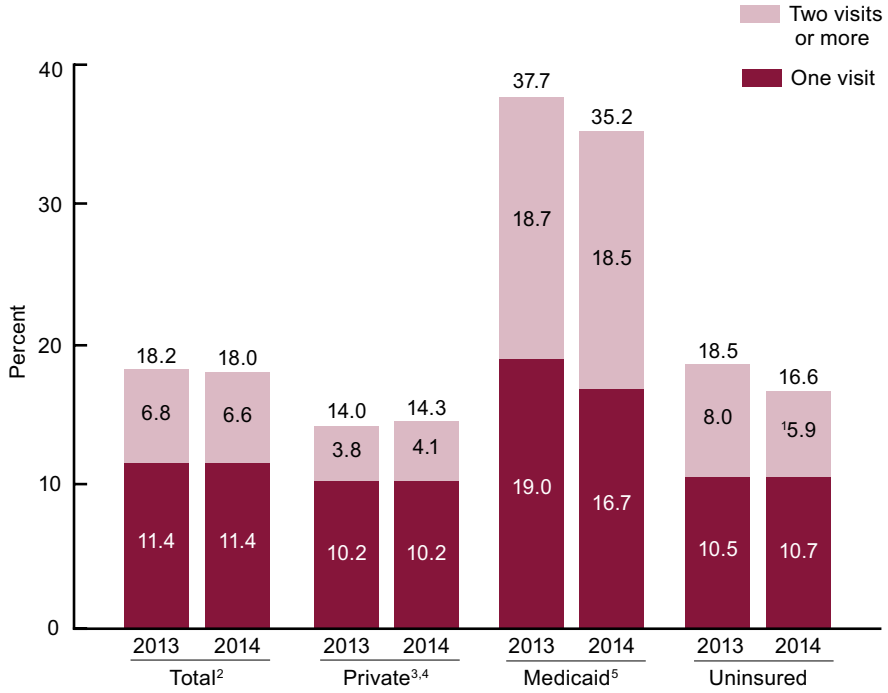
This report first presents patterns of ER use among the civilian, noninstitutionalized population of adults aged 18–64. Estimates of any use and frequency of use (none, one, and two or more times) in the past year by insurance status and demographic characteristics are presented. Next, the distribution of reasons for the most recent ER visit among adults who have used the ER within the past 12 months was examined by insurance status and demographic characteristics.

Although this report is primarily intended to provide basic descriptive statistics for key population subgroups that may guide future analyses, it also presents results from a series of multiple logistic regressions with selected

interactions. Regression models include factors associated with any use of the ER and with each of the three categories of reasons for ER use. Adjusted odds ratios (AORs) are shown, controlling for insurance type, age, sex, race and ethnicity, metropolitan residence, and survey year. Confidence intervals (CIs) are presented for each AOR, along with an indicator of statistical significance of the AOR. All main effects, regardless of significance, were retained in the final models. The reference groups selected for these models were adults with private insurance, adults aged 45–64, men, non-Hispanic white adults, and adults living in metropolitan areas. Interactions were included in the models to allow for differential associations of insurance type in the different demographic subgroups. Only significant interactions at the 0.05 level were retained in the final models.

Estimates in this report were calculated using sample adult weights and are therefore representative of the U.S. civilian noninstitutionalized population of adults aged 18–64. Data weighting procedures are described in more detail elsewhere (26). Point estimates, and estimates of their variances, were calculated using SUDAAN software version 11.0.0, a software package designed to account for the complex sampling design of NHIS.

Calculations of estimates excluded persons with missing information for ER visits or reasons for most recent ER visit. Reliability of estimates was evaluated using the relative standard error (RSE), which is the standard error divided by the point estimate. Estimates were considered reliable if the RSE was less than 30%. Statistical tests performed to assess the significance of differences between annual estimates were two-tailed tests with no adjustments made for multiple comparisons. The critical value used for two-sided tests at the 0.05 level of significance was 1.96.



[1]Significantly different from 2013 ($p < 0.05$).
[2]Includes adults with unknown health insurance coverage status.
[3]Significantly different from Medicaid in 2013 and 2014 for adults with one visit, two visits or more, or at least one visit to the emergency room in the past year ($p < 0.05$).
[4]Significantly different from uninsured in 2013 and 2014 for adults with at least one visit or two visits or more to the emergency room in the past year ($p < 0.05$).
[5]Significantly different from uninsured in 2013 and 2014 for adults with one visit, two visits or more, or at least one visit to the emergency room in the past year ($p < 0.05$).
SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Figure 1. Adults aged 18–64 with at least one visit to the emergency room in the past year, by number of visits, health insurance coverage status, and year: United States, 2013 and 2014

