

Racial/Ethnic Differences in Emergency Department Utilization and Experience



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BACKGROUND: Previous work has demonstrated racial/ethnic differences in emergency department (ED) utilization, but less is known about racial/ethnic differences in the experience of care received during an ED visit.

OBJECTIVE: To examine differences in self-reported healthcare utilization and experiences with ED care by patients' race/ethnicity.

DESIGN: Adult ED patients discharged to community (DTC) were surveyed (response rate: 20.25%) using the Emergency Department Patient Experience of Care (EDPEC) DTC Survey. Linear regression was used to estimate case-mix-adjusted differences in patient experience between racial/ethnic groups.

PARTICIPANTS: 3122 survey respondents who were discharged from the EDs of 50 hospitals nationwide January–March 2016.

MAIN MEASURES: Six measures: getting timely care, doctor and nurse communication, communication about medications, receipt of sufficient information about test results, whether hospital staff discussed the patient's ability to receive follow-up care, and willingness to recommend the ED.

KEY RESULTS: Black and Hispanic patients were significantly more likely than White patients to report visiting the ED for an ongoing health condition (40% Black, 30% Hispanic, 28% White, $p<0.001$), report having visited an ED 3+ times in the last 6 months (26% Black, 25% Hispanic, 19% White, $p<0.001$), and report not having a usual source of care (19% Black, 19% Hispanic, 8% White, $p<0.001$). Compared with White patients, Hispanic patients more often reported that hospital staff talked with them about their ability to receive needed follow-up care (+7.2 percentile points, $p=0.038$) and recommended the ED (+7.2 points, $p=0.037$); Hispanic and Black patients reported better doctor and nurse communication (+6.4 points, $p=0.008$; +4 points, $p=0.036$, respectively).

CONCLUSIONS: Hispanic and Black ED patients reported higher ED utilization, lacked a usual source of care, and reported better experience with ED care than White patients. Results may reflect differences in care delivery by staff and/or different expectations of ED care among Hispanic and Black patients.

KEY WORDS: emergency department; patient experience; utilization; race; communication.

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INTRODUCTION

There were over 145 million emergency department (ED) visits in the United States (U.S.) in 2016, equivalent to 45.8 visits per 100 persons.¹ Each year, nearly 20% of adults in the U.S. visit an ED.^{2, 3} ED utilization, however, varies by race/ethnicity. While non-Hispanic White (hereafter, “White”) patients represent the majority of ED visits, non-Hispanic Black or African American (hereafter, “Black”) individuals are twice as likely to visit an ED as Whites or Hispanics (80.4 vs. 43.5 and 40.4 visits per 100 persons per year).^{1, 4, 5} In addition, Blacks and Hispanics are more likely than Whites to report receiving routine healthcare in an ED and are less likely to report having a primary care provider.^{4–7}

Though these racial/ethnic differences in ED utilization are well documented, less is known about racial/ethnic differences in the experience of care during an ED visit. In non-ED healthcare settings, researchers have found racial/ethnic differences in care experiences, though not in a consistent direction. In the hospital inpatient setting, Goldstein et al.⁸ found that Hispanics and Blacks reported better care experiences than Whites within the same hospital, but typically received care from poorer-quality hospitals than Whites. In the hospice setting, caregivers of Hispanic and Black decedents reported better care experiences than caregivers of White decedents for five of seven measures but reported worse care experiences with respect to getting emotional and spiritual support.⁹ In the Medicare outpatient setting, Hispanic beneficiaries generally reported poorer care experiences than White beneficiaries, but Hispanic beneficiaries reported better care experiences in health plans that had a higher proportion of Hispanics;^{10, 11} also in the Medicare outpatient setting, Black beneficiaries reported poorer care experiences than White beneficiaries for six of nine measures.¹² While prior studies have examined ED experiences generally,^{13, 14} those that have examined racial/ethnic differences have been limited in scope (e.g., using only a single hospital) or relied on a single overall rating rather than multiple patient experience domains (e.g., communication, timeliness).^{15, 16}

