


Differences Between Emergency Department and Urgent Care Users for Low-acuity Health Needs: A Public Opinion Analysis

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The emergency department (ED) is a commonly utilized health care setting for many Americans when unexpected health challenges arise.¹ Although vital, the ED is viewed as an expensive site of care, especially for conditions that could be managed in less resource-intensive settings.² Prior estimates have suggested that a sizable proportion of ED visits are for low-acuity complaints that could be treated in cheaper alternatives, such as urgent care (UC) centers or retail clinics.² Over the past decade, these alternatives to the ED for unexpected, low-acuity visits have rapidly emerged in the market.³ Policymakers and payers have shown enthusiasm to redirect low-acuity ED patients toward these alternatives given the proposed dual benefits of reducing crowded ED volumes and overall health care costs.⁴

Although policies have been crafted to realize these proposed benefits, some efforts have been controversial, especially those that penalize patients retrospectively for seeking ED care for conditions later deemed to not be actual emergencies.⁵ Furthermore, it is unclear whether or not the introduction of UCs in proximity to EDs is associated with decreasing rates of

low-acuity ED visits.^{6,7} Prior work has suggested that the rise in UCs have been primarily concentrated in high-income areas, thereby calling into question whether these alternatives are equitably distributed.⁸ Missing from these prior analyses, however, are end-user perspectives as to why they choose one site of care versus another. We aim to fill this gap by leveraging a unique public opinion survey that allows us to characterize respondents who used EDs compared to UCs for low-acuity health needs, identify factors associated with the use of EDs versus UCs for low-acuity health needs, and summarize low-acuity ED users' reasons for opting for the ED versus an alternative.

Data come from the "Patients' Perspectives on Health Care in the United States" survey, a randomized, probability-based telephone poll conducted by the Harvard T.H. Chan School of Public Health, Robert Wood Johnson Foundation, and National Public Radio.⁹ The survey was fielded by the research firm SSRS in 2015, using a random-digit dialing method for cell phones and landlines. Interviews were conducted among U.S. adults, ages 18 years and above, in both English and Spanish. The data set consisted

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of a national sample ($n = 1,002$) as well as samples of approximately 1,000 individuals from seven states chosen for their diverse demographic, geographic, and political contexts (Florida, Kansas, New Jersey, Ohio, Oregon, Texas, and Wisconsin; $n = 7,036$). The broad survey, which has been used for other published work, had an overall response rate similar to other national polls of 13%.¹⁰

The variables constructed as primary outcomes were self-reported 1) utilization of EDs and/or UCs, 2) rationale for choosing the ED over alternatives, and, 3) health acuity when making this choice (“To get treatment for a ‘major health problem (like a broken bone, cut or high fever)’ or ‘for a minor health problem (like a sprain or toothache)’ or ‘some other reason’.” Respondents were categorized as having a low-acuity health need if they chose anything but “major health problem” (Data Supplement S1, available as supporting information in the online version of this paper, which is available at <http://onlinelibrary.wiley.com/doi/10.1111/acem.14047/full>).

Independent variables included household income, whether or not a respondent had a regular provider, health insurance, self-reported health (dichotomized as excellent/good or fair/poor), having a chronic illness (yes/no), and residing in a Medicaid expansion state. Covariates associated with health care utilization, including age, sex, race/ethnicity, geographical area, employment status, and education, were included.¹⁰

For all analyses, we collated the state-level responses into a combined seven-state sample, which was analyzed separately from the smaller national sample. We reweighted the seven-state sample to reflect its aggregate proportion of the national population based on the 2014 U.S. Census American Community Survey.¹⁰ Results focus on the combined seven-state sample given its larger sample size and lack of substantive differences with the smaller national sample (Data Supplement S1).

We summarize the characteristics of respondents who use both EDs and UCs, regardless of health acuity level. Among the low-acuity user subgroup, we compare differences in characteristics between both sites of care using chi-square tests. We then conducted multivariable logistic regression modeling to identify characteristics of low-acuity users that may independently predict seeking care at an ED versus UC. Finally, we summarize why low-acuity ED users opt for the ED versus alternatives. Statistical significance was set at p -values below 0.05. Analyses were conducted

using Stata 14.0. The study was exempted from review by the Harvard Office of Human Research Administration.

Nearly half of survey respondents (48%) reported accessing care at the ED and/or UC within the past 2 years. Approximately one-third of adults reported using EDs (32%), while 26% reported using UCs within that time period; their user profiles differed across a variety of socioeconomic factors (Data Supplement S1). More than half of ED users (54%) reported seeking ED care for a low-acuity health need; the majority of UC users (84%) had a low-acuity complaint.