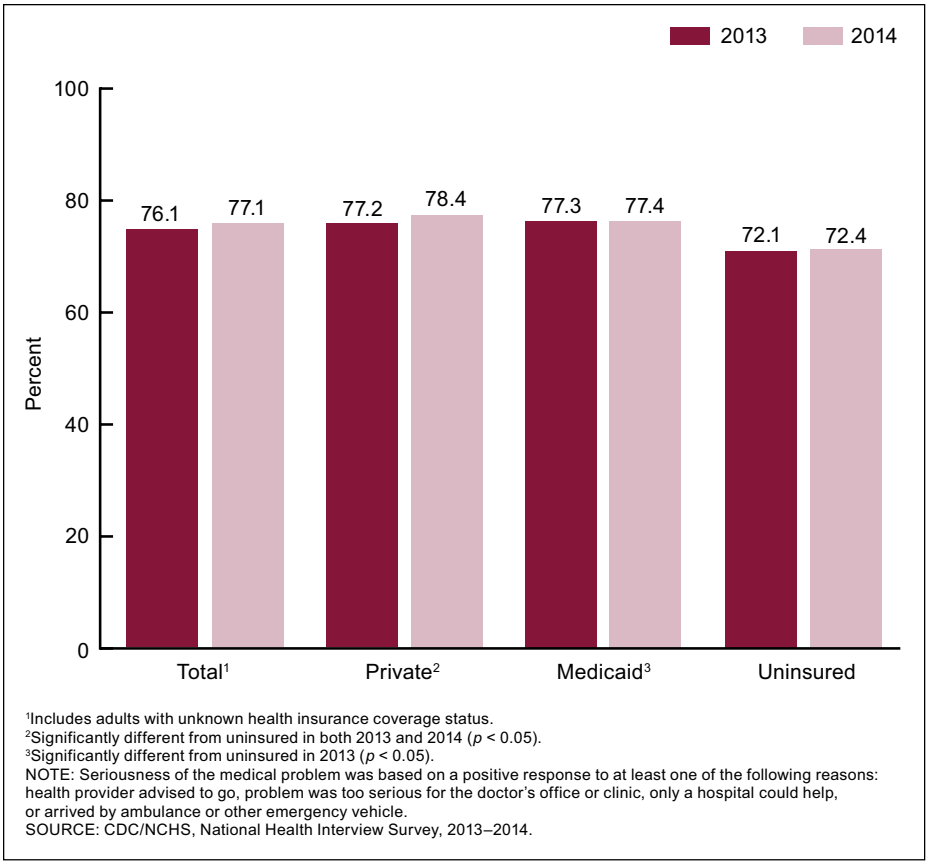
Results

Prevalence of ER use among adults aged 18–64

The percentage of adults aged 18–64 who had visited the ER one or more times in the past 12 months remained unchanged at approximately 18% in both 2013 and 2014 (Figure 1). In 2014, 14.3% of adults with private coverage visited the ER one or more times in the past 12 months, while 35.2% of adults with Medicaid and 16.6% of uninsured adults had visited the ER.

Among adults with private health insurance, the frequency of ER visits (one ER visit compared with two visits or more in the past 12 months) did not change between 2013 and 2014. The percentage of uninsured adults who used the ER two or more times decreased between 2013 and 2014, from 8.0% to 5.9%. (Note that between 2013 and 2014, the decrease in one ER visit in the past 12 months among adults with Medicaid, from 19.0% to 16.7%, was significant at $p < 0.1$ rather than $p < 0.05$.)

In both years, the prevalence of at least one ER visit in the last 12 months was significantly higher among adults with Medicaid (35.2% in 2014) than among uninsured adults (16.6% in 2014) or those with private health insurance (14.3% in 2014). Differences between uninsured adults and adults with private coverage were also significant. Similar relationships were observed when looking specifically at frequency of ER visits. In 2013 and 2014, adults with Medicaid had the highest prevalence of a single ER visit in the past 12 months (16.7% in 2014), compared with uninsured adults (10.7% in 2014) and adults with private health insurance (10.2% in 2014). In both years, adults with Medicaid had the highest prevalence of two or more ER visits in the past 12 months (18.5% in 2014), compared with uninsured adults (16.6% in 2014)



[1]Includes adults with unknown health insurance coverage status.
[2]Significantly different from uninsured in both 2013 and 2014 ($p < 0.05$).
[3]Significantly different from uninsured in 2013 ($p < 0.05$).
NOTE: Seriousness of the medical problem was based on a positive response to at least one of the following reasons: health provider advised to go, problem was too serious for the doctor's office or clinic, only a hospital could help, or arrived by ambulance or other emergency vehicle.
SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Figure 2. Adults aged 18–64 with a visit to the emergency room whose last visit was due to the seriousness of the medical problem, by year and health insurance coverage status: United States, 2013 and 2014

and adults with private health insurance (14.3% in 2014), with significant differences between uninsured adults and those with private health insurance.

Additional detail on overall ER use and frequency of ER visits within demographic subgroups by year is shown in Table 1. Within these demographic subgroups, no significant changes were observed in the percentage of adults using the ER between 2013 and 2014.

Differences in ER use by demographic characteristics were generally consistent in 2013 and 2014. In both years, younger adults aged 18–29 were more likely than adults aged 45–64 to have visited the ER one or more times in the past 12 months (20.2% compared with 17.5% in 2014). In 2014 only, adults aged 30–44 were less likely than adults aged 45–64 to have visited the ER in the past 12 months. In both 2013 and 2014, women were more likely to visit the ER than men. More than one-quarter of non-Hispanic black adults visited the ER in the past 12 months, compared with 17.5% of non-Hispanic white adults. Hispanic adults were less likely than non-Hispanic white adults to have visited the ER. Adults living in nonmetropolitan areas were more likely than adults living in metropolitan areas to have visited the ER in the past 12 months (21.6% compared with 17.4% in 2014).