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Higher ED utilization is not completely explained by lack of access to care.^{7, 17–20} ED utilization may be driven by a combination of ED experiences and access to care.^{15, 16} Alternatively, prior ED utilization may shape a patient's reported experience in the ED if prior utilization informs their expectations or self-efficacy within an ED setting. Understanding potential racial/ethnic differences in patient experience of care in the ED is an important step towards understanding the complex relationship between experience of care, access to care, and ED utilization. Potential racial/ethnic differences in ED experiences may be attributable to outright differences in care provided by nurses, doctors, and other ED staff, or differences in patient's expectations of care delivery in the ED. In addition, similar to non-ED settings, it would be important to assess whether differences in care experiences exist within EDs (racial/ethnic groups reporting different experiences within the same ED) versus between EDs (racial/ethnic groups concentrating within and thus receiving care from poorer/better quality EDs), or a combination of both.

The Centers for Medicare & Medicaid Services (CMS) has developed the Emergency Department Patient Experience of Care (EDPEC) Discharged to Community (DTC) survey to measure patient experience in the ED among adult patients discharged to home.²¹ In this study, we used data from a nationwide administration of the EDPEC DTC Survey to (1) examine racial/ethnic differences in self-reported reasons for ED utilization, ED utilization in the past 6 months, and reported sources of usual care; and (2) examine differences in reported experience of care in the ED, including timeliness of care, communication about medications, and follow-up care. In addition, we investigated whether racial/ethnic differences in reported experiences remained after accounting for differences in ED utilization.

STUDY DATA AND METHODS

Data Source

Hospital-based EDs with 14,000 or more annual ED visits were eligible for the study. The 50 hospitals that were recruited for this study were representative of all eligible hospitals with respect to the number of annual ED visits and geographic region (see [Appendix](#) and [Appendix Table 1](#) in the Supplementary Information for more details about ED recruitment).

Patient eligibility for this survey was the same as eligibility for the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey with one exception: ED patients admitted to the hospital following the ED visit were ineligible (see [Appendix](#) in the Supplementary Information).^{22, 23} A total of 16,006 eligible patients discharged from the 50 hospitals January–March 2016 were randomly sampled and randomized to one of three survey modes: mail only, telephone only, or mixed mode (mail with telephone follow-up); the survey was conducted in English. The overall response rate was 20.25% (see [Appendix](#) in the

Supplementary Information); survey mode effects are described elsewhere.²⁴ In this study, we analyzed data from the 3122 eligible respondents. The 43-item EDPEC DTC survey instrument used in this study (EDPEC Version 3.0) is available online.²¹ Subsequent to the completion of this study, the survey was revised and in March 2020 received the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) trademark; the survey is now known as the Emergency Department Consumer Assessment of Healthcare Providers and Systems, or ED CAHPS®, survey.²¹ This study was approved by the Institutional Review Board at the RAND Corporation (Approval Number 2015-1060).

Dependent Variables: Measures

We analyzed six measures: three composite measures regarding getting timely care, doctor and nurse communication, and communication about medications; and three single-item measures that assessed receipt of sufficient information from doctors and nurses about test results, discussions with hospital staff about ability to receive follow-up care, and willingness to recommend the ED. [Table 1](#) lists the survey questions in each measure (see [Appendix Table 2](#) in the Supplementary Information for more details). Measurement properties of the composite measures are detailed elsewhere.²⁵

Previous studies have found that responses to specific health-related patient experience survey questions (“report” type questions) can be compared fairly across Black, White, and Hispanic racial/ethnic groups because these groups tend to use these response scales in a similar manner.^{26, 27} In contrast, other studies have found that the 0–10 response scale employed for the overall rating of care is used differently by different racial/ethnic groups.^{28, 29} Because comparisons of this rating across racial/ethnic groups might reflect differences in response propensity rather than true differences in experiences, we excluded the overall rating of ED care in our analysis.

