National Study of Health Insurance Type and Reasons for Emergency Department Use

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BACKGROUND: The rates of emergency department (ED) utilization vary substantially by type of health insurance, but the association between health insurance type and patient-reported reasons for seeking ED care is unknown.

OBJECTIVE: We evaluated the association between health insurance type and self-perceived acuity or access issues among individuals discharged from the ED.

DESIGN, PATIENTS: This was a cross-sectional analysis of the 2011 National Health Interview Survey. Adults whose last ED visit did not result in hospitalization (n= 4,606) were asked structured questions about reasons for seeking ED care. We classified responses as 1) perceived need for immediate evaluation (acuity issues), or 2) barriers to accessing outpatient services (access issues).

MAIN MEASURES: We analyzed survey-weighted data using multivariable logistic regression models to test the association between health insurance type and reasons for ED visits, while adjusting for sociodemographic characteristics.

KEY RESULTS: Overall, 65.0 % (95 % CI 63.0–66.9) of adults reported ≥ 1 acuity issue and 78.9 % (95 % CI 77.3–80.5) reported ≥ 1 access issue. Among those who reported no acuity issue leading to the most recent ED visit, 84.2 % reported ≥ 1 access issue. Relative to those with private insurance, adults with Medicaid (OR 1.05; 95 % CI 0.79–1.40) and those with Medicare (OR 0.98; 95 % CI 0.66–1.47) were similarly likely to seek ED care due to an acuity issue. Adults with Medicaid (OR 1.50; 95 % CI 1.06–2.13) and Medicaid + Medicare (dual eligible) (OR 1.94; 95 % CI 1.18–3.19) were more likely than those with private insurance to seek ED care for access issues.

CONCLUSION: Variability in reasons for seeking ED care among discharged patients by health insurance type may be driven more by lack of access to alternate care, rather than by differences in patient-perceived acuity. Policymakers should focus on increasing access to alternate sites of care, particularly for Medicaid beneficiaries, as well as strategies to increase care coordination that involve ED patients and providers.

J Gen Intern Med 29(4):621–7

DOI: 10.1007/s11606-013-2734-4

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Presentation *Abstract Presentation at 2013 Society for Academic Emergency Medicine National Meeting. Atlanta, GA, 15 May 2013.*

Electronic supplementary material *The online version of this article (doi:10.1007/s11606-013-2734-4) contains supplementary material, which is available to authorized users.*

Received May 25, 2013
Revised October 18, 2013
Accepted December 2, 2013
Published online December 24, 2013

INTRODUCTION

A large and increasing proportion of patients seek care in U.S. emergency departments (EDs).[1] Patients present to the ED for many reasons; some for acute medical care services that they believe require immediate evaluation and others for care that cannot be provided in a timely manner in alternate venues. The latter is often due to barriers to accessing health care services and represent conditions that may be adequately treated in primary care or other outpatient settings if timely access were available (i.e., potentially ED avoidable visits).[2–6]

According to Tang and colleagues, adults with Medicaid insurance accounted for a disproportionately large increase in the overall number of ED visits from 1997 to 2007.[1] Furthermore, a majority of those ED visits could have potentially taken place in the primary care provider's office.[1] Subsequent studies have identified differences in primary care access relating to type of health insurance. Specifically, patients with Medicaid or no insurance were more likely to face barriers to accessing primary care services when compared with adults with private insurance.[3,7,8]

Policymakers and payers have expressed concerns about the increase in potentially avoidable ED visits and the costs associated with those visits. Medicaid beneficiaries use emergency services more than privately insured patients (5.6 visits per 100 beneficiaries compared with 3.6 visits per 100 privately insured individuals).[9] This will grow in importance with the implementation of the Affordable Care Act (ACA), which estimates that up to 21 million additional Americans will enroll in the Medicaid program by 2022.[10] Few studies have examined ED use from the patient's

perspective—specifically, to determine whether ED use is related to perceived need for immediate medical evaluation or perceived barriers in accessing outpatient care.

Our study uses the National Health Interview Survey (NHIS) to evaluate the association between health insurance type and self-perceived acuity or self-perceived access issues among individuals who were discharged from the ED. We hypothesized that patients with Medicaid insurance were more likely than those with private insurance to use the ED primarily because of access issues, rather than a perceived acuity issues.