Seriousness of the medical problem as the reason for the most recent ER visit

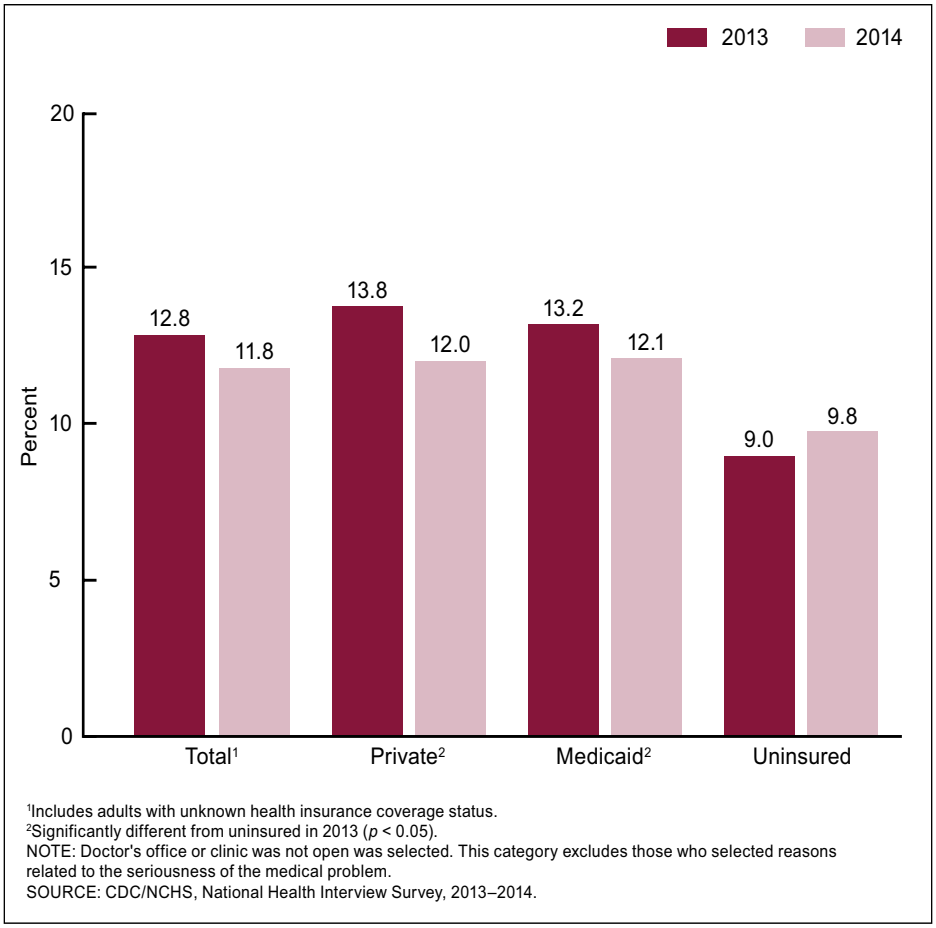
Seriousness of the medical problem was the reason for the most recent ER visit for approximately 77% of adults aged 18–64 who had visited the ER at least once in the past 12 months (Figure 2). There were no changes between 2013 and 2014 overall and within insurance coverage status. Uninsured adults (72.4%) were less likely than adults with private coverage (78.4%) and Medicaid (77.4%) to have seriousness of the medical problem as the reason for the most recent visit. (Note that in 2014, the difference between uninsured adults and adults with Medicaid was significant at $p < 0.1$ rather than $p < 0.05$.)

Table 2 provides more detail on the percentage of adults aged 18–64 with seriousness of the medical problem as the reason for the most recent ER visit, within demographic groups and by year. There was no significant change between 2013 and 2014 in any demographic subgroup. In both years, the seriousness of the medical problem as the reason for the most recent ER visit was significantly more common in some age groups (79.8% among those aged 45–64 compared with 73.7% among those aged 18–29), race groups (77.6% among non-Hispanic white adults compared with 73.0% among non-Hispanic black adults), and residential areas (78.5% of metropolitan residents compared with 70.4% of nonmetropolitan residents).

Doctor's office not open as the reason for the most recent ER visit

Figure 3 and Table 3 further explore reasons that adults used the ER at the most recent visit, focusing on those whose most recent visit to the ER was not because of the seriousness of the medical problem, but because the doctor's office or clinic was not open. Among adults aged 18–64 who used the ER in the past year, 11.8% indicated that the doctor's office or clinic was not open as the reason for their most recent ER visit (Figure 3). There were no significant changes between 2013 and 2014 overall and within health insurance coverage status. In 2013, the percentage of adults whose most recent visit to the ER was because the doctor's office wasn't open was lowest among the uninsured (9.0%), and did not differ significantly between adults with private coverage and adults with Medicaid (approximately 13%). In 2014, differences between uninsured adults and those with private coverage or Medicaid were no longer significant.

Table 3 provides more details on the percentage of adults aged 18–64 whose most recent ER visit was because the doctor's office was not open, by demographic characteristics and year. No changes were noted between 2013 and 2014 for any subgroups. In both



[1]Includes adults with unknown health insurance coverage status.
[2]Significantly different from uninsured in 2013 ($p < 0.05$).
NOTE: Doctor's office or clinic was not open was selected. This category excludes those who selected reasons related to the seriousness of the medical problem.
SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Figure 3. Adults aged 18–64 with a visit to the emergency room whose last visit was due to the doctor's office not being open, by year, health insurance coverage status, and demographic characteristics: United States, 2013 and 2014

years, adults living in nonmetropolitan areas were more likely than adults living in metropolitan areas to have indicated that their doctor's office was not open as the reason for the most recent ER visit (17.4% compared with 10.7% in 2014). Other subgroups with differences in the percentage indicating that the doctor's office was not open as the reason for the most recent ER visit included: adults aged 30–44 more so than adults aged 45–64 (2013), women more so than men (2014), and Hispanic adults less so than non-Hispanic white adults (2014).

Lack of access to other providers as the reason for the most recent ER visit

Figure 4 shows the percentage of adults whose last visit to the ER was due to lack of access to other providers, rather than the seriousness of the medical problem or that the doctor's office was not open. In 2014, for 7.0% of adults aged 18–64 who used the ER in the past year, lack of access to other providers was the reason for the most recent ER visit (7.8% in 2013) (Figure 4). There were no significant changes between 2013 and 2014 overall or by health insurance coverage status. In both years, a higher percentage of uninsured adults' last visit to the ER was due to lack of access to other providers (15.4%) compared with adults with private coverage (4.8%) or Medicaid (7.5%). In 2014 only, adults with Medicaid were more likely than adults with private coverage to have lack of access to other providers as the reason for the most recent ER visit.