We calculated measure scores as top-box scores, in which the best or most positive response option was coded as 100 and all other response options were coded as 0 (see [Table 1](#)). For example, for the question “During this emergency room visit, did doctors and nurses give you as much information as you wanted about the results of these tests?” the response “Yes, definitely” was coded as 100, while “Yes, somewhat” or “No” were coded as 0 (see [Appendix Table 3](#) in the Supplementary Information for results from a sensitivity analysis that utilized an alternative scoring method).

Composites were calculated for each patient by averaging the non-missing top-box scored items within the composite.

Patient Characteristics

Our main independent variable was patients' race/ethnicity, categorized as non-Hispanic White, Hispanic, non-Hispanic Black, and “Other,” based on the patient's self-report (see [Appendix](#) in the Supplementary Information for details).

Table 1 Emergency Department Patient Experience of Care Discharged to Community Survey Items that Compose Each Measure

Measure	Survey items	Top-box response option
Composites		
Getting timely care	(Q3) When you first arrived at the emergency room, how long was it before someone talked to you about the reason why you were there? (Q4) During this emergency room visit, did you get care within 30 minutes of getting to the emergency room?	Less than 5 minutes Yes
Doctor and nurse communication	(Q16) During this emergency room visit, how often did nurses treat you with courtesy and respect? (Q17) During this emergency room visit, how often did nurses listen carefully to you? (Q18) During this emergency room visit, how often did nurses explain things in a way you could understand? (Q19) During this emergency room visit, how often did doctors treat you with courtesy and respect? (Q20) During this emergency room visit, how often did doctors listen carefully to you? (Q21) During this emergency room visit, how often did doctors explain things in a way you could understand?	Always Always Always Always Always Always
Communication about medications	(Q6) During this emergency room visit, did the doctors or nurses ask about all of the medicines you were taking? (Q8) Before giving you any new medicine, did the doctors or nurses tell you what the medicine was for? (Q9) Before giving you any new medicine, did the doctors or nurses describe possible side effects to you in a way you could understand?	Yes, definitely Yes, definitely Yes, definitely
Single items		
Receipt of sufficient information from doctors and nurses about test results	(Q15) During this emergency room visit, did doctors and nurses give you as much information as you wanted about the results of these tests?	Yes, definitely
Discussions with hospital staff about a patient's ability to receive follow-up care	(Q27) Before you left the emergency room, did someone ask if you would be able to get this follow-up care?	Yes
Willingness to recommend the ED	(Q31) Would you recommend this emergency room to your friends and family?	Definitely yes

Patients with no reported race/ethnicity, or who reported as multiple races, non-Hispanic Asian/Pacific Islander, or American Indian/Alaska Native were classified into a single "Other" category; due to small sample sizes, we do not present results for this heterogeneous group.

For case-mix adjustment, we used patient characteristics that have been previously shown to be associated with response patterns (see the Statistical Analysis section), including patient's age, education, primary language spoken at home, self-reported overall health status, reason for the ED visit, arrival by ambulance, self-reported importance of getting timely care, whether a proxy helped in completing the survey, and response percentile.²⁴ Response percentile is defined as the rank-ordered number of days between a respondent's discharge date and the date that data collection activities ended for the respondent relative to all eligible patients within an ED and survey mode, scaled from 0 to 1.³⁰⁻³² Additional patient characteristics used for descriptive purposes were as follows: gender, number of ED visits in the past 6 months, having a primary care doctor/usual source of care, number of visits to this usual source of care in the past 6 months, self-reported mental health status, and geocoded rural-urban commuting area codes.