MATERIALS AND METHODS

Study Design and Setting

The 2011 National Health Interview Survey (NHIS) is a cross-sectional household telephone interview survey representative of the non-institutionalized U.S. civilian population. This study was approved by the Colorado Multiple Institutional Review Board as an exempt study. Details of the NHIS methods are described elsewhere.[11,12] Briefly, the sample is obtained annually using a multistage probability design with oversampling of certain racial/ethnic minorities (i.e., Black, Asian, and Hispanic persons) and older adults, and obtains a response rate of > 80 % of all eligible households sampled. The NHIS uses a two-stage probability sampling strategy, with the primary sampling unit being county, small groups of continuous counties, or Metropolitan Statistical Areas (381 concise geographic regions defined by the U.S. Office of Management and Budget and Census Bureau as having at least one urban core of at least 50,000 population). The second stage units are composed of eight to 16 addresses within the primary sampling units.

For the year 2011, the NHIS collected household data, including demographics, health status, and health care use, for 32,737 adults (≥ 18 years), representing 230 million national adult population. Our primary analysis was limited to those who had one or more ED visit within the previous 12 months and the most recent visit did not result in hospital admission (n=4,606); this represents 32 million adults nationally. Because the visits resulting in hospital admission were unlikely to be avoidable, the NHIS asked the reasons for seeking emergency care only to adults who were discharged after their most recent ED visit.

Variables

Visits related to acuity were defined as answering ‘yes’ to one of more of the following survey questions: only hospital could help, advised by health provider to go to ED, or problem too serious for doctor’s office or clinic. Visits related to access were defined as adults answering ‘yes’ to one or more of the following: didn’t have another place to go, doctor’s office or clinic not open, ED is the closest provider, or ED is usual place to get care. These categories of acuity and access were not validated, but were grouped in this manner based on the authors’ clinical experiences and consultations with other local health policy experts.

The primary predictor that we explored was health insurance type. We considered adults who reported private insurance as their primary insurance type as having private insurance; those reporting Medicare with supplemental private insurance as having Medicare + private; those reporting Medicare and Medicaid were considered to be dual-eligible (Medicare + Medicaid). Adults who reported having Medicare alone were considered to have Medicare, while those having Medicaid alone were considered to have Medicaid. Adults who reported having insurance other than private, Medicare, or Medicaid were labeled as having an “other” type of insurance. Adults reporting no current health insurance were considered uninsured. We defined public insurance as patients who had Medicare, Medicaid, or both.

Other covariates included age, sex, race/ethnicity, U.S. census region, education status, defined source of primary care (based on response to the question “Is there a place that you usually go to when you are sick or need advice about your health”), and self-reported health status. The latter was obtained from the survey question: “Would you say your health in general is excellent, very good, good, fair or poor?”

Outcomes

The stated reason for seeking ED care was the dependent variable in our analyses. These reasons were classified as perceived need for immediate evaluation (acuity) or barriers to accessing other outpatient sources of care (access).

Statistical Analysis

Survey commands were used to account for the complex survey design and to weight the sample in order to provide national estimates. The descriptive analysis included prevalence with 95 % confidence intervals (CIs). Missing data were dropped from the analysis when representing less than 2 % of observations. We used multivariable logistic regression analysis to adjust the primary associations for age, sex, race/ethnicity, U.S. census region, education status, defined source of primary care, and health condition. A two-tailed P-value

less than 0.05 was considered statistically significant. We performed the statistical analysis using commercially available software (STATA 12.1, StataCorp LP, College Station, TX), according to NHIS instructions.[11]

RESULTS

ED Visits for U.S. Adults

Overall, 20.3 % (95 % CI 19.7–20.8) of U.S. adults had at least one ED visit in the previous 12 months; and of the adults, 31.1 % (95 % CI 29.8–32.4) of these reported being admitted to the hospital, while 68.9 % (95 % CI 67.6–70.2) reported being discharged (treated and released) on their most recent ED visit. Stratification of ED utilization and disposition by characteristics are presented in Table 1. Non-Hispanic black adults, those with less than high school education, and those with Medicaid insurance (with or without Medicare) had the highest percentages of ED utilization. When compared to all other insurance types, adults with Medicaid were more likely to be discharged home after the most recent ED visit when compared with individuals who had other insurance types; while adults who had both Medicare and Medicaid were more likely to be admitted to the hospital after their most recent ED visit.