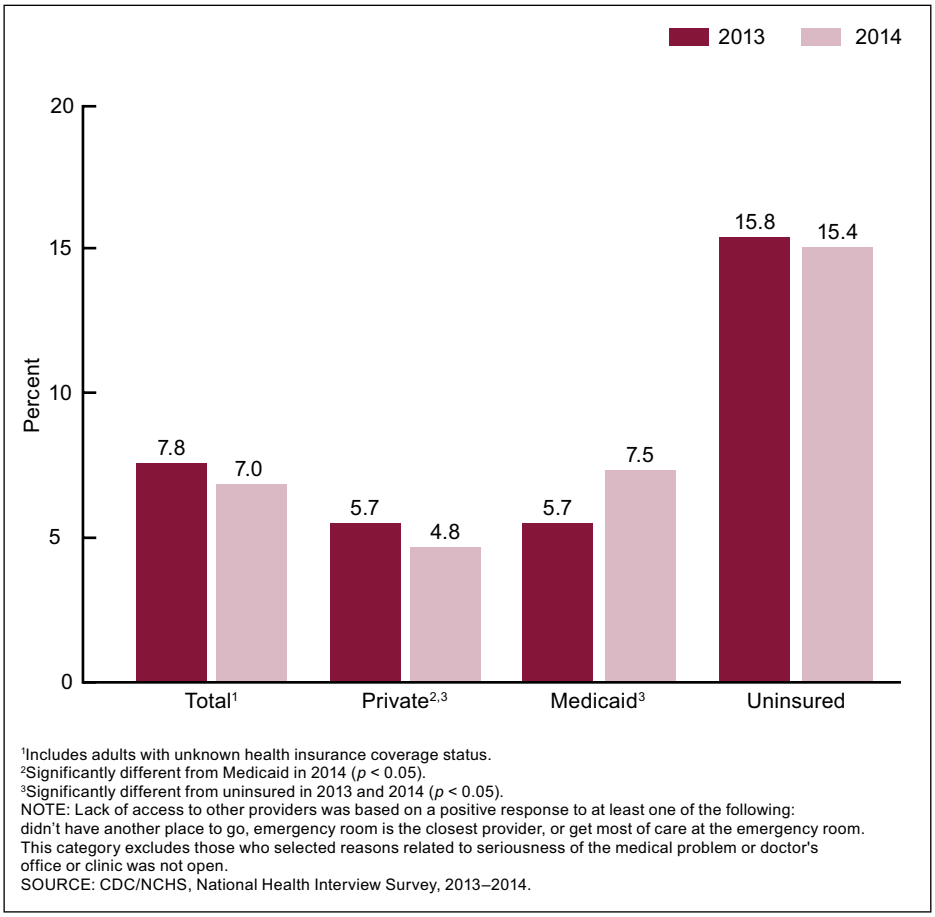
Table 4 provides more detail on the percentage of adults aged 18–64 for whom lack of access to other providers was the reason for the most recent ER visit, by demographic characteristics and year. In both years, the lack of access to other providers as the reason for the most recent ER visit was significantly more common in some age groups (7.4% among ages 30–44 compared with 4.8% among ages 45–64) and race groups (10.3% among non-Hispanic black adults compared with 6.0% among non-Hispanic white adults). In 2013 only, ER use at the most recent visit due to the lack of access to other providers was significantly less likely among women (compared with men) and more likely among younger adults aged 18–29 (compared with adults aged 45–64).

Associations between having one or more ER visits in the past 12 months, health insurance coverage status, year, and demographic factors among adults aged 18–64

After adjusting for demographic factors in the multivariable models, adults with Medicaid had almost four times the odds of one or more ER visits in the past 12 months compared with privately insured adults, but no difference when compared with uninsured and privately insured adults (Table 5). Interaction terms between insurance coverage status and age group, sex, and race and ethnicity were significant, indicating differential associations of these demographic characteristics with ER use by insurance type. Differences between 2013 and 2014 were not significant.

Uninsured younger adults aged 18–29 and those with private insurance had higher odds of an ER visit in the past 12 months than did adults in the oldest age group, 45–64 ($AOR_{private}$: 1.25, 95% CI: 1.11–1.40; $AOR_{uninsured}$: 1.36, 95% CI: 1.15–1.60). Women had increased odds of an ER visit in the past 12 months, with the largest effect observed among uninsured women ($AOR_{private}$: 1.17, 95% CI: 1.08–1.27; $AOR_{Medicaid}$: 1.41, 95% CI: 1.21–1.63; and $AOR_{uninsured}$: 1.52, 95% CI: 1.32–1.74).

Race and ethnicity continued to be associated with ER use, but the effects differed by insurance type. Privately insured non-Hispanic black adults and uninsured non-Hispanic black adults had higher odds of an ER visit than their non-Hispanic white counterparts, but



[1]Includes adults with unknown health insurance coverage status.
[2]Significantly different from Medicaid in 2014 ($p < 0.05$).
[3]Significantly different from uninsured in 2013 and 2014 ($p < 0.05$).
NOTE: Lack of access to other providers was based on a positive response to at least one of the following: didn't have another place to go, emergency room is the closest provider, or get most of care at the emergency room. This category excludes those who selected reasons related to seriousness of the medical problem or doctor's office or clinic was not open.
SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Figure 4. Adults aged 18–64 with a visit to the emergency room whose last visit was due to lack of access to other providers, by year, health insurance coverage status, and demographic characteristics: United States, 2013 and 2014

no difference was observed between non-Hispanic black adults and non-Hispanic white adults with Medicaid ($AOR_{private}$: 1.42, 95% CI: 1.25–1.60; $AOR_{Medicaid}$: 1.05, 95% CI: 0.86–1.25; and $AOR_{uninsured}$: 1.52, 95% CI: 1.27–1.81). Uninsured Hispanic adults and Hispanic adults with Medicaid had lower odds of an ER visit than their non-Hispanic white counterparts. No difference was observed between Hispanic adults and non-Hispanic white adults with private coverage ($AOR_{private}$: 0.93, 95% CI: 0.82–1.04; $AOR_{Medicaid}$: 0.63, 95% CI: 0.53–0.76; and $AOR_{uninsured}$: 0.64, 95% CI: 0.55–0.76).

Even after accounting for insurance type and other demographic factors, adults living in nonmetropolitan areas still had increased odds of ER use in the past 12 months (AOR: 1.18, 95% CI: 1.08–1.30).

Associations between reasons for most recent emergency room visit, health insurance coverage status, year, and demographic factors among adults aged 18–64 with an ER visit in the past 12 months

Seriousness of the medical problem

Even after adjusting for demographic factors in multivariable models, insurance status continued to be significantly associated with ER use at last visit due to the seriousness of the medical problem (Table 5). Among adults who had visited the ER in the past 12 months, adults with Medicaid had significantly higher odds of having the seriousness of the medical problem as the reason for the most recent ER visit than adults with private coverage (AOR: 1.59, 95% CI: 1.18–2.15). Uninsured adults had lower odds of having seriousness of the medical problem as the reason for the most recent ER visit than those with private coverage (AOR: 0.70, 95% CI: 0.51–0.95). Differences between 2013 and 2014 were not significant.