Statistical Analysis

First, we summarized the patients' demographic characteristics, health-related characteristics, and health care utilization and tested for differences between racial/ethnic groups using

chi-squared tests. We then used multivariate linear regression models both to examine whether ED care experiences differed by race/ethnicity and to assess the extent to which observed differences were due to the concentration of racial/ethnic minorities in particular hospitals ("between-ED" differences) versus differential care experiences within the same hospitals ("within-ED" differences). To estimate overall differences, we ran models using the measures as the dependent variables and race/ethnicity as the independent variable, adjusting for mode of survey administration and the case-mix adjusters listed above. To estimate differences in experiences for each racial/ethnic group within a given ED, we used the same model, adding fixed effects for hospitals. We then estimated between-ED experiences for each racial/ethnic group by calculating the difference between overall and within-ED estimates—that is, the amount of the overall difference attributable to Black and Hispanic patients' receiving care from EDs that are on average better or worse than the average ED from which White patients received care.

Lastly, we investigated whether any observed difference in ED care experiences could be explained by differences in self-reported past ED utilization and/or differences in having a usual source of care, which potentially reflects familiarity with receiving care in the ED setting. Specifically, we conducted a mediation analysis wherein we further adjusted our multivariate regression models with fixed effects for hospitals by including patients' frequency of ED use in the past 6 months (1, 2, or 3+ times) and having a usual source of care (yes or no) and compared the coefficients for Blacks and Hispanics

Table 2 Demographic Characteristics of Emergency Department Patient Experience of Care Discharged to Community Survey Respondents, by Race/Ethnicity of Patients (N=3122)

	Overall	White	Hispanic	Black	
Total respondents	3122 (100.0%)	2022 (64.8%)	323 (10.3%)	372 (11.9%)	
Survey mode					***
Mail only	901 (28.9%)	680 (33.6%)	75 (23.2%)	72 (19.4%)	
Telephone only	1126 (36.1%)	653 (32.3%)	128 (39.6%)	162 (43.5%)	
Mixed mode	1095 (35.1%)	689 (34.1%)	120 (37.2%)	138 (37.1%)	
Age					***
18–34	781 (25.0%)	401 (19.8%)	143 (44.3%)	128 (34.4%)	
35–54	811 (26.0%)	464 (22.9%)	98 (30.3%)	123 (33.1%)	
55–74	983 (31.5%)	714 (35.3%)	52 (16.1%)	91 (24.5%)	
75 +	533 (17.1%)	432 (21.4%)	28 (8.7%)	30 (8.1%)	
Unknown	14 (0.4%)	11 (0.5%)	2 (0.6%)	0 (0.0%)	
Gender					
Female	1926 (61.7%)	1231 (60.9%)	203 (62.8%)	238 (64.0%)	
Male	1196 (38.3%)	791 (39.1%)	120 (37.2%)	134 (36.0%)	
What is the highest grade or level of school that you have completed? (Q37)					***
8th grade or less	112 (3.6%)	56 (2.8%)	27 (8.4%)	9 (2.4%)	
Some high school	274 (8.8%)	142 (7.0%)	35 (10.8%)	60 (16.1%)	
High school or GED	956 (30.6%)	592 (29.3%)	123 (38.1%)	136 (36.6%)	
Some college or 2-year degree	984 (31.5%)	665 (32.9%)	102 (31.6%)	126 (33.9%)	
4-year college graduate	357 (11.4%)	271 (13.4%)	16 (5.0%)	25 (6.7%)	
More than 4-year college degree	344 (11.0%)	280 (13.8%)	15 (4.6%)	13 (3.5%)	
Unknown	95 (3.0%)	16 (0.8%)	5 (1.5%)	3 (0.8%)	
What language do you mainly speak at home? (Q40)					***
English	2845 (91.1%)	1987 (98.3%)	200 (61.9%)	362 (97.3%)	
Spanish	109 (3.5%)	1 (0.0%)	105 (32.5%)	1 (0.3%)	
Other	69 (2.2%)	23 (1.1%)	4 (1.2%)	7 (1.9%)	
Unknown	99 (3.2%)	11 (0.5%)	14 (4.3%)	2 (0.5%)	
Did someone help you complete this survey? (Q41)					*
No	2941 (94.2%)	1908 (94.4%)	297 (92.0%)	359 (96.5%)	
Yes	154 (4.9%)	109 (5.4%)	25 (7.7%)	12 (3.2%)	
Unknown	27 (0.9%)	5 (0.2%)	1 (0.3%)	1 (0.3%)	
Patient geocoded rural-urban commuting area (RUCA) codes					***
Metropolitan (RUCA: 1–3)	2631 (84.3%)	1630 (80.6%)	310 (96.0%)	347 (93.3%)	
Micropolitan (RUCA: 4–6)	312 (10.0%)	244 (12.1%)	6 (1.9%)	18 (4.8%)	
Small town (RUCA: 7–9)	75 (2.4%)	56 (2.8%)	4 (1.2%)	6 (1.6%)	
Rural (RUCA: 10)	102 (3.3%)	91 (4.5%)	2 (0.6%)	1 (0.3%)	
Unknown	2 (0.1%)	1 (0.0%)	1 (0.3%)	0 (0.0%)	

