The Journal of Emergency Medicine, Vol. 57, No. 4, pp. 578–586, 2019

0736-4679/$ - see front matter

https://doi.org/10.1016/j.jemermed.2019.06.004

Public Health in Emergency Medicine

USE OF EMERGENCY DEPARTMENTS FOR PREVENTATIVE CARE AMONG ADULTS IN THE UNITED STATES: ESTIMATES FROM THE 2017 NATIONAL HEALTH INTERVIEW SURVEY

Kristin Primm, MPH, Daenuka Muraleetharan, MS, and Tamika Gilreath, PHD

Department of Health and Kinesiology, Texas A&M University, College Station, Texas
Corresponding Address: Kristin Primm, MPH, Department of Health and Kinesiology, Texas A&M University, Kristin Primm 604 West Main Street, Houston, TX 77006

☐ **Abstract—Background: Use of the emergency department (ED) for routine or preventative care has been an abiding concern for policy makers and public health practitioners. Objectives: We utilized recent data to examine health-related, socioeconomic, and demographic factors associated with use of the ED for routine or preventative care using a national sample of adults. Methods: Data from the 2017 National Health Interview Survey, a nationally representative sample of 26,742 adults ≥18 years of age was used for this investigation. Bivariate and multivariate analyses were used to assess the association between reported use of EDs as a usual source of preventative care and health-related, socioeconomic, and demographic factors. Results: In 2017, approximately 2 million adults nationwide reported the ED as their usual source of preventative health care. Individuals experiencing ≥2 health care–related barriers were more likely to use the ED as a source of usual preventative care (odds ratio = 2.78 [95% confidence interval 1.64–4.72]). Individuals without insurance had higher odds (odds ratio = 9.52 [95% confidence interval 5.60–16.19]) of using the ED for care compared with those who were privately insured. In addition, those using the ED for preventative care were more likely to be younger, poorer, less educated, to identify as Asian or African American, and to reside in the Northeast United States. Conclusion: This study provides a current perspective into characteristics and factors contributing to use of the ED for preventative care. Overall, our findings suggest that the ED continues to provide crucial safety net services to a small subset of the population experiencing significant barriers to timely medical care.**

☐ **Keywords—emergency department utilization; health disparities; health equity; preventative care**

INTRODUCTION

Use of the emergency department (ED) for routine or preventative care has been an abiding concern for policy makers and public health practitioners. For nearly 2 decades, the number of annual ED visits in the United States has been steadily increasing, reaching a 10-year high in 2015 (1). Emergency departments are the only part of the U.S. health care system that is mandated by federal law to provide care to all patients at any time, regardless of their ability to pay or the severity of their ailment (2). Although the main purpose of the ED is to treat patients with medical emergencies, EDs also provide essential services to underserved populations who do not have access to alternative sources of medical care (3).

There is a large body of literature regarding the use of EDs for preventative or nonurgent medical care that is based on assumptions that use of the ED for nonemergency conditions results in overcrowding, longer wait times, fragmented care coordination, and high costs (4–7). As a result, the Patient Protection and Affordable

RECEIVED: 5 February 2019; FINAL SUBMISSION RECEIVED: 29 May 2019;
ACCEPTED: 8 June 2019

Care Act (ACA) was initiated in 2010 to expand health insurance coverage, increase access to medical services, and reduce health care expenditures (8). With a strong emphasis on disease prevention, the ACA also eliminated cost-sharing for a range of recommended preventive services, such as evidence-based screenings, counseling services, and routine immunizations (8). Therefore, a fundamental goal of the ACA was to expand access to health insurance, increase utilization of preventative health services, and decrease costly utilization of EDs for nonurgent conditions.