Interaction terms between insurance coverage status and age group and metropolitan status were significant, indicating differential associations of these demographic groups with ER use due to the seriousness of the medical problem by insurance type.

Among those with an ER visit in the last 12 months, younger adults aged 18–29 had lower odds of having seriousness of the medical problem as the reason for the most recent ER visit than did adults in the oldest age group, 45–64, and the strength of this association varied by insurance type ($AOR_{private}$: 0.76, 95% CI: 0.61–0.95; $AOR_{Medicaid}$: 0.37, 95% CI: 0.26–0.52; and $AOR_{uninsured}$: 0.69, 95% CI: 0.50–0.96). Non-Hispanic black adults were less likely than non-Hispanic white adults to have the seriousness of the medical problem as the reason for the most recent ER visit (AOR: 0.77, 95% CI: 0.65–0.91).

There were different degrees of association between metropolitan status and ER use due to the seriousness of the medical problem by insurance type. While adults living in nonmetropolitan areas generally had lower odds of having the seriousness of the medical problem as the reason for the most recent ER visit relative to those living in metropolitan areas, the strength and precision of this association varied by insurance type ($AOR_{private}$: 0.57, 95% CI: 0.45–0.72; $AOR_{Medicaid}$: 0.56, 95% CI: 0.42–0.76; and $AOR_{uninsured}$: 0.85, 95% CI: 0.60–1.23).

Doctor's office was not open

Among adults who had visited the ER in the past 12 months, adults with Medicaid (AOR: 0.55, 95% CI: 0.39–0.78) and uninsured adults (AOR: 0.62, 95% CI: 0.40–0.98) had lower odds of having the doctor's office not open as the reason for the most recent visit compared with adults who had private coverage, even after adjusting for demographic factors. Differences between 2013 and 2014 were not significant.

Interaction terms between insurance coverage status and age group were

significant, indicating differential associations of age groups with ER use due to the doctor's office not being open by insurance type. Adults aged 30–44 had higher odds of indicating that the doctor's office was not open as the reason for the most recent ER visit relative to the oldest age group (AOR: 1.45, 95% CI: 1.13–1.87). While younger adults with private coverage and older adults with private coverage had similar odds of indicating the doctor's office not being open as the reason for the most recent ER visit, young adults with Medicaid had significantly higher odds than older adults with Medicaid (AOR: 2.84, 95% CI: 1.90–4.25). Among adults with an ER visit in the past 12 months, adults living in nonmetropolitan areas were almost twice as likely to cite the doctor's office was not open as the reason for the most recent ER visit relative to those living in metropolitan areas (AOR: 1.80, 95% CI: 1.45–2.23).

Lack of access to other providers

Among adults who had visited the ER in the past 12 months, uninsured adults were more than twice as likely to have lack of access to other providers as the reason for the most recent ER visit to other providers than were adults with private insurance (AOR: 2.44, 95% CI: 1.64–3.64) and adults with Medicaid (AOR 2.11, 95% CI: 1.17–3.82, uninsured compared with Medicaid as referent, not shown in Table 5) after adjusting for demographic factors. Differences between 2013 and 2014 were not significant.

Interaction terms between insurance coverage status and sex and race were significant, indicating differential associations between sex and race with ER use due to lack of access to other providers by insurance type. Younger adults (aged 18–29 and 30–44) had higher odds of having lack of access to other providers as the reason for the most recent ER visit relative to the oldest age group (45–64). Women with private coverage had one-half the odds of men with private coverage of having lack of access to other providers as the reason for the most recent ER visit (AOR: 0.54, 95% CI: 0.39–0.75). In contrast, women with Medicaid and uninsured women had similar odds as their male counterparts.

Among adults with an ER visit in the past 12 months, privately insured and uninsured non-Hispanic black adults had approximately twice the odds of having lack of access to other providers as the reason for the most recent ER visit relative to non-Hispanic white adults ($AOR_{private}$: 2.03, 95% CI: 1.33–3.11; $AOR_{uninsured}$: 2.08, 95% CI: 1.35–3.21). However, no difference was observed between Hispanic and non-Hispanic white adults who had either private insurance or were uninsured. Among adults with Medicaid, there were no significant differences between non-Hispanic black, Hispanic, and non-Hispanic white adults in ER use due to lack of access to other providers.

Discussion

This report contributes to the evaluation of health insurance expansion and ER use nationwide by providing updated estimates on ER use and reasons for the most recent ER visit among U.S. adults aged 18–64. In both 2013 and 2014, about 18% of adults visited the ER, indicating that ER use overall has not changed significantly after the first full year of ACA implementation. Adults with Medicaid coverage continue to have higher rates of ER use than do privately insured and uninsured adults. While there were no changes in the percentages of adults with private coverage or Medicaid using the ER or in the frequency of their ER use between 2013 and 2014, there were changes among uninsured adults. The percentage of uninsured adults who used the ER two or more times decreased over time.

The existing studies on ER use have made it difficult to predict the impact of ACA implementation on ER use. Results from state-specific health insurance expansion programs have suggested that the rate of ER use could initially rise following ACA (18–20). Conversely, a geographically diverse study of young adults indicated that small downward shifts in ER use, and particularly, ER use for nonurgent visits, could be expected after expansion of private coverage under ACA (21). However, this nationwide analysis of adults' ER visits instead demonstrated little change in ER use during and immediately following ACA implementation.

Key insurance and demographic subgroups had higher rates of ER use. Consistent with results from other nationally representative surveys, this analysis found higher rates of ER use among adults with Medicaid (2), as well as among younger adults, non-Hispanic black adults, and women (27).

This report noted few changes in the reasons for the most recent ER visit between 2013 and 2014 among those who used the ER in the past 12 months. In both years, the seriousness of the medical problem was the reason for the most recent ER visit for approximately 77% of adults aged 18–64, while 12% visited because their doctor's office was not open, and 7% visited because of lack of access to other providers (an additional 4% did not select any of the reasons given). Adults with Medicaid were more likely to have the seriousness of the medical problem as the reason for the most recent ER visit than adults with private coverage or the uninsured. Adults with private coverage were more likely to indicate that the doctor's office was not open as the reason for the most recent ER visit than were adults with Medicaid and uninsured adults. Uninsured adults were more likely than adults with private coverage or Medicaid to have lack of access to providers other than the ER as the reason for the most recent ER visit, rather than a medical emergency or an inability to see a regular provider.