Notes: Significance was calculated using chi-square tests to determine differences in the distributions between White, Hispanic, and Black of non-missing/known responses categories; overall column includes all patients including those in the “Other” category

* $0.01 \leq p < 0.05$

** $0.001 \leq p < 0.01$

*** $p < 0.001$

between models with and without the hypothesized mediators. If self-reported past ED utilization and/or differences in having a usual source of care mediated the effects of race/ethnicity on patient experience, then the regression coefficients for race/ethnicity should be reduced when the potential mediators are added to the model.

RESULTS

Demographic Characteristics of Patients

Of the 3122 respondents to the EDPEC DTC Survey, 65% were White ($n=2022$), 12% were Black ($n=372$), 10% were Hispanic ($n=323$), and the remaining 13% ($n=405$) were classified as “Other.” Overall, compared to Whites, Blacks and Hispanics were more likely to respond to the telephone-only and mixed-mode protocols, more likely to be younger (18–54 years old) and less educated (obtaining a high school degree or less), and more likely to live in metropolitan areas ($p < 0.001$ for all; see Table 2). Hispanics were more likely than Blacks or

Whites to primarily speak Spanish at home ($p < 0.001$) and have proxy help while completing the survey ($p = 0.031$).

Health and ED Utilization by Race/Ethnicity

Compared with White patients, Hispanic and Black patients were more likely to visit the ED for an ongoing health condition (as opposed to an accident or a new health problem), more likely to have visited an ED three or more times in the last 6 months, and less likely to have a usual source of care ($p < 0.001$ for all; see Table 3). Black and Hispanic patients were also more likely to report poorer mental health ($p = 0.038$).

Overall Differences in Care Experience by Race/Ethnicity

Overall, Black and Hispanic patients reported better doctor and nurse communication than White patients (+4.0 percentage points, $p = 0.036$, for Black patients, and +6.4 percentage points, $p = 0.008$, for Hispanic patients; see Table 4). Compared with White patients, Hispanic patients reported better

Table 3 Health- and Utilization-Related Characteristics of Emergency Department Patient Experience of Care Discharged to Community Survey Respondents, by Race/Ethnicity of Patients (N=3122)