Previous studies on ED utilization primarily focused on describing factors related to frequent ED use or inappropriate use of the ED (9–15). Additional studies have investigated the association between ED use and barriers to primary care (16–19). However, few recent studies have examined health-related, socioeconomic, and demographic factors related to utilization of the ED for routine or preventative care (20–22). Given that millions of Americans gained health insurance coverage through the ACA, it is unclear whether patients continue to use the ED as a regular source of preventative or routine health care. In the present study, we use recent data to explore patterns in ED utilization and examine health-related, socioeconomic, and demographic characteristics associated with the use of EDs for preventative or routine care.

METHODS

Data Source

Data from the 2017 U. S. National Health Interview Survey (NHIS) were used for this study. Conducted annually by the National Center for Health Statistics, the NHIS is a cross-sectional household survey that approximates a representative sample of the U.S. civilian population (23). The NHIS provides a snapshot of the overall health of the U.S. population through the collection and analyses of data on a broad range of health topics.

The target population for the NHIS is the civilian noninstitutionalized population living in the U.S. at the time of the interview (23). Therefore, the NHIS does not include persons in long-term care institutions (i.e., nursing homes for the elderly or hospitals for the intellectually disabled), correctional facilities (i.e., prisons, jails, or halfway houses), and U.S. nationals living in foreign countries. Active-duty Armed Forces personnel are also excluded from the survey, unless at least 1 other family member is a civilian that is eligible to take part in the survey (23).

A multistage probability design is used to select households and individuals for the sample, with certain subgroups (such as racial/ethnic minorities) purposely oversampled (23). Household interviews are conducted by census interviewers using computer-assisted personal interviewing. In 2017, the NHIS collected household interview data from 49,067 households of 78,132 persons in 33,157 families. One "sample adult" ≥18 years of age was randomly selected from each family, producing a nationally representative sample of the U.S. adult population. The response rate for the NHIS was 53.0% in 2017. Additional details of the NHIS have been described elsewhere (23,24).

Variables

ED utilization was measured by the reported number of visits to the ED in past 12 months. Approximately 93% of the adult sample answered the question "Where do you usually go for routine or preventative care?" This question was used to determine the type of provider typically used for routine care. The NHIS classified providers into 4 different categories, including: clinic or health center, doctor's office or health maintenance organization, emergency department, hospital outpatient department, or some other provider. For our analysis, provider categories were recoded into 2 groups: 1) persons who reported using the ED as their source of usual preventative care and 2) persons who reported using some other (non-ED) provider (i.e., clinic or health center, doctor's office or health maintenance organization, hospital outpatient department, or some other provider) as their source of preventative care. There were 1740 individuals that reported that they "do not receive preventative care anywhere" or "do not go to one place (for routine care) that often," indicating they have no usual source of routine care. It is important to note that 499 adults in the sample did not provide a response to the survey questions on ED utilization and usual routine or preventative care provider.

Covariates

We compared various health-related, demographic, and socioeconomic variables among those reporting the ED as their usual source of preventative care vs. those with some other usual source of care. Health-related variables included type of insurance, barriers to timely health care, and time since last talked to a health care professional. Demographic information included region of residence, age, sex, race/ethnicity, and reported health status. Socioeconomic status variables included education and poverty level. Additional details about the study covariates can be found in the Appendix.

Statistical Analyses

Statistical analyses were performed using Stata software (version 14; StataCorp LLC, College Station, TX) (25).

First, survey commands were used to adjust for the complex survey design and apply sampling weights. We first generated descriptive statistics to compare health-related, demographic, and socioeconomic variables among users of the ED for preventative care. Then, we performed separate bivariate analysis to measure associations between covariates and the primary outcome. Subsequently, we performed a multivariate logistic regression analysis to evaluate the association between health-related, demographic, and socioeconomic factors and ED utilization for preventative care.

RESULTS

In 2017, an estimated 2 million adults nationwide reported using the ED as their usual source of preventative health care, 18 million adults reported no usual source of routine care, and 223 million reported using some other provider for preventative care (Table 1). Overall, about 12% of adults had ≥1 barrier to timely primary care and 18.7% had ≥1 ED visit over the previous year. While most people who visited the ED in the past 12 months had some other source of care, 5.6% had no usual source of preventative care, and 2.6% used EDs as their source of usual care (Table 2).