Compared to low-acuity UC users, a greater percentage of low-acuity ED users identified as nonwhite (44% ED vs. 30% UC, $p < 0.001$), were less likely to have a college degree (49% ED vs. 65% UC, $p < 0.001$), were more likely to be very low income ($< \$30,000$ annual income; 46% ED vs. 29% UC, $p < 0.001$), were less likely to be privately insured (33% ED vs. 51% UC users, $p < 0.001$), were more likely to be chronically ill (48% ED vs. 36% UC, $p < 0.001$), and had poor-to-fair self-reported health (33% ED vs. 20% UC, $p < 0.001$). Results from the national survey were similar, though less often statistically significant (Data Supplement S1).

The adjusted model suggested that a number of factors independently predicted low-acuity ED use versus the UC, including being uninsured (OR = 1.85, 95% CI = 1.04 to 3.27, $p = 0.04$), identifying as black (OR = 1.78, 95% CI = 1.11 to 2.87, $p = 0.02$), being unemployed (OR = 1.66, 95% CI = 1.12 to 2.45, $p = 0.01$), and having lower-incomes ($< \$30,000$; OR = 2.67, 95% CI = 1.63 to 4.38, $p < 0.001$; Table 1).

When asked why they chose the ED versus other alternatives, a plurality of low-acuity ED users (33%) reported access concerns (i.e., “other facilities were not open,” “too far away,” or they were “unable to secure another appointment”), 13% felt that the ED was the only place they could be treated, 11% were brought to the hospital by ambulance, 8% felt the ED had the equipment or staff they needed, and 8% felt that they might need hospital admission (Data Supplement S1).

This study leverages a unique public opinion survey to assess self-reported low-acuity health usage of EDs versus alternatives and reasons for this care-seeking behavior. We found that nearly half of the U.S. adult population reports recently using EDs and/or UCs and the groups who utilize these sites of care differ across a range of socioeconomic factors. Furthermore,

Table 1
 Logistic Regression Results Predicting ED Use for Low-acuity Health Reason (vs. UC) Within the Past Two Years (2014 and 2015), Combined 7-State Sample

Variables	Seven-state Sample Low-Acuity Users (n = 1,986) Prob > F: <0.000
Has regular care provider	
Yes	—
No	0.94 (0.62–1.41)
Main source of health insurance	
Private/employer-based health insurance	—
Medicare	1.31 (0.78–2.20)
Medicaid	1.49 (0.80–2.76)
Other insurance	1.03 (0.67–1.60)
No insurance	1.85* (1.04–3.27)
Chronically Ill	
No	—
Yes	1.29 (0.94–1.78)
Fair/poor health	
No	—
Yes	1.00 (0.69–1.46)
Sex	
Male	—
Female	1.00 (0.74–1.34)
Race/ethnicity	
White (NH)	—
Black (NH)	1.78* (1.11–2.87)
Hispanic	0.86 (0.55–1.36)
Other	1.51 (0.84–2.72)
Age (years)	
18–29	—
30–49	1.08 (0.69–1.68)
50–64	0.88 (0.57–1.37)
65+	0.78 (0.43–1.38)
Education	
<High school	—
Some college+	0.84 (0.61–1.16)
Employment	
Full-time	—
Part-time	0.92 (0.57–1.49)
Unemployed	1.66* (1.12–2.45)
Household income	
>\$100,000	—
\$50,000–\$99,999	1.59* (1.02–2.46)
\$30,000–\$49,999	3.12*** (1.92–5.06)
<\$30,000	2.67*** (1.63–4.38)
Household location	
Urban	—
Suburban	1.14 (0.81–1.62)
Rural	1.19 (0.81–1.74)

(Continued)

Table 1 (continued)

Variables	Seven-state Sample Low-Acuity Users (n = 1,986) Prob > F: <0.000
Lives in Medicaid expansion state	
No	—
Yes	1.01 (0.76–1.34)

Data are reported as adjusted OR (95% CI). Reference groups (—), in order of categories: has a regular care provider, ESHI, not chronically ill, in good/excellent health, male, NH white, age 18 to 29, high school education or less, employed full-time, household income > \$100,000, urban household location, and for state-analysis, does not live in Medicaid expansion state. Responses of “don’t know” or “refuse to answer” to any of the above covariates were considered missing data and excluded from modeling. In terms of total observations, the n = 1,986 reflects the total number of low-acuity users that were included in the final model; this comes from the total pool of n = 7,036 respondents in the combined seven-state sample and includes the smaller subset of low-acuity ED or UC users. Model is significant at *p < 0.05, **p < 0.01, and ***p < 0.001. Results from the smaller national model are included in Data Supplement S1. NH = non-Hispanic; UC = urgent care.