The finding that adults with Medicaid were more likely than adults with private coverage to have the seriousness of the medical problem as the reason for the most recent ER visit contrasts what has been observed in reviews of the literature (28) and in other national surveys. Data from the 2011 National Hospital Ambulatory Care Survey indicated that adults with Medicaid were less likely than adults with private coverage to have visits to the ER classified as emergent or urgent (7,27). This contrast could reflect differences over time (2011 compared with 2013–2014) or statistical methodology (adjusted compared with unadjusted analyses). Also contributing to this difference may be the disagreement between patients' self-reported seriousness of the medical problem and ER providers' perception and subsequent

recording of the medical urgency of the visit (29).

In this report, uninsured adults were less likely than adults with private coverage to have the seriousness of the medical problem as the reason for the most recent ER visit and more likely to have lack of access to other providers as the reason for the most recent ER visit. Previous results in this area have been mixed (28), but other analyses have indicated that uninsured adults are more likely than adults with private coverage to use the ER as a usual source of care (30).

While insurance type is strongly associated with reasons for the most recent ER visit, even after accounting for insurance type, some demographic groups had noticeably higher likelihoods of visiting the ER for each of these three reasons. The demographic subgroups identified in this report as most likely to visit the ER for certain reasons were largely consistent with those identified in other studies in the United States. For example, in this analysis, younger adults were less likely than older adults to have the seriousness of the medical problem as the reason for the most recent ER visit and more likely to visit due to lack of access to other providers. As noted in a 2013 review article, several studies have indicated that younger adults were more likely to have nonurgent visits than older adults (28). Non-Hispanic black adults were less likely to have the seriousness of the medical problem as the reason for the most recent ER visit and more likely to visit due to lack of access to other providers compared with non-Hispanic white adults, although this was not consistent across all insurance coverage groups. Similarly, the evidence for this association in other studies has been mixed (28). Adults living in nonmetropolitan areas were less likely to have the seriousness of the medical problem as the reason for the most recent ER visit, consistent with other studies that have found lower rates of hospital admission among adults in nonmetropolitan areas compared with adults in metropolitan areas (27,31). While men in this analysis were more likely than women to have lack of access to other providers as the reason for the most recent ER visit, this was not consistent across all insurance coverage groups. Similarly, the evidence for this association in the literature has been mixed (28).

This analysis identified adults with Medicaid, uninsured adults, and adults living in metropolitan areas as less likely to indicate that the doctor's office was not open as the reason for the most recent ER visit. Adults with Medicaid and uninsured adults are less likely to have a doctor's office or clinic as a usual source of care than adults with private coverage (30), so it is possible that this question captures a general lack of access to medical providers for these groups rather than the specific need to seek services at a time when offices are closed. The difference between adults living in nonmetropolitan areas and adults in metropolitan areas in ER use due to a doctor's office not being open may reflect more difficulty accessing physicians in nonmetropolitan areas (30,32).

To estimate reasons for adult ER use that are generalizable at the national level, this report uses NHIS, which has a nationally representative sample of the civilian resident population. The large household sample size and a wide range of demographic characteristics allow for a detailed examination of population subgroups. However, this report is not without some limitations. There is the potential for misclassification of the health insurance coverage associated with an ER visit because information collected on ER use refers to visits in the previous 12 months, while type of insurance is classified based on coverage during the time of the interview. In addition, reasons for ER visits were asked regarding the respondent's most recent ER visit. It is possible that results are subject to recall bias and overestimate the prevalence of seriousness, as some respondents may recall and report an ER visit that was serious even if it was not the most recent. The hierarchical classification of reason for visit used in this report is an approximation of avoidable and nonavoidable reasons for ER use. Other researchers interested in using these data may choose alternate classification systems (33).

ER use, whether appropriate or inappropriate, is an expensive source of care. This report examined the prevalence of ER use and reasons for ER use in NHIS during and after ACA implementation. The findings indicate that so far, there have been no changes over time, and disparities between groups persist. Continued monitoring of ER use by insurance coverage status and by demographic subgroups may help identify influential factors that can be addressed to reduce inappropriate ER use and ER use overall. In future studies, additional factors influencing ER use, such as family income and new receipt of insurance coverage, may be incorporated. Changes to the demographic composition of the privately insured, adults with Medicaid, and uninsured adults may also be incorporated into this monitoring.

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Table 1. Adults aged 18–64 with at least one visit to the emergency room, by year, number of visits, and selected characteristics: United States, 2013 and 2014