Table 3 shows weighted percentages for demographics, socioeconomic status, and health-related variables among those utilizing the ED as their usual source of care compared with those with some other source of usual care. It is important to note that Table 3 does not include information from the estimated 21 million individuals with no usual source of care. The most frequently cited barrier to care among those using the ED were "you have to wait too long to see the physician" and "no transportation," while "couldn't get an appointment soon enough" was the most frequent barrier for those with other sources of care. Compared with those with other sources of care, a higher proportion of individuals using the ED reported that it had been ≥1 year since they last saw or spoke to a health care professional (29.3% vs. 10.6%). Furthermore, about 43% of those using the ED for preventative care had no insurance, while only 6% of those with other sources of care reported no insurance.

Table 1. Usual Source of Routine/Preventative Care, Estimated From the 2017 National Health Interview Survey

	Population (in Millions)	Percent
Other source routine care	223.0	90.5
Emergency department source routine care	2.0	0.84
No source routine care	18.0	7.4

Using the ED for preventative care also had a higher percentage of individuals reporting "fair or poor" health status (28.2% vs. 12.8%), living below the poverty level (38.9% vs. 11.1%), less than high school education level (68.3% vs. 34.5%), and under age 35 (48.3% vs. 27.6%).

Results from the bivariate and multivariate logistic regressions are included in Table 4.

Individuals experiencing ≥2 barriers to care were more likely to use the ED for care (odds ratio [OR] = 2.78 [95% confidence interval {CI} 1.64–4.72) compared with those reporting no barriers. Furthermore, adults without insurance had higher odds (OR = 9.52 [95% CI 5.60–16.19]) of using the ED for care compared with the privately insured. Those reporting fair to poor health were also more likely to use EDs for preventative care (OR = 1.86 [95% CI 1.17–2.93]) relative to those reporting excellent/very good health.

Adults living below the poverty level were more likely to report the use of ED as their usual source of preventative care than nonpoor adults (OR = 1.80 [95% CI 1.23–2.64]).

Compared with those with a graduate degree, persons with a level of education of high school or less showed a greater odds of using the ED for care (OR = 4.53 [95% CI 1.42–14.46]). In terms of demographics, males were about 58% more likely than females to use ED as a source of preventative care (OR = 1.58 [95% CI 1.31–1.91]). Furthermore, persons between 25 and 34 years of age were >6 times as likely to use the ED for usual care than individuals ≥65 years of age (OR = 6.88 [95% CI 2.87–16.47]). Both Asian (OR = 2.51 [95% CI 1.06–5.93]) and African American (OR = 2.48 [95% CI 1.47–4.20]) adults had more than twice the odds of using ED for preventative care relative to their white counterparts. However, Hispanic individuals were no more likely to use EDs for preventative care than white individuals. Also, the likelihood that adults residing in the Northeast used EDs as a source of usual preventative care were 2.16 times greater than the odds of those residing in the West (OR = 2.16 [95% CI 1.07–4.35]).

DISCUSSION

Findings from this study indicate that those using the ED for routine or preventative care represent a small proportion of the U.S. population (<1%). While previously published literature suggests that use of the EDs for nonemergency care leads to overcrowding and longer wait times, we found those using the ED for routine or preventative care represent only 3% of the 45 million individuals who reported ≥1 ED visit in 2017. A previous examination of the 1998 NHIS found that 0.9% Americans reported using the ED is their usual source of care, indicating that the proportion of individuals seeking

Table 2. Frequency of Emergency Department Visits in Past 12 months by Source of Care

ED Visits in Past 12 months, n	Other Source of Care (in Millions)	ED for Care (in Millions)	No Source of Care (in Millions)	Total (in Millions)
None	180.0	0.84	15.0	195.8
1	27.0	0.59	1.6	29.2
2–3	10.0	0.43	0.71	11.4
4–5	2.3	0.09	0.15	2.5
6–7	0.81	0.01	0.03	0.85
8–9	0.39	0.02	0.01	0.42
10–12	0.36	0.04	0.004	0.40
≥13	0.14	0.005	0.00	0.15

ED = emergency department.