ED Visits Related to Acuity Issues

An estimated 65.0 % (95 % CI 63.0–66.9) of all adults cited one or more acuity issues as a reason for seeking ED care. Overall, 55.4 % (95 % CI 53.4–57.3) of adults stated only a hospital could help, 19.4 % (95 % CI 17.9–21.1) stated they were advised by a health care provider to go to the ED, and 42.6 % (95 % CI 40.6–44.6) of adults stated their problem was too serious for doctor's office/clinic (Appendix Table 1, available online). Adults with private insurance, Medicare, and Medicaid reported similar percentages of seeking ED care because of acuity issues, while uninsured adults were less likely to report perceived acuity as the reason for the visit (Fig. 1). In the adjusted analysis, adults with Medicare (OR 0.98, 95 % CI 0.66–1.47) or with Medicaid (OR 1.05, 95 % CI 0.79–1.40) had no significant differences in perceived acuity compared to those with private insurance (Table 2). Addition of the presence of one or more access issues as a covariate in the acuity model did not substantially change the odds ratios of each insurance type (Table 3).

ED Visits Related to Access Issues

An estimated 78.9 % (95 % CI 77.3–80.5) of U.S. adults cited access issues as reasons for seeking ED care. Overall, 46.3 % (95 % CI 44.2–48.4) of adults did not have a place to go, 49.3 % (95 % CI 47.4–51.1) said the doctor's office/clinic was not open, 45.9 % (95 % CI 43.7–48.0) said ED is the closest provider, and 16.1 % (95 % CI 14.7–17.6) said the ED is their usual source of care (Appendix Table 2, available online). There was variability in adults seeking ED care because of access issues by health insurance type with Medicaid (with or without Medicare) and the uninsured reporting the highest rate of access issues (Fig. 1). Adults with Medicaid had higher percentages than those with private insurance to: have no other place to go, state the doctor's office/clinic was not open, and report the ED as their usual place of care (Appendix Table 2, available online). In the adjusted analysis, adults with Medicare and Medicaid (OR 1.94, 95 % CI 1.18–3.19), Medicaid only (OR 1.50, 95 % CI 1.06–2.13), and uninsured (OR 1.45, 95 % CI 1.08–1.96) were more likely to seek ED care because of one or more access issues when compared to those with private insurance (Table 2). Addition of the presence one or more acuity issues as a covariate in the access model did not substantially change these results (Table 3).

ED Visits Related to Access Issues Without Acuity Issues

Of adults who did not report an acuity issue, 84.2 % reported an access issue. In the adjusted analysis, adults with Medicare and Medicaid had odds ratios of 1.47 (95 % CI 0.59–3.63) and 1.53 (95 % CI 0.74–3.18), respectively, when compared with those who have private insurance, although these exploratory comparisons were not statistically significant (Table 2).

ED Visits Related to Acuity Issues Without Access Issues

Overall, of all individuals who did not report an access issue, 73.6 % reported one or more acuity issues. The odds ratios for health insurance type were similar to those reported for the overall acuity models, suggesting little interaction between health insurance type and acuity issues (Table 2). Only 5.9 % (95 % CI 5.1–6.8) of adults discharged after their most recent ED visit reported neither acuity issues nor access issues.

DISCUSSION

In this study, we evaluated the patient's perspective and reasons as to why they seek emergency care. We found that variability by health insurance type in reasons for seeking

Table 1. Characteristics of 2011 National Health Interview Survey Participants by Emergency Department Visit Status in the Past 12 months

