

# Importance of Communication and Relationships: Addressing Disparities in Hospitalizations for African-American Patients in Academic Primary Care



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**BACKGROUND:** There are many interventions to facilitate seamless continuity of care for patients in transition from hospital back to primary care; however, disparities remain in readmission rates for vulnerable populations, especially African-Americans.

**OBJECTIVES:** We set out to investigate the association of race and ethnicity with 30-day readmission in our urban academic setting and to identify factors that could be leveraged in primary care to address disparities in hospitalizations.

**METHODS/APPROACH:** Using data originally collected for quality improvement purposes, we evaluated 30-day readmission rates for our primary care patients (January 1, 2013–September 30, 2014) by race and ethnicity, adjusting for demographic and clinical characteristics. Then, using inductive and deductive methods, we coded semi-structured interviews with 24 African-American primary care patients who were discharged from the Medicine or Cardiology service at our tertiary care hospital during the study period.

**KEY RESULTS:** African-Americans had the highest readmission rate (21.7%) and a higher adjusted odds of readmission (1.37; 95% CI 1.04–1.81) compared to Whites. Five major themes emerged as having potential to be leveraged in primary care to help prevent multiple hospitalizations: (1) dependable patient-physician relationships, (2) healthcare coordination across settings, (3) continuity with one primary care provider (PCP), (4) disease self-management, and (5) trust in resident physicians. Participants also made several recommendations to keep patients like themselves from returning to the hospital: increased time to tell their story during their primary care visit, more direct patient-physician communication during the visit, and improved access between visits.

**CONCLUSIONS:** While African-American patients in our practice experience higher rates of hospital readmissions

than their White counterparts, they emphasize the significance of their PCP relationship and communication to enhance disease management and prevent hospitalizations. Ongoing efforts are needed to establish and implement best practice communication trainings for patients at increased risk of hospitalization, particularly for resident physicians.

**KEY WORDS:** communication; health disparities; qualitative research; transitions of care; primary care interventions.

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## INTRODUCTION

Health care delivery in the USA is rapidly changing to prioritize high-value, cost-effective interventions that improve health outcomes. Hospital readmissions, many which are deemed preventable, are financially burdensome on the US healthcare system, costing approximately \$30.8 billion annually.<sup>1</sup> Multiple studies have shown racial disparities in hospitalizations, with African-Americans especially experiencing higher readmission rates for chronic conditions, including congestive heart failure, myocardial infarction, pulmonary disease, diabetes, and kidney disease.<sup>2–4</sup> Readmission disparities for African-Americans persist despite efforts to manage care and control costs with programs such as Medicare Advantage; one study notably demonstrated a 64% higher readmission rate for African-Americans postoperatively compared to Whites<sup>5</sup>. This inequity extends beyond hospitalizations. African-American and Hispanic populations are less likely to receive evidence-based medications for chronic conditions<sup>6</sup> and more likely to receive lower quality healthcare compared to Whites on 38% of AHRQ measures.<sup>7</sup>

Research in hospital readmissions has largely been conducted during transitions in care, such as hospital discharge back to outpatient settings.<sup>8–10</sup> Interventions to prevent frequent hospitalizations focus primarily on early primary care follow-up, post-hospital discharge phone calls by healthcare

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providers,<sup>11, 12</sup> and close coordination between primary care physicians (PCP) and hospitalists.<sup>13</sup> No single intervention alone has been found to decrease hospitalizations,<sup>14</sup> suggesting the need for multidisciplinary, chronic care management of high-risk patients. Additionally, little is known about patients' perspectives regarding the role of PCPs and the significance of patient-physician relationships and communication in preventing hospital readmissions for African-American populations. Our study attempts to understand patient-identified barriers experienced by African-Americans in primary care that contribute to hospitalizations and potential readmissions.

## METHODS

### Study Design

Quantitative and qualitative data were originally collected for clinic-based quality improvement efforts and subsequently analyzed for research purposes. We used explanatory sequential design to investigate the association of race and ethnicity with 30-day readmission in an urban academic setting and to identify factors that could be leveraged in primary care to address readmission and hospitalization disparities. The institutional review board at the University of California San Francisco reviewed and granted an exemption for the study.

### Study Population

The quantitative data set included all general internal medicine patients in an urban academic practice who were discharged from any service of the teaching hospital January 1, 2013–September 30, 2014.

For the qualitative interview part of our study, patients discharged from Hospital Medicine or Cardiology services during July 1, 2013, to June 1, 2014, were eligible. Participants were invited for the qualitative interview component if they (1) self-identified as African-American, (2) were English-speaking, (3) were  $\geq 18$  years old, and (4) had at least one discharge from the aforementioned services in the prior 18 months. One hundred patients were eligible for study participation, after excluding other discharge services, death, repeated medical record numbers, and PCP requests. Of the 100 eligible patients, 24 participated in interviews, 17 no-showed for their interview appointment, 15 refused participation, 5 were no longer eligible (late PCP requests, cognitive impairment, no longer at practice), and 39 could not be contacted.

### Data Collection

Quantitative data collected from the electronic medical record included admission and discharge dates, patient demographics (race and ethnicity, age, gender, preferred language), and clinical characteristics (PCP type, insurance, ICU stay, severity of illness score<sup>15</sup>, Elixhauser comorbidity index<sup>16, 17</sup>, admission status).