Table 3. Distribution of Healthy Adults Using the Emergency Department (ED) for Usual Care and Those Using Other Providers

Variable	ED for Care (n = 195), % (Range)	Other Source of Care (n = 24,308), % (Range)
Barriers to health care		
None	79.2 (70.7–85.7)	87.3 (86.6–88.0)
Couldn't get through on the phone	0.3 (0.1–1.2)	0.4 (0.4–0.6)
Couldn't get appointment soon enough	4.8 (1.6–13.5)	4.1 (3.7–4.5)
Wait too long to see physician	7.6 (4.0–13.8)	3.5 (3.1–3.9)
Not open when you could go	2.1 (0.8–5.8)	2.8 (2.6–3.1)
No transportation	6.0 (3.1–11.3)	1.8 (1.6–2.1)
Time since last seen health professional, y		
<1	70.7 (61.9–78.1)	89.4 (88.8–90.0)
>1 (<2)	10.1 (5.4–18.0)	6.0 (5.6–6.4)
>2	19.2 (13.2–27.1)	4.6 (4.2–4.9)
Insurance		
Private	24.4 (17.7–32.5)	66.4 (65.3–67.5)
Public	32.2 (25.0–40.3)	27.2 (26.2–28.3)
No insurance	43.4 (35.3–51.9)	6.4 (5.9–7.0)
Perceived health status		
Excellent to good	71.7 (62.7–79.3)	87.1 (86.5–87.7)
Fair to poor	28.2 (20.7–37.3)	12.8 (12.3–13.4)
Poverty level		
Below	38.9 (30.9–47.4)	11.1 (10.4–11.8)
Above	61.1 (62.5–69.1)	88.9 (88.2–89.6)
Education		
High school or less	68.3 (59.8–75.8)	34.5 (33.4–35.6)
College	28.9 (21.8–31.1)	52.3 (51.4–53.3)
Graduate degree	2.8 (1.1–6.9)	13.1 (12.4–13.9)
Age categories, y		
18–25	20.7 (14.5–28.7)	12.7 (11.9–13.5)
26–34	27.6 (20.4–36.2)	14.9 (13.4–15.5)
35–44	16.3 (10.7–24.2)	16.0 (15.4–16.6)
45–54	19.4 (13.3–27.5)	17.1 (16.5–17.7)
55–64	10.8 (6.8–16.8)	17.5 (16.9–18.2)
≥65	5.1 (2.7–9.4)	21.7 (21.0–22.4)
Region		
Northeast	19.1 (11.9–29.2)	18.9 (17.3–20.6)
Midwest	18.2 (12.1–26.4)	22.2 (21.0–23.5)
South	46.4 (36.9–56.3)	35.3 (33.3–37.4)
West	16.3 (10.5–24.5)	23.5 (21.7–25.4)
Race		
Hispanic	23.8 (16.2–33.5)	14.5 (13.2–15.9)
White	36.0 (27.8–45.2)	66.0 (64.3–67.7)
African American	32.0 (23.8–41.6)	12.2 (11.2–13.2)
Asian	6.2 (2.9–12.8)	6.1 (5.5–6.9)
Other	1.9 (0.7–4.9)	1.1 (0.80–1.7)
Sex		
Male	60.8 (51.2–69.6)	46.7 (45.9–47.5)
Female	39.2 (30.4–48.8)	53.3 (52.5–54.1)

Table 4. Factors Associated With Use of the Emergency Department for Preventative or Routine Care