Characteristics	No ED visit (*n*=25,868) Weighted % (95 %CI)	Last ED visit—admitted (*n*=2,263) Weighted % (95 %CI)	Last ED visit—not admitted (*n*=4,606) Weighted % (95 %CI)
Total	79.8 (79.2–80.3)	6.3 (6.0–6.6)	13.9 (13.45–14.4)
Demographic characteristics			
Age, years			
18–34	30.3 (29.5–31.2)	22.8 (20.6–25.1)	38.0 (36.0–40.1)
35–49	27.1 (26.5–27.8)	19.6 (17.5–21.9)	25.7 (24.1–27.3)
50–64	26.1 (25.5–26.8)	25.4 (23.1–27.8)	22.3 (20.9–23.8)
≥65	16.4 (15.9–17.0)	32.3 (30.1–34.6)	14.0 (12.9–15.2)
Female sex	50.1 (49.4–50.9)	57.6 (55.2–60.0)	57.1 (55.4–58.8)
Race/ethnicity			
Non-hispanic white	68.6 (67.7–69.5)	65.9 (63.5–68.3)	67.8 (66.1–69.5)
Non-hispanic black	10.7 (10.1–11.3)	16.4 (14.6–18.3)	16.3 (15.0–17.6)
Hispanic	14.4 (13.8–15.1)	14.1 (12.5–15.9)	12.5 (11.4–13.8)
Non-hispanic asian	5.5 (5.2–5.9)	2.7 (2.0–3.6)	2.0 (1.7–2.5)
Other	0.8 (0.6–1.0)	0.9 (0.6–1.6)	1.4 (1.0–2.0)
Census region			
Northeast	17.9 (17.2–18.7)	17.5 (15.8–19.4)	18.6 (17.3–20.0)
Midwest	22.9 (22.0–23.9)	23.0 (21.0–25.0)	23.8 (22.1–25.5)
South	35.1 (34.2–36.1)	39.2 (36.7–41.8)	37.2 (35.2–39.2)
West	24.1 (23.2–25.0)	20.3 (18.4–22.4)	20.5 (18.9–22.1)
Education			
< High school graduate	13.1 (12.5–13.7)	21.8 (19.8–24.0)	18.0 (16.6–19.5)
High school graduate	25.9 (25.1–26.7)	30.6 (28.4–32.9)	29.0 (27.3–30.8)
≥ Some college	61.1 (60.1–62.0)	47.6 (45.2–50.0)	53.0 (51.1–54.9)
Access to healthcare			
Health insurance type			
Any private	57.0 (56.1–57.9)	32.0 (29.7–34.5)	44.3 (42.4–46.3)
Medicare + Private	8.6 (8.2–9.1)	16.7 (14.9–18.7)	7.8 (7.0–8.8)
Medicare + Medicaid	1.5 (1.4–1.7)	6.4 (5.3–7.6)	2.6 (2.2–3.2)
Medicare only (+/−other)	7.6 (7.2–8.0)	16.1 (14.3–17.9)	7.8 (6.9–8.8)
Medicaid only (+/−other)	5.1 (4.7–5.4)	10.9 (9.6–12.5)	12.6 (11.4–13.9)
Other	3.1 (2.8–3.4)	3.8 (2.8–5.1)	5.1 (4.4–5.9)
Uninsured	17.1 (16.5–17.8)	14.1 (12.4–16.0)	19.7 (18.1–21.4)
No defined source of primary care	17.8 (17.8–18.6)	13.9 (12.2–15.6)	19.3 (12.2–15.6)
Health conditions			
Health status			
Excellent	31.2 (30.4–31.9)	11.6 (10.0–13.4)	21.7 (20.3–23.3)
Very good	33.5 (32.8–34.3)	20.4 (18.5–22.5)	27.1 (25.4–28.8)
Good	25.4 (24.7–26.1)	29.4 (27.2–31.7)	30.5 (28.8–32.4)
Fair-poor	9.9 (9.4–10.4)	38.7 (36.4–41.0)	20.6 (19.2–22.1)

ED emergency department, CI confidence interval

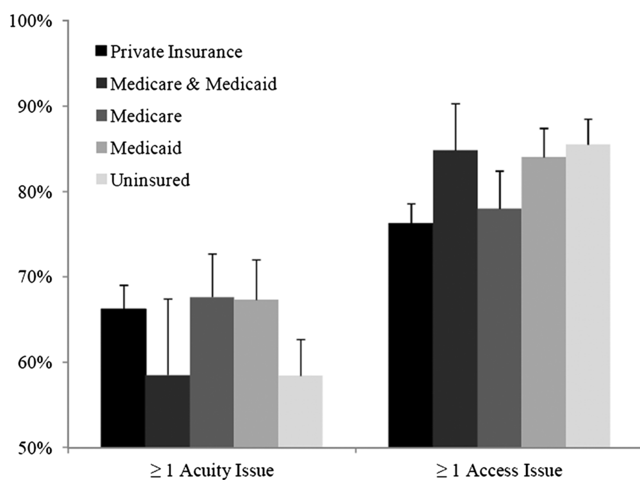

Figure 1. Differences in reasons for most recent emergency department visit by health insurance type. ***Error bars*** **represent upper bound of 95 % confidence interval.**

ED care among discharged patients is driven more by patient-perceived access issues, rather than differences in patient-perceived acuity. The Center for Medicare and Medicaid Services (CMS) continues to have great interest in developing strategies to reliably identify and divert patients from EDs to outpatient clinics for clinically non-emergent conditions.[13] Much focus has been on determining if the ED visits are clinically necessary or potentially avoidable. However, very little is known about the patient's perspective and reasons as to why they seek emergency care.