over half of ED users self-report turning to the ED for a low-acuity health complaint, despite increasing pressures from payers and policymakers to shunt patients away from the ED for low-acuity health needs.² Those who rely on EDs and UCs for low-acuity health needs differ, suggesting that the least resourced and most vulnerable in society are particularly reliant on the ED for all types of care—regardless of acuity. These findings complement a growing evidence base that the availability of ED alternatives for low-acuity visits are unevenly distributed in communities, with the poorest areas being least likely to benefit from this emerging “alternative” market.^{7,8}

Our findings should be interpreted considering several well-known limitations related to survey research, including nonresponse bias, ordering effects, and language bias. Recall bias is important to acknowledge given our method for defining low-acuity ED users (i.e., based on self-report after learning of their ED workup outcome); however, other retrospective or prospective mechanisms for defining low-acuity ED usage also have challenges. Furthermore, this survey required access to a phone and thus may have biased our findings relevant to vulnerable populations toward the null. Also, though comparable to other national polls, this survey’s response rate was low; therefore, we employed weighting procedures that adhere to best practices in probability-based sampling polling methods.^{9,10} Furthermore, nearly a third of low-acuity ED respondents chose “some other reason” when asked why they opted for the

ED versus an alternative, even after being presented with reasons that are commonly thought of as why patients make this choice. Since the survey structure did not permit for respondents to expand upon this answer, further research will be helpful for elucidating care-seeking behavior among low-acuity ED visits. Finally, although unique, these data are from 2015 and merit contemporary follow-up analyses.

Looking ahead, policymakers are likely to promote sustained efforts that redirect patients with low-acuity needs away from the ED toward lower-cost alternatives in an effort to better optimize the perceived value of these health care settings. In this policy context, patients should have meaningful access (e.g., availability in their neighborhood and during extended hours, treatment regardless of ability to pay, access to triage consultants such as through certain insurers) to alternative sites of care before they are penalized for opting for the ED for low-acuity needs. As the COVID-19 pandemic's impact on ED care-seeking behavior has demonstrated, it is more important than ever to understand why, when, and where patients elect to receive timely care.

References

1. Singer AJ, Thode HC, Pines JM. US emergency department visits and hospital discharges among uninsured patients before and after implementation of the affordable care act. *JAMA Netw Open* 2019;2:e192662.
2. Trueger NS, Chua KP, Hussain A, Liferidge AT, Pitts SR, Pines JM. Incorporating alternative care site characteristics into estimates of substitutable ED visits. *Med Care* 2017;55:693–7.
3. Dolan S. Urgent Care Clinics in 2019: Industry Trends & Market Stats – Business Insider. Business Insider. 2019. Available at: <https://www.businessinsider.com/urgent-care-industry-trends>. Accessed May 26, 2019
4. Weinick RM, Burns RM, Mehrotra A. Many emergency department visits could be managed at urgent care centers and retail clinics. *Health Aff (Millwood)* 2010;29:1630–6.
5. Jaffe TA, Kocher KE, Ghaferi AA. Potentially avoidable emergency department use: when policy expects patients to be physicians. *Ann Emerg Med* 2018;72:256–8.
6. Carlson LC, Raja AS, Dworkis DA, et al. Impact of urgent care openings on emergency department visits to two academic medical centers within an integrated health care system. *Ann Emerg Med* 2020;75:382–91.
7. Allen L, Cummings JR, Hockenberry J. Urgent Care Centers and the Demand for Non-Emergent Emergency Department Visits. National Bureau of Economic Research. 2019. Available at: <http://www.nber.org/papers/w25428>. Accessed Feb 9, 2020.
8. Le ST, Hsia RY. Community characteristics associated with where urgent care centers are located: a cross-sectional analysis. *BMJ Open* 2016;6:e010663.
9. Patients' Perspectives on Health Care in the United States. Robert Wood Johnson Foundation. 2016. Available at: <https://www.rwjf.org/en/library/research/2016/02/patients-perspectives-on-health-care-in-the-united-states.html>. Accessed Jul 14, 2018
10. Sommers BD, McMurtry CL, Blendon RJ, Benson JM, Sayde JM. Beyond health insurance: remaining disparities in US health care in the post-ACA era. *Milbank Q* 2017;95:43–69.

Supporting Information

The following supporting information is available in the online version of this paper available at <http://onlinelibrary.wiley.com/doi/10.1111/acem.14047/full>
Data Supplement S1. Supplementary material.