Total respondents	Overall	White	Hispanic	Black	
	3122 (100.0%)	2022 (64.8%)	323 (10.3%)	372 (11.9%)	
Thinking about this visit, what was the main reason why you went to the emergency room? (Q1)					***
Accident or injury	780 (25.0%)	519 (25.7%)	72 (22.3%)	83 (22.3%)	
A new health problem	1331 (42.6%)	896 (44.3%)	148 (45.8%)	136 (36.6%)	
An ongoing health condition or concern	945 (30.3%)	559 (27.6%)	98 (30.3%)	147 (39.5%)	
Unknown	66 (2.1%)	48 (2.4%)	5 (1.5%)	6 (1.6%)	
For this visit, did you go to the emergency room in an ambulance? (Q2)					
No	2519 (80.7%)	1637 (81.0%)	263 (81.4%)	294 (79.0%)	
Yes	587 (18.8%)	376 (18.6%)	60 (18.6%)	73 (19.6%)	
Unknown	16 (0.5%)	9 (0.4%)	0 (0.0%)	5 (1.3%)	
In the last 6 months, how many times have you visited any emergency room to get care for yourself? Please include the emergency room visit you have been answering questions about in this survey. (Q32)					***
1 time	1691 (54.2%)	1163 (57.5%)	160 (49.5%)	180 (48.4%)	
2 times	651 (20.9%)	405 (20.0%)	76 (23.5%)	84 (22.6%)	
3 times	326 (10.4%)	196 (9.7%)	48 (14.9%)	35 (9.4%)	
4 times	155 (5.0%)	91 (4.5%)	12 (3.7%)	31 (8.3%)	
5-9 times	134 (4.3%)	76 (3.8%)	14 (4.3%)	21 (5.6%)	
10 or more times	34 (1.1%)	17 (0.8%)	6 (1.9%)	8 (2.2%)	
Unknown	131 (4.2%)	74 (3.7%)	7 (2.2%)	13 (3.5%)	
Not counting the emergency room, is there a doctor's office, clinic, or other place you usually go if you need a check-up, want advice about a health problem, or get sick or hurt? (screener) (Q33)					***
No	364 (11.7%)	168 (8.3%)	62 (19.2%)	70 (18.8%)	
Yes	2666 (85.4%)	1807 (89.4%)	256 (79.3%)	297 (79.8%)	
Unknown	92 (2.9%)	47 (2.3%)	5 (1.5%)	5 (1.3%)	
How many times in the last 6 months did you visit that doctor's office, clinic, health center, or other place to get care or advice about your health? (Q34)					**
None	229 (7.3%)	138 (6.8%)	29 (9.0%)	38 (10.2%)	
1 time	550 (17.6%)	392 (19.4%)	43 (13.3%)	58 (15.6%)	
2 times	632 (20.2%)	435 (21.5%)	56 (17.3%)	63 (16.9%)	
3 times	396 (12.7%)	275 (13.6%)	27 (8.4%)	54 (14.5%)	
4 times	266 (8.5%)	185 (9.1%)	31 (9.6%)	21 (5.6%)	
5-9 times	368 (11.8%)	238 (11.8%)	48 (14.9%)	39 (10.5%)	
10 or more times	158 (5.1%)	101 (5.0%)	20 (6.2%)	12 (3.2%)	
Unknown	159 (5.1%)	90 (4.5%)	7 (2.2%)	17 (4.6%)	
Screened out	364 (11.7%)	168 (8.3%)	62 (19.2%)	70 (18.8%)	
In general, how would you rate your overall health? (Q35)					*
Poor	221 (7.1%)	138 (6.8%)	25 (7.7%)	22 (5.9%)	
Fair	648 (20.8%)	398 (19.7%)	70 (21.7%)	100 (26.9%)	
Good	999 (32.0%)	673 (33.3%)	102 (31.6%)	128 (34.4%)	
Very good	793 (25.4%)	557 (27.5%)	81 (25.1%)	71 (19.1%)	
Excellent	383 (12.3%)	240 (11.9%)	42 (13.0%)	48 (12.9%)	
Unknown	78 (2.5%)	16 (0.8%)	3 (0.9%)	3 (0.8%)	
In general, how would you rate your overall mental or emotional health? (Q36)					*
Poor	101 (3.2%)	62 (3.1%)	10 (3.1%)	15 (4.0%)	
Fair	392 (12.6%)	244 (12.1%)	48 (14.9%)	52 (14.0%)	
Good	795 (25.5%)	531 (26.3%)	76 (23.5%)	100 (26.9%)	
Very good	856 (27.4%)	616 (30.5%)	81 (25.1%)	84 (22.6%)	
Excellent	903 (28.9%)	558 (27.6%)	105 (32.5%)	118 (31.7%)	
Unknown	75 (2.4%)	11 (0.5%)	3 (0.9%)	3 (0.8%)	