Variable	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Barriers to health care		
None	1.00 (ref)	1.00 (ref)
1	0.81 (0.44–1.50)	0.67 (0.35–1.31)
≥2	3.50 (2.03–6.04)[a]	2.78 (1.64–4.72)[a]
Insurance		
Private	1.00 (ref)	1.00 (ref)
Public	3.22 (2.04–5.07)[a]	2.08 (1.17–3.68)[b]
No insurance	18.50 (11.91–28.75)[a]	9.52 (5.60–16.19)[c]
Perceived health status		
Excellent/very good/good	1.00 (ref)	1.00 (ref)
Fair/poor	2.67 (1.77–4.02)[a]	1.86 (1.17–2.93)[c]
Poverty level		
Below	5.10 (3.58–7.26)[a]	1.80 (1.23–2.64)[c]
Above	1.00 (ref)	1.00 (ref)
Education		
High school or less	9.25 (3.56–24.01)[a]	4.53 (1.42–14.46)[b]
College	2.58 (0.99–6.74)	2.13 (0.66–6.81)
Graduate degree	1.00 (ref)	1.00 (ref)
Age categories, y		
18–25	6.98 (3.27–14.91)[a]	5.30 (2.10–13.41)[a]
26–34	7.90 (3.93–15.87)[a]	6.88 (2.87–16.47)[a]
35–44	4.36 (2.00–9.51)[a]	4.10 (1.61–10.43)[c]
45–54	4.84 (2.27–10.30)	4.59 (1.93–10.89)[c]
55–64	2.64 (1.18–5.89)[b]	2.72 (1.05–7.01)[b]
≥65	1.00 (ref)	1.00 (ref)
Region		
Northeast	1.45 (0.73–2.87)	2.16 (1.07–4.35)[b]
Midwest	1.18 (0.63–2.18)	1.40 (0.72–2.73)
South	1.89 (1.11–3.24)[b]	1.41 (0.81–2.42)
West	1.00 (ref)	1.00 (ref)
Race		
Hispanic	3.01 (1.81–5.00)[a]	1.19 (0.69–2.06)
White	1.00 (ref)	1.00 (ref)
African American	4.83 (3.10–7.51)[a]	2.48 (1.47–4.20)[c]
Asian	1.86 (0.81–4.25)	2.51 (1.06–5.93)[b]
Other	3.06 (1.11–8.40)	1.30 (0.46–3.63)
Sex		
Male	1.77 (1.20–2.61)[c]	1.83 (1.20–2.79)[c]
Female	1.00 (ref)	1.00 (ref)

CI = confidence interval; OR = odds ratio.
[a] $p < 0.001$.
[b] $p < 0.05$.
[c] $p < 0.01$.

routine care through the ED has remained relatively stable over the past 2 decades, despite significant health care reform (21).

Consistent with previous research, we found that patients are more likely to use the ED for routine care when faced with significant barriers to obtaining timely, affordable, and convenient care at alternative sites (16–19). Patients experiencing significant access barriers often prefer the ED based on perceptions of increased availability and convenience (26–29). Unlike other providers, EDs are open 24 hours a day, 7 days a week, and care is provided without the need to make an appointment. Therefore, patients can receive ED care at a time that is most convenient to them, eliminating the need to request time away from work or coordinate childcare (26–29).

Because EDs are required to provide care to patients regardless of their ability to pay for services, patients without insurance or funds to pay out of pocket fees may prefer using the ED for routine or preventative care. As such, we found that lack of insurance and young age were the strongest independent predictors of ED use for preventative care. Findings from previous studies on associations between insurance and ED utilization have been mixed, with some studies indicating an association between nonurgent ED use among Medicare beneficiaries and the uninsured while other have indicated no association (15,30–33). While research has indicated higher rates of overall ED utilization among adults >65 years of age, our findings are consistent with studies suggesting that younger individuals account for a higher proportion of nonurgent ED visits (12–15,19,34). It has been hypothesized that factors such as unemployment, low-paying entry level jobs, or enrollment in education programs lacking adequate coverage options make it difficult for young adults to obtain affordable health insurance (35,36). While the ACA enabled young adults to remain on their parents' insurance plans until 26 years of age, our findings indicate that a coverage gap might still exist among adults between the ages of 26 to 34.