According to a study in the 1990s, approximately 45 % of all adult patients sought care in the ED because of a perceived emergent or urgent need, but this study did not consider the influences insurance type had on this perception.[14] Additionally, a more recent national study showed that approximately 50 % of patients with Medicaid were categorized by the ED triage nurse as having an urgent or

Table 2. Adjusted Associations Between Characteristics and Summary of Reasons for Last Emergency Department Visit

Characteristics	≥ 1 access issue OR (95 %CI) Model n=4,530	≥ 1 acuity issue OR (95 %CI) Model n=4,512	≥ 1 access issue if no acuity issue reported OR (95 %CI) Model n=1,632	≥ 1 acuity issue if no access issue reported OR (95 % CI) Model n=931
Demographic characteristics				
Age, years				
18–34	REF	REF	REF	REF
35–49	0.89 (0.69–1.14)	1.15 (0.93–1.41)	0.95 (0.59–1.54)	1.25 (0.66–2.34)
50–64	0.85 (0.62–1.15)	1.21 (0.96–1.52)	1.27 (0.74–2.17)	1.75 (0.92–3.33)
≥65	0.60 (0.36–0.99)	1.05 (0.69–1.59)	0.65 (0.29–1.45)	0.97 (0.30–3.09)
Female sex	1.03 (0.86–1.25)	0.91 (0.78–1.07)	1.64 (1.17–2.30)	1.67 (1.13–2.48)
Race/ethnicity				
Non-hispanic white	REF	REF	REF	REF
Non-hispanic black	1.19 (0.92–1.55)	0.87 (0.71–1.05)	0.80 (0.52–1.25)	0.51 (0.30–0.88)
Hispanic	1.01 (0.75–1.38)	1.10 (0.86–1.40)	0.58 (0.33–1.01)	0.60 (0.29–1.25)
Non-hispanic asian	0.92 (0.56–1.52)	0.99 (0.67–1.48)	0.53 (0.23–1.27)	0.44 (0.19–1.02)
Other	1.15 (0.41–3.27)	1.03 (0.54–1.97)	1.66 (0.29–9.53)	2.14 (0.24–18.9)
Census region				
Northeast	REF	REF	REF	REF
Midwest	1.83 (1.34–2.49)	0.67 (0.50–0.90)	2.37 (1.39–4.05)	0.99 (0.51–1.90)
South	1.55 (1.18–2.05)	0.70 (0.54–0.89)	2.17 (1.30–3.61)	0.98 (0.58–1.66)
West	1.81 (1.34–2.44)	0.79 (0.60–1.04)	2.54 (1.45–4.43)	1.12 (0.64–1.97)
Education				
< High school graduate	0.91 (0.68–1.21)	0.97 (0.79–1.20)	0.70 (0.40–1.22)	0.78 (0.44–1.41)
High school graduate	0.86 (0.68–1.09)	0.97 (0.81–1.16)	0.62 (0.42–0.90)	0.73 (0.46–1.18)
≥ Some college	REF	REF	REF	REF
Access to healthcare				
Health insurance type				
Any private	REF	REF	REF	REF
Medicare + Private	1.05 (0.63–1.74)	1.04 (0.66–1.65)	1.12 (0.44–2.85)	1.14 (0.33–3.97)
Medicare + Medicaid	1.94 (1.18–3.19)	0.69 (0.41–1.14)	1.47 (0.69–3.14)	0.71 (0.23–2.20)
Medicare only (+/−other)	1.50 (0.92–2.45)	0.98 (0.66–1.47)	1.47 (0.59–3.63)	1.05 (0.35–3.12)
Medicaid only (+/−other)	1.50 (1.06–2.13)	1.05 (0.79–1.40)	1.53 (0.74–3.18)	0.97 (0.51–1.85)
Other	1.11 (0.74–1.66)	1.07 (0.77–1.47)	1.56 (0.67–3.63)	1.50 (0.53–4.20)
Uninsured	1.45 (1.08–1.96)	0.85 (0.67–1.09)	1.16 (0.69–1.97)	0.82 (0.39–1.72)
No defined source of primary care	1.45 (1.08–1.95)	0.74 (0.59–0.93)	1.98 (1.17–3.34)	0.92 (0.46–1.82)
Health conditions				
Health status				
Excellent	REF	REF	REF	REF
Very good	1.29 (0.97–1.72)	1.04 (0.83–1.30)	1.56 (0.98–2.51)	1.23 (0.69–2.19)
Good	1.44 (1.11–1.87)	1.18 (0.93–1.50)	1.98 (1.25–3.14)	2.00 (1.08–3.72)
Fair-poor	1.40 (1.02–1.90)	1.25 (0.94–1.68)	2.41 (1.35–4.30)	2.40 (1.26–4.57)