Notes: Significance was calculated using chi-square tests to determine differences in the distributions between White, Hispanic, and Black of non-missing/known responses categories; overall column includes all patients including those in the "Other" category

* $0.01 \leq p < 0.05$

** $0.001 \leq p < 0.01$

*** $p < 0.001$

experiences regarding discussions with hospital staff about their ability to receive follow-up care (+7.2 percentage points, $p=0.038$) and were more likely to be willing to recommend the ED (+7.2 percentage points, $p=0.037$). All of these significant differences were medium-to-large in magnitude.³³

Within-ED Differences in Care Experience by Race/Ethnicity

Table 4 shows that observed overall differences are largely attributable to within-ED differences with respect to doctor and nurse communication. Within a given ED, Black and

Hispanic patients reported better doctor and nurse communication than White patients (+4.8 percentage points, $p=0.026$ for Black patients; +7.5 percentage points, $p=0.003$, for Hispanic patients). In addition, Black patients reported better communication about medications than White patients (+4.9 percentage points, $p=0.043$) within a given ED.

Between-ED Differences in Care Experience by Race/Ethnicity

In our examination of the between-ED differences, we found that Hispanic patients were significantly more likely than

Table 4 Measure Scores by Race/Ethnicity Of Patients

Measures	Case-mix adjusted differences from Whites								
	Case-mix adjusted overall scores			Overall		Within-ED		Between-ED	
	White	Hispanic	Black	Hispanic	Black	Hispanic	Black	Hispanic	Black
Composites									
Getting timely care	70.5	66.6	67.7	-3.9	-2.9	-0.4	-0.4	-3.5*	-2.5
Doctor and nurse communication	76.4	82.8**	80.4*	6.4**	4.0*	7.5**	4.8*	-1.1	-0.8
Communication about medications	79.9	83.1	82.8	3.2	2.9	3.3	4.9*	-0.1	-1.9
Single items									
Receipt of sufficient information from doctors and nurses about test results	69.2	75.9	72.6	6.7	3.4	4.7	4.0	1.9	-0.6
Discussions with hospital staff about a patient's ability to receive follow-up care	77.5	84.7*	81.4	7.2*	3.9	6.8	3.6	0.4	0.3
Willingness to recommend the ED	65.0	72.2*	69.1	7.2*	4.0	5.5	2.9	1.7	1.2

Notes: Survey items were scored using top-box scoring in which the best or most positive response option was coded as 100 and all other response options were coded as 0. For example, for the question "During this emergency room visit, did doctors and nurses give you as much information as you wanted about the results of these tests?," the response "Yes, definitely" was coded as 100, while "Yes, somewhat" or "No" were coded as 0. Scores were adjusted for case-mix and mode of survey administration (mail only, telephone only, or mixed mode—that is, mail with telephone follow-up). Overall results are from fixed-effects models that estimated the difference between Black or Hispanic patients and White patients, with case-mix adjusted for patient characteristics and mode of survey administration. Within-ED results are from models that added hospital fixed effects, thereby controlling for hospital-based EDs. Between-ED effects were estimated as the difference between overall and within-ED effects. Significance refers to difference from White. The "Other" race/ethnicity category was included in the models, but results are not shown

* $0.01 \leq p < 0.05$

** $0.001 \leq p < 0.01$

*** $p < 0.001$

Whites to receive care from EDs that offered poorer care experiences on getting timely care (see Table 4). Compared with Whites, Hispanic patients received care from EDs that averaged 3.5 percentage points lower ($p=0.013$) on this measure, a medium difference.³³ There were no other instances of statistically significant between-ED racial/ethnic differences in patient experiences.

Examination of Potential Mediation

In our examination of potential mediation of racial/ethnic differences in patient experience by patients' frequency of ED use in the past 6 months and having a usual source of care, there was no evidence of mediation. Specifically, in no instance did a hypothesized mediator reduce racial/ethnic differences in patient experience to a statistically significant degree (results not shown).