Limitations

We used existing survey data for this study, therefore we were limited to the question set developed for the survey. In addition, the NHIS was based on self-reported data, meaning that individual responses could be subject to bias. Although the NHIS sampling method was designed to provide representative data for the U.S. population, the survey does include responses from the homeless population, undocumented immigrants, individuals in nursing homes, and other special populations. In addition, results from this study are cross-sectional, so we were unable to detect longitudinal changes in ED utilization that might have occurred over time.

It is also important to reiterate that provider categories were recoded into 2 groups: 1) persons who reported using the ED as their source of usual preventative care and 2) persons who reported using some other non-ED provider (i.e., clinic or health center, doctor's office or health maintenance organization, hospital outpatient department, or some other provider) as their source of preventative care. Therefore, an urgent care clinic could be included in the "some other provider" category. It is important to note that while urgent care centers may provide a cost-effective alternative to the use of EDs for regular or

preventative care, their impact on continuity of care and other aspects of health care quality remains unknown (37).

CONCLUSION

The continuous examination of patterns in ED utilization and barriers to timely health care is a crucial step in identifying solutions to increase access to appropriate care providers and to reduce the cost of care for the most vulnerable individuals. While there is an abundant amount of literature on characteristics of frequent ED users, as well as inappropriate, unnecessary, or nonurgent ED utilization, there is a limited number of studies that examine characteristics of individuals using ED as a source of routine or preventative care. Therefore, the current study provides a contemporary perspective into characteristics and factors contributing to utilization of the ED for primary care. Overall, our findings suggest that the ED continues to provide crucial safety net services to a small subset of the population experiencing significant barriers to timely primary care. Our analysis revealed that those relying on the ED for preventative care were more likely to be younger, less educated, to report poor health, Asian or African American, to live below the poverty level, and to reside in the Northeast United States. Future research should explore innovative strategies to better connect uninsured and underserved individuals with local safety net primary care providers.