OR odds ratio, CI confidence interval
[a]Associations adjusted for all variables displayed in Table 2

emergent chief complaint.[9] That study showed that patients with Medicaid had similar rates of ED utilization for either an emergent, urgent or semi-urgent condition when compared with patients who had private insurance.[9] In that study, the determination of acuity was based on an interpretation and evaluation by a triage nurse. In our study, this overall rate of the patient-perceived acuity issues was higher than previously reported (65 %), even though the analysis was limited to only patients who were discharged. This measure is likely representative of the patient's knowledge of what does and does not constitute an emergency (i.e., the "prudent layperson" standard).

Here, we found an association between the type of health insurance and having access issues as reasons for ED use, but not with acuity issues. Accordingly, it is likely that patients will seek emergency services when they feel there is an acute problem, regardless of their insurance type. In addition, we found that patients with public insurance, particularly those with Medicaid, perceived significant barriers to accessing outpatient services. This may be a major modifiable cause for higher ED use for potentially avoidable ED visits made by patients with Medicaid. Nationally, adults with Medicaid are more likely to report barriers to accessing primary care services, and higher rates of ED use for potentially avoidable ED visits when compared with those who have private insurance.[1,3,15]

Previous studies have sought to determine which conditions currently treated in an ED could be treated in the outpatient setting, essentially defining a potentially avoidable ED visit. In one well-known study, Billings and colleagues studied disposition (final) ED diagnosis and made assumptions about the acuity of the presenting complaint based on those final diagnoses.[16,17] Billings and colleagues concluded that a large proportion of the underserved population of New York sought ED care for

Table 3. Adjusted Associations Between Characteristics and Summary of Reasons for Last Emergency Department Visit with ≥ 1 Acuity or ≥ 1 Access Issue Included in the Models

Characteristics	≥ 1 access issue OR (95 %CI) Model *n*=4,512	≥ 1 acuity issue OR (95 %CI) Model *n*=4,512
Demographic characteristics		
Age, years		
18–34	REF	REF
35–49	0.88 (0.68–1.14)	1.13 (0.92–1.39)
50–64	0.83 (0.61–1.13)	1.19 (0.95–1.50)
≥65	0.59 (0.36–0.99)	1.01 (0.67–1.53)
Female sex	1.04 (0.86–1.26)	0.92 (0.78–1.07)
Race/ethnicity		
Non-hispanic white	REF	REF
Non-hispanic black	1.17 (0.90–1.53)	0.87 (0.72–1.06)
Hispanic	1.02 (0.75–1.39)	1.09 (0.85–1.40)
Non-hispanic asian	0.91 (0.55–1.50)	0.96 (0.65–1.44)
Other	1.17 (0.42–3.25)	1.03 (0.55–1.94)
Census region		
Northeast	REF	
Midwest	1.74 (1.27–2.37)	0.70 (0.52–0.94)
South	1.45 (1.10–1.92)	0.72 (0.56–0.92)
West	1.68 (1.25–2.27)	0.82 (0.62–1.08)
Education		
< High school graduate	0.89 (0.67–1.19)	0.97 (0.78–1.20)
High school graduate	0.84 (0.66–1.06)	0.95 (0.79–1.14)
≥ Some college	REF	REF
Health insurance type		
Any private	REF	REF
Medicare + Private	1.01 (0.61–1.68)	1.02 (0.65–1.62)
Medicare + Medicaid	1.86 (1.13–3.06)	0.72 (0.43–1.19)
Medicare only (+/−other)	1.50 (0.92–2.45)	1.02 (0.68–1.51)
Medicaid only (+/−other)	1.47 (1.04–2.08)	1.08 (0.81–1.44)
Other	1.10 (0.74–1.64)	1.08 (0.78–1.49)
Uninsured	1.41 (1.05–1.91)	0.87 (0.68–1.11)
No defined source of primary care	1.38 (1.03–1.87)	0.76 (0.60–0.95)
Health conditions		
Health status		
Excellent	REF	REF
Very good	1.33 (0.99–1.79)	1.07 (0.85–1.35)
Good	1.51 (1.16–1.96)	1.22 (0.96–1.55)
Fair-poor	1.47 (1.08–2.01)	1.29 (0.96–1.73)
≥ 1 acuity issue	0.63 (0.52–0.77)	–
≥ 1 access issue	–	0.63 (0.52–0.78)