DISCUSSION

Visits to the ED are common for many in the U.S. who need medical assistance with an urgent condition, and ED utilization is higher for Black and Hispanic patients, who may face additional structural barriers to care, including insurance and network coverage.¹⁻³ We find that for some aspects of the ED care experience, Blacks and Hispanics report better care than Whites; the magnitude of these differences is medium-to-large³³ and substantially greater than those observed in hospital inpatient and hospice settings.^{8, 9}

We offer two hypotheses for these observed differences. First, given their comparatively greater use of and experience with the ED, Black and Hispanic patients may be more likely

to expect challenging ED experiences, especially if they had previously experienced poor treatment or interactions with ED staff in the past.^{5, 6} If, based upon prior experience, a patient expects to wait a substantial amount of time to be seen or to have only cursory and limited communication with ED staff, then a briefer than anticipated wait time and substantial communication may exceed those expectations. As an alternative hypothesis, patients with higher prior ED utilization or who lack a usual source of care may be savvier with respect to meeting their needs in an ED setting. Thus, better experience in the ED may be a result of their own focused efforts to get the information they need. However, if this were the case, we would have expected ED utilization to mediate the differences in experience, which we did not observe. Possibly, our measure of utilization alone does not adequately capture differences in patient expectations or knowledge; other specific measures assessing, e.g., patient expectations are needed to test this hypothesis.

It is also possible that ED providers may be aware of patient subgroups that are more likely to use the ED and to lack a usual source of care and exert more effort to communicate effectively with them. For example, ED staff may discuss follow-up care more comprehensively with some patients to help them understand where to go in the future and to avoid clinically unnecessary use of EDs. While this hypothesis is not testable with our data, it would be in line with past efforts to increase cultural competence in the ED.^{16, 34}

We also found that Hispanic patients were significantly more likely than Whites to receive care from EDs that typically provide less timely care. This difference in access to EDs that provide timely care is worrisome, especially as it is not limited to the ED setting—prior work has shown that

minorities tend to receive care from poorer-quality hospitals and hospices as well.^{8, 9} All patients should have access to high-quality care and further efforts are needed to ensure broader access to high-quality care.

Although Blacks and Hispanics report better care experiences than Whites for some measures, there is still substantial room for improvement for all groups. For example, Hispanics have the highest score, 84.7, for the measure of whether there was a discussion with hospital staff about the patient's ability to receive follow-up care, which indicates that 15.3% did not report having such discussions. After-care discussions are important to ensure that patients know what to do when discharged and to reduce clinically unnecessary return visits to the ED. EDs generally cannot provide continuity of care and usually cannot access past medical care information, making appropriate treatment of complex existing conditions difficult.^{35–38}

Our study has limitations. First, the 50 EDs that participated in this study were large, voluntarily agreed to participate, and were hospital-based EDs (freestanding EDs were excluded from recruitment; see [Appendix](#) in the Supplementary Information); if these EDs and their patients substantially differ from others nationwide, our results may not be generalizable to all EDs. Second, our response rate was low and results are limited to survey respondents only and thus may not be representative of all ED DTC patients in these hospitals. Third, we did not have any information about past experiences with ED care, insurance information, staff race/ethnicity, or language spoken by staff; racial/ethnic differences may be partially explained by these unmeasured confounders. Lastly, these data were collected in 2016 and thus do not reflect the dramatic change in the ED environment that has occurred as a result of COVID-19. EDs have had to make radical changes in care delivery that will likely affect patient experience (e.g., patients not being able to bring a friend or relative with them into the ED). Our study has notable strengths, such as the inclusion of 50 diverse geographically dispersed EDs and the ability to adjust for several potential confounders, including the reason for the ED visit, arrival by ambulance, patients' language, education, and self-reported health.

In summary, we found that Hispanic and Black ED patients reported higher ED utilization, more often lacked a usual source of care, and reported better experience with ED care compared to White patients. Future work should investigate other potential explanations of differences in ED care experience, ED utilization, and their relationship to one another that could help EDs identify and target areas for quality improvement.

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