REFERENCES

1. Sun R, Karaca Z, Wong HS. Trends in hospital emergency department visits by age and payer, 2006–2015: statistical brief #238. Healthcare Cost and Utilization Project. Rockville, MD: Agency for Healthcare Research and Quality; 2018.
2. Fields WW, Asplin BR, Larkin GL, Marco CA, Johnson LA, Yeh C, et al. The emergency medical treatment and labor act as a federal health care safety net program. Acad Emerg Med 2001;8:1064–9.
3. Ferreira F, Andrade J, Mesquita A, Campello G, Dias C, Granja C. The emergency room–analysis and evaluation of an organizational model. Rev Port Cardiol 2008;27:889–900.
4. Trzeciak S, Rivers EP. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. Emerg Med J 2003;20:402–5.
5. McCarthy ML. Overcrowding in emergency departments and adverse outcomes. BMJ 2011;342:d2830.
6. Baker LC, Baker LS. Excess cost of emergency department visits for nonurgent care. Health Aff (Millwood) 1994;13:162–71.
7. Mehrotra A, Liu H, Adams JL, Wang MC, Lave JR, Thygeson NM, et al. Comparing costs and quality of care at retail clinics with that of other medical settings for 3 common illnesses. Ann Intern Med 2009;151:321328.
8. Protection P, Act AC. Patient protection and affordable care act. Public law 2010;111:759–62.
9. Uscher-Pines L, Pines J, Kellermann A, Gillen E, Mehrotra A. Deciding to visit the emergency department for non-urgent conditions: a systematic review of the literature. Am J Manag Care 2013;19:47.
10. Sarver JH, Cydulka RK, Baker DW. Usual source of care and nonurgent emergency department use. Acad Emerg Med 2002;9:916–23.
11. Sempere-Selva T, Peiró S, Sendra-Pina P, Martínez-Espín C, López-Aguilera I. Inappropriate use of an accident and emergency department: magnitude, associated factors, and reasons—an approach with explicit criteria. Ann Emerg Med 2001;37:568–79.
12. Carret MLV, Fassa ACG, Domingues MR. Inappropriate use of emergency services: a systematic review of prevalence and associated factors [in Spanish]. Cad Saúde Pública 2009;25:7–28.
13. Kubicek K, Liu D, Beaudin C, Supan J, Weiss G, Lu Y, Kipke MD. A profile of non-urgent emergency department usage in an urban pediatric hospital. Pediatr Emerg Care 2012;28:977.
14. Buesching DP, Jablonowski A, Vesta E, Dilts W, Runge C, Lund J, Porter R. Inappropriate emergency department visits. Ann Emerg Med 1985;14:672–6.
15. Carret ML, Fassa AG, Kawachi I. Demand for emergency health service: factors associated with inappropriate use. BMC Health Serv Res 2007;7:131.
16. Rust G, Ye J, Baltrus P, Daniels E, Adesunloye B, Fryer GE. Practical barriers to timely primary care access: impact on adult use of emergency department services. Arch Intern Med 2008;168:1705–10.
17. Cheung PT, Wiler JL, Lowe RA, Ginde AA. National study of barriers to timely primary care and emergency department utilization among Medicaid beneficiaries. Ann Emerg Med 2012;60:4–10.
18. Cheung PT, Wiler JL, Ginde AA. Changes in barriers to primary care and emergency department utilization. Arch Intern Med 2011;171:1393–400.
19. Afilalo J, Marinovich A, Afilalo M, Colacone A, Leger R, Unger B, Giguere C. Nonurgent emergency department patient characteristics and barriers to primary care. Acad Emerg Med 2014;11:1302–10.
20. Wilson KM, Klein JD. Adolescents who use the emergency department as their usual source of care. Arch Pediatr Adolesc Med 2000;154:361–5.
21. Walls CA, Rhodes KV, Kennedy JJ. The emergency department as usual source of medical care: estimates from the 1998 national health interview survey. Acad Emerg Med 2002;9:1140–5.
22. Halfon N, Newacheck PW, Wood DL, St Peter RF. Routine emergency department use for sick care by children in the United States. Pediatrics 1996;98:28–34.
23. Parsons VL, Moriarity CL, Jonas K, Moore TF, Davis KE, Tompkins L. Design and estimation for the national health interview survey, 2006–2015. Vital Health Stat 2 2014;165:1–53.
24. Blackwell DL, Lucas JW, Clarke TC. Summary health statistics for U.S. adults: national health interview survey, 2012. Vital Health Stat 10 2014;260:1–161.
25. StataCorp. Stata statistical software: release 14. College Station, TX: StataCorp; 2015.
26. MacKichan F, Brangan E, Wye L, Checkland K, Lasserson D, Huntley A, et al. Why do patients seek primary medical care in emergency departments? An ethnographic exploration of access to general practice. BMJ Open 2017;7:e013816.
27. Hefner JL, Wexler R, McAlearney AS. Primary care access barriers as reported by nonurgent emergency department users: implications for the US primary care infrastructure. Am J Med Qual 2015;30:135–40.
28. Brim C. A descriptive analysis of the non-urgent use of emergency departments. Nurse Res 2008;15:72–88.
29. Berry A, Brousseau D, Brotanek JM, Tomany-Korman S, Flores G. Why do parents bring children to the emergency department for nonurgent conditions? A qualitative study. Ambul Pediatr 2008;8:360–7.
30. Zhou RA, Baicker K, Taubman S, Finkelstein AN. The uninsured do not use the emergency department more—they use other care less. Health Aff (Millwood) 2017;36:2115–22.
31. Campbell PA, Pai RK, Derksen DJ, Skipper B. Emergency department use by family practice patients in an academic health center. Fam Med 1998;30:272–5.
32. Gooding SS, Smith DB, Peyrot M. Insurance coverage and the appropriate utilization of emergency departments. J Public Policy Mark 1996;15:76–86.