Selected demographic	2013				2014			
	Zero visits	One or more visits	One visit	Two or more visits	Zero visits	One or more visits	One visit	Two or more visits
	Percent (standard error)							
Total	81.8 (0.32)	18.2 (0.32)	11.4 (0.26)	6.8 (0.21)	82.0 (0.34)	18.0 (0.34)	11.4 (0.27)	6.6 (0.23)
Health insurance coverage status								
Private	86.0 (0.36)	14.0 (0.36)	10.2 (0.31)	3.8 (0.19)	85.6 (0.39)	14.4 (0.39)	10.2 (0.33)	4.1 (0.25)
Medicaid	62.3 (1.15)	37.7 (1.15)	19.0 (0.96)	18.7 (0.94)	64.8 (1.15)	35.2 (1.15)	16.7 (0.84)	18.5 (0.85)
Uninsured	81.5 (0.68)	18.5 (0.68)	10.5 (0.50)	8.0 (0.52)	83.4 (0.72)	16.6 (0.72)	10.7 (0.62)	†5.9 (0.45)
Age group								
18–29	79.6 (0.69)	20.4 (0.69)	12.8 (0.58)	7.6 (0.47)	79.8 (0.76)	20.2 (0.76)	12.4 (0.59)	7.8 (0.57)
30–44	83.0 (0.53)	17.0 (0.53)	10.6 (0.42)	6.4 (0.35)	83.2 (0.56)	16.8 (0.56)	10.9 (0.44)	5.9 (0.36)
45–64	82.3 (0.48)	17.7 (0.48)	11.1 (0.37)	6.5 (0.30)	82.5 (0.47)	17.5 (0.47)	11.1 (0.39)	6.4 (0.30)
Sex								
Male	84.2 (0.43)	15.8 (0.43)	10.6 (0.37)	5.3 (0.28)	84.0 (0.45)	16.0 (0.45)	11.2 (0.39)	4.8 (0.26)
Female	79.6 (0.45)	20.4 (0.45)	12.2 (0.35)	8.2 (0.31)	80.1 (0.48)	19.9 (0.48)	11.6 (0.35)	8.3 (0.37)
Race and ethnicity								
Non-Hispanic white	82.2 (0.41)	17.8 (0.41)	11.5 (0.34)	6.3 (0.27)	82.5 (0.43)	17.5 (0.43)	11.4 (0.36)	6.1 (0.30)
Non-Hispanic black	74.6 (0.94)	25.4 (0.94)	14.1 (0.75)	11.3 (0.61)	73.5 (0.93)	26.5 (0.93)	15.1 (0.77)	11.4 (0.68)
Hispanic	83.9 (0.63)	16.1 (0.63)	10.3 (0.53)	5.8 (0.42)	84.3 (0.64)	15.7 (0.64)	10.0 (0.54)	5.6 (0.40)
Residence								
Metropolitan	82.5 (0.34)	17.5 (0.34)	11.2 (0.28)	6.4 (0.22)	82.6 (0.37)	17.4 (0.37)	11.2 (0.29)	6.2 (0.25)
Nonmetropolitan	78.0 (0.93)	22.0 (0.93)	12.8 (0.70)	9.2 (0.65)	78.4 (0.82)	21.6 (0.82)	12.7 (0.70)	8.9 (0.57)

†Significantly different from 2013 ($p < 0.05$).

NOTES: Adults with unknown health insurance coverage status are included in the totals. Adults who are of race and ethnicity groups other than non-Hispanic white, non-Hispanic black, and Hispanic are included in the totals but are not shown separately.

SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Table 2. Adults aged 18–64 with a visit to the emergency room whose last visit was due to the seriousness of the medical problem, by year and selected characteristics: United States, 2013 and 2014

Selected demographic	2013	2014
	Percent (standard error)	
Total	76.1 (0.84)	77.1 (0.84)
Health insurance coverage status		
Private	77.2 (1.13)	78.4 (1.12)
Medicaid	77.3 (1.76)	77.4 (1.55)
Uninsured	72.1 (1.86)	72.4 (2.30)
Age group		
18–29	71.5 (1.66)	73.7 (1.70)
30–44	74.1 (1.46)	76.8 (1.46)
45–64	80.7 (1.09)	79.8 (1.19)
Sex		
Male	74.4 (1.32)	78.0 (1.30)
Female	77.3 (0.97)	76.5 (1.04)
Race and ethnicity		
Non-Hispanic white	76.8 (1.07)	77.6 (1.12)
Non-Hispanic black	72.2 (1.96)	73.0 (1.94)
Hispanic	77.1 (1.80)	80.6 (1.69)
Residence		
Metropolitan	77.5 (0.90)	78.5 (0.90)
Nonmetropolitan	68.9 (2.37)	70.4 (2.15)

NOTES: Seriousness of the medical problem was based on a positive response to at least one of the following reasons: health provider advised to go, problem was too serious for the doctor's office or clinic, only a hospital could help, or arrived by ambulance or other emergency vehicle. Adults with unknown health insurance coverage status are included in the totals. Adults who are of race and ethnicity groups other than non-Hispanic white, non-Hispanic black, and Hispanic are included in the totals but are not shown separately.

SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Table 3. Adults aged 18–64 with a visit to the emergency room whose last visit was due to the doctor's office not being open, by year and selected characteristics: United States, 2013 and 2014

Selected demographic	2013	2014
	Percent (standard error)	
Total	12.8 (0.68)	11.8 (0.63)
Health insurance coverage status		
Private	13.8 (0.88)	12.0 (0.85)
Medicaid	13.2 (1.54)	12.1 (1.16)
Uninsured	9.0 (1.18)	9.8 (1.58)
Age group		
18–29	13.8 (1.31)	13.0 (1.20)
30–44	14.6 (1.21)	12.3 (1.17)
45–64	10.9 (0.90)	10.6 (0.88)
Sex		
Male	12.5 (1.02)	9.9 (0.89)
Female	13.1 (0.83)	13.3 (0.83)
Race and ethnicity		
Non-Hispanic white	13.6 (0.91)	12.5 (0.86)
Non-Hispanic black	11.9 (1.24)	12.3 (1.35)
Hispanic	10.8 (1.38)	9.5 (1.31)
Residence		
Metropolitan	11.6 (0.70)	10.7 (0.65)
Nonmetropolitan	19.0 (1.99)	17.4 (1.83)

NOTES: For this response option, doctor's office or clinic was not open was selected and none of the reasons related to seriousness of the medical problem were selected. Adults with unknown health insurance coverage status are included in the totals. Adults who are of race and ethnicity groups other than non-Hispanic white, non-Hispanic black, and Hispanic are included in the totals but are not shown separately.

SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Table 4. Adults aged 18–64 with a visit to the emergency room whose last visit was due to reasons of lack of access to other providers, by year and selected characteristics: United States, 2013 and 2014

Selected demographic	2013	2014
	Percent (standard error)	
Total	7.8 (0.50)	7.0 (0.50)
Health insurance coverage status		
Private	5.7 (0.65)	4.8 (0.58)
Medicaid	5.7 (0.93)	7.5 (1.06)
Uninsured	15.8 (1.39)	15.4 (1.83)
Age group		
18–29	10.9 (1.15)	9.8 (1.27)
30–44	7.8 (0.81)	7.4 (0.86)
45–64	5.7 (0.63)	4.8 (0.59)
Sex		
Male	9.3 (0.83)	7.8 (0.84)
Female	6.7 (0.61)	6.4 (0.58)
Race and ethnicity		
Non-Hispanic white	6.9 (0.63)	6.0 (0.59)
Non-Hispanic black	12.1 (1.41)	10.3 (1.33)
Hispanic	7.3 (1.15)	6.2 (1.05)
Residence		
Metropolitan	7.8 (0.55)	6.8 (0.57)
Nonmetropolitan	7.9 (1.20)	8.0 (1.12)

NOTES: Lack of access to other providers was based on a positive response to at least one of the following: didn't have another place to go, emergency room is the closest provider, or get most of care at the emergency room. This category excludes those who selected reasons related to seriousness of the medical problem or doctor's office or clinic was not open. Adults with unknown health insurance coverage status are included in the totals. Adults who are of race and ethnicity groups other than non-Hispanic white, non-Hispanic black, and Hispanic are included in the totals but are not shown separately.

SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

Table 5. Adjusted odds ratios for any ER visit and reason for last ER visit among adults aged 18–64 with a visit to the emergency room: United States, 2013 and 2014

	Any ER visit		Reason for visit					
			Seriousness[1]		Doctor's office not open[2]		Lack of access[3]	
Selected characteristic	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI
Health insurance coverage status								
Private[4]	1.00	…	1.00	…	1.00	…	1.00	…
Medicaid	†3.65	3.06–4.36	†1.59	1.18–2.15	†0.55	0.39–0.78	1.16	0.67–2.00
Uninsured	1.13	0.95–1.34	†0.70	0.51–0.95	†0.62	0.40–0.98	†2.44	1.64–3.64
Other coverage	…	…	0.76	0.56–1.03	†1.46	1.03–2.07	1.24	0.67–2.29
Year								
2013[4]	1.00	…	1.00	…	1.00	…	1.00	…
2014	0.97	0.92–1.04	1.05	0.92–1.19	0.90	0.77–1.06	0.94	0.77–1.16
Age group								
18–29[4]	…	…	…	…	…	…	†1.91	1.45–2.50
30–44	…	…	…	…	†1.45	1.13–1.87	†1.40	1.08–1.81
45–64	…	…	…	…	1.00	…	1.00	…
Sex								
Male[4]	…	…	1.00	…	1.00	…	…	…
Female	…	…	1.07	0.94–1.22	1.17	0.99–1.38	…	…
Race and ethnicity								
Non-Hispanic white[4]	…	…	1.00	…	1.00	…	…	…
Non-Hispanic black	…	…	†0.77	0.65–0.91	0.98	0.79–1.21	…	…
Hispanic	…	…	1.12	0.93–1.35	0.85	0.67–1.10	…	…
Residence								
Metropolitan[4]	1.00	…	…	…	1.00	…	1.00	…
Nonmetropolitan	†1.18	1.08–1.30	…	…	†1.80	1.45–2.23	1.02	0.78–1.33
Selected interactions								
Private, 18–29 vs. private, 45–64	†1.25	1.11–1.40	†0.76	0.61–0.95	1.10	0.83–1.44	…	…
Medicaid, 18–29 vs. Medicaid, 45–64	0.95	0.82–1.17	†0.37	0.26–0.52	†2.84	1.90–4.25	…	…
Uninsured, 18–29 vs. uninsured, 45–64	†1.36	1.15–1.60	†0.69	0.50–0.96	1.48	0.86–2.55	…	…
Private, female vs. private, male	†1.17	1.08–1.27	…	…	…	…	†0.54	0.39–0.75
Medicaid, female vs. Medicaid, male	†1.41	1.21–1.63	…	…	…	…	1.13	0.68–1.87
Uninsured, female vs. uninsured, male	†1.52	1.32–1.74	…	…	…	…	0.88	0.64–1.21
Private, non-Hispanic black vs. private, non-Hispanic white	†1.42	1.25–1.60	…	…	…	…	†2.03	1.33–3.11
Medicaid, non-Hispanic black vs. Medicaid, non-Hispanic white	1.05	0.86–1.25	…	…	…	…	0.71	0.43–1.18
Uninsured, non-Hispanic black vs. uninsured, non-Hispanic white	†1.52	1.27–1.81	…	…	…	…	†2.08	1.35–3.21
Private, Hispanic vs. private, non-Hispanic white	0.93	0.82–1.04	…	…	…	…	0.60	0.35–1.03
Medicaid, Hispanic vs. Medicaid, non-Hispanic white	†0.63	0.53–0.76	…	…	…	…	0.61	0.35–1.06
Uninsured, Hispanic vs. uninsured, non-Hispanic white	†0.64	0.55–0.76	…	…	…	…	0.89	0.56–1.40
Private, nonmetropolitan vs. private, metropolitan	…	…	†0.57	0.45–0.72	…	…	…	…
Medicaid, nonmetropolitan vs. Medicaid, metropolitan	…	…	†0.56	0.42–0.76	…	…	…	…
Uninsured, nonmetropolitan vs uninsured, metropolitan	…	…	0.85	0.60–1.23	…	…	…	…

… Category not applicable.

†Significantly different from reference ($p < 0.05$).

[1]Reasons related to seriousness were based on a positive response to at least one of the following reasons: health provider advised to go, problem was too serious for the doctor's office or clinic, only a hospital could help, or arrived by ambulance or other emergency vehicle.

[2]The reason doctor's office or clinic was not open was selected, and any reasons related to seriousness were not selected.

[3]Reasons related to access were based on a positive response to at least one of the following: didn't have another place to go, emergency room is the closest provider, or get most of care at the emergency room. Groups are mutually exclusive from those that selected reasons related to seriousness or doctor's office or clinic was not open.

[4]Reference group.

NOTES: Adults with other types of health insurance coverage and adults of other non-Hispanic races are included in the model, but results for these groups are not shown separately. ER is emergency room; CI is confidence interval.

SOURCE: CDC/NCHS, National Health Interview Survey, 2013–2014.

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road, Room 5419
Hyattsville, MD 20782–2064

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