OR odds ratio, CI confidence interval
[a]*Associations adjusted for all variables displayed in Table 3*

primary care treatable conditions with the assumption that there was timely and reliable access to primary care services, although a recent study illustrated the many limitations to applying these criteria to individual patient visits.[16–18] Other studies have reported that fewer barriers to primary care access result in decreased ED utilization.[19–22] In our study we found that of the patients that did not have a perceived acuity need, 84 % reported barriers to accessing care for conditions that resulted in ED discharge. This represents a potentially significant opportunity to shift care from the ED to the outpatient site, if barriers to care in those settings were decreased or eliminated.

Our study has several implications for researchers and policy makers. Currently, millions of uninsured patients are becoming insured under the Affordable Care Act (ACA), largely through Medicaid expansion.[10] To date, nearly one third of office-based physicians, primary care and non-primary care, are reportedly not accepting new patients with Medicaid, and as a result, we anticipate an increase in ED utilization.[7,23] Medical homes throughout the country are being formed and are able to provide patient-friendly services, such as provider on-call availability for after hours, open evening/weekend hours, and shared electronic medical records. We believe these factors will decrease some of the access barriers described in this report. We also believe that access to care can be improved through the use of patient navigators or community health workers who help vulnerable populations with their social and health care needs.[24] These programs are currently being developed and implemented, and preliminary results are promising.[25–27]

These results should be interpreted in the context of certain limitations. We were limited to the questions available in the survey and the subgroups that were asked these specific questions. The NHIS was based on self-reported data, and we could not confirm findings and they are subject to recall bias. The measurement of perceived acuity was done by combining several elements of the survey that we thought were related to perceived acuity or immediate need for evaluation, and those questions have not been previously validated for that use in the literature. For example, we considered the variable “only hospital could help” as an acuity issue variable, although it is possible that the individuals who answered “yes” to this question could have done so because they could not access their primary care provider. The NHIS sampling method is designed to provide nationally represented data; however, certain vulnerable groups of patients who likely have Medicaid insurance are not interviewed. These include adults who are incarcerated or homeless. Finally, the NHIS assessed reasons for ED visits only among patients who were discharged from the ED after their most recent visit; thus, our results do not extend to ED care that resulted in admission.

Our study demonstrates an association between the type of health insurance and having access issues as reasons for ED use, particularly for adults with Medicaid. Patients often seek ED care for perceived acuity issues and need for immediate evaluation; health insurance type was not associated with differences in these acuity issues as reasons for ED use. To address potentially modifiable access issues, policymakers should focus on increasing availability of

alternative sites of care, particularly for Medicaid beneficiaries, as well as on strategies to increase care coordination that involve ED patients and providers.

Acknowledgements:
Contributors: *Dr. Ginde conceived and designed the study. Dr. Ginde and Mr. Rooks performed the statistical analysis. Dr. Capp drafted the manuscript. All authors participated in the analysis and interpretation of the data, and critically revised the manuscript for important intellectual content. Dr. Ginde takes responsibility for the manuscript as a whole.*

Funding/Support and Role of the Sponsor: *None.*

Conflicts of Interest: *The authors declare that they do not have a conflict of interest.*

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