33. Mendoza-Sassi R, Béria JU. Health services utilization: a systematic review of related factors [in Spanish]. Cad Saude Publica 2001;17:819–32.
34. Latham LP, Ackroyd-Stolarz S. Emergency department utilization by older adults: a descriptive study. Can Geriatr J 2014;17:118–25.
35. Callahan ST, Cooper WO. Uninsurance and health care access among young adults in the united states. Pediatrics 2005;116:88–95.
36. Nicholson JL, Collins SR, Mahato B, Gould E, Schoen C, Rustgi SD. Rite of passage? Why young adults become uninsured and how new policies can help, 2009 update. Issue Brief (Commonw Fund) 2009;64:1–20.
37. Weinick RM, Bristol SJ, DesRoches CM. Urgent care centers in the U.S.: findings from a national survey. BMC Health Serv Res 2009;9:79.

APPENDIX

Description of Covariates

For the current study, we compared various health-related, demographic, and socioeconomic variables among those reporting the emergency department as their usual source of preventative care vs. those with some other usual source of care. Health-related variables included type of insurance, barriers to timely health care, and time since last talked to health care professional. Insurance categories included private (reference), public insurance (includes Medicare, Medicaid, military insurance, Children's Health Insurance Program, and other government sponsored plans), and no insurance (uninsured).

Barriers to timely primary care were identified by ≥ 1 affirmative responses to the following questions: "Have you delayed getting care for any of the following reasons in the past 12 months?" Specific barrier questions included "You couldn't get through on the telephone," "You couldn't get an appointment soon enough," "You have to wait too long to see the physician," "The clinic/doctor's office wasn't open when you could get there," and "You didn't have transportation." For the purpose of this analysis, we created a variable stratifying responses according to the number of reported barriers to care. Individuals who answered yes to one of the aforementioned barrier questions were labeled "one barrier," individuals who answered yes to ≥2 of the barrier questions were labeled as "2 or more," and those who answered no to all barrier questions were labeled "no barriers." Response items for the question "How long has it been since you last seen or talked to a health professional?" included "less than 1 year," "more than 1 year (but less than 2 years)," and "2 years or more."

Demographic information included region of residence, age, sex, race/ethnicity, and reported health status. Region of residence included Northeast, Midwest, South, and West. Age was categorized into 6 categories, including 18–25, 26–34, 35–44, 45–54, 55–64, and ≥65 years of age. Racial/ethnic groups included white, Hispanic, African American, Asian, and other. Reported health status included 5 answer choices, including excellent, very good, good, fair, and poor. For this analysis, we recoded responses into 2 general groupings: "excellent/very good/good" and "fair/poor."

Socioeconomic status variables included education, and poverty level. Education categories included less than or equal to high school diploma, college degree, or graduate degree. Poverty level was ascertained according to the respondent's ratio of family income to the poverty threshold, where individuals with a ratio <1 were categorized as "below poverty level" and those ≥1.00 were categorized as "at or above poverty level."

ARTICLE SUMMARY

1. Why is this topic important?

Emergency departments (EDs) are often used by vulnerable individuals who have limited access to a regular primary care provider. Few recent studies have examined health-related, socioeconomic, and demographic factors related to utilization of the ED for routine or preventative care.

2. What does this study attempt to show?

For this study, we utilize recent data to explore patterns in ED utilization and examine health-related, socioeconomic, and demographic factors associated with the use of EDs for preventative or routine care.

3. What are the key findings?

A relatively small proportion of the U.S. population (<1%) used EDs as their usual source of preventative care in 2017. Approximately one-third of these individuals reported $\geq$1 barriers to timely health care, with the most frequently cited barriers being long wait times in the physician's office and lack of transportation. Furthermore, those relying on the ED for preventative care were more likely to be younger, less educated, to report poor health, Asian or African American, to live below the poverty level, and to reside in the Northeast census region.

4. How is patient care impacted?

Reliance on the ED for primary care purposes can result in long wait times, fragmented care coordination, and high health-related costs.