For the qualitative investigation, participants completed a demographic questionnaire and a semi-structured, in-person

interview that occurred between September and November 2014. The interview guide was divided into four separate sections: before hospital admission, during hospital admission, transition from hospital to home, and overall reflections or suggestions (Appendix Online). Interviews were purposefully comprised of open-ended questions to understand participants' full experience of hospitalization and their perception of the role of primary care in preventing hospitalizations. Each interview lasted 45 to 60 min, and participants received a \$25 gift card in appreciation of their time. All interviews were audio-recorded and professionally transcribed.

### Analysis

**Quantitative.** We considered the first discharge in the dataset as the "index" admission and defined readmission as admission to the hospital  $\leq 30$  days after the index. Any subsequent admission could serve as a new index admission, such that an individual patient could have more than one index admission and more than one readmission. Descriptive statistics were calculated using proportion and means, and bivariate associations of patient and clinical characteristics with readmission were investigated using chi-square for categorical variables and *t* tests for continuous variables. For each patient discharge in the dataset, we compared mean number of hospitalizations in the prior year, and mean number of emergency department (ED) visits in the prior 6 months by race and ethnicity. We then modeled the odds of hospital readmission by race and ethnicity (non-Latino White, Asian/Asian-American, Black/African-American, Hispanic/Latino, Pacific Islander/American Indian/Alaska Native, other/unknown) adjusting for patient age, gender, PCP type (resident, attending), insurance (Private, Medicare, Medicaid), severity of illness (minor, moderate, major, extreme), ICU stay (yes/no), comorbidity index, and index admission length of stay. The model was adjusted for clustering within patients. We did not adjust for prior year hospitalizations or prior 6-month ED visits as these are likely mediators of the effect of race-ethnicity on readmission. All analyses were conducted using STATA version 14.2 (College Station, TX: StataCorp LP).

**Qualitative.** The research team utilized inductive and deductive coding to analyze the transcribed interviews. Guided by the Boyatzis framework for creating data-driven codes, the codebook was developed initially by two authors (NJ, UE) using 3 interviews chosen at random.<sup>18, 19</sup> These two authors double-coded an additional two transcripts to confirm utility and reliability of the codes; thus, 5 out of 24 transcripts were double-coded. The research team (LK, NJ, UE) then met to reconcile coding discrepancies and review additional themes that had emerged during team discussions. Two authors (NJ, UE) completed coding for the remaining transcripts; any discrepancies were resolved through consensus with all three authors. For this manuscript, a fourth author (JV), not involved in the initial coding, utilized clinical expertise and recent literature review to re-assess all transcripts and

coding of themes to identify factors that could potentially be leveraged in primary care to help prevent readmission. All qualitative analyses were performed using NVivo Software (QSR International Pty Ltd. Version 10, 2012).

## RESULTS

### Quantitative: 30-Day Readmission

The mean number of hospitalizations in the year prior to a given index admission was significantly higher for African-Americans compared to the overall mean (mean for African-Americans 1.5, s.d. 3.7 vs. overall mean 0.6, s.d. 1.9;  $p < 0.001$ ). Similarly, the mean number of ED visits in the prior 6 months was significantly higher for African-Americans compared to the overall mean (mean for African-Americans 6.2, s.d. 12.2 vs. overall mean 3.3, s.d. 7.9;  $p < 0.001$ ). Table 1 summarizes baseline characteristics by readmission status and the results of the adjusted model for the 4,409 hospital discharges for primary care general medicine patients between January 2013 and September 2014. African-Americans had the highest 30-day readmission rate (21.7%) and a higher adjusted odds of readmission (1.37; 95% CI 1.04–1.81)

compared to Whites. There were no differences for other race and ethnic groups in the adjusted model.

### Qualitative Themes

**Description of the Sample.** Table 2 outlines the demographics of the 24 interview participants. The majority were high school graduates; only one participant had a college degree. Two-thirds reported financial insecurity. The majority of participants independently managed their healthcare. Two-thirds reported fair or poor health status. In the 18 months prior to study enrollment, 11 participants experienced a single hospitalization, 10 had multiple hospital admissions but none within 30 days of a prior hospitalization, and 3 were readmitted to the hospital within 30 days of a prior hospitalization. Five major themes emerged as having potential to be optimized in the primary care setting: (1) presence of a dependable patient-physician relationship, (2) importance of coordination across multiple healthcare settings and providers, (3) continuity with one PCP, (4) barriers to disease self-management, and (5) trust in resident physicians. Participants also made specific suggestions that might improve the overall experience within primary care and prevent future readmissions.

**Table 1 Predictors of 30-Day Hospital Readmission for Patients in an Urban Academic General Medicine Practice (January 1, 2013–September 30, 2014)**

	No 30-day readmission <i>N</i> = 3,740	30-day readmission <i>N</i> = 669	<i>p</i> value	Adjusted OR** (95% CI)
Race/ethnicity				
Non-Latino White	1,533 (86.2)	245 (13.8)	< 0.001	Ref
Asian/Asian American	840 (86.2)	134 (13.8)		0.92 (0.71–1.19)
Black/African-American	641 (78.3)	178 (21.7)		1.37 (1.04–1.81)
Hispanic/Latino	411 (83.9)	79 (16.2)		1.00 (0.73–1.39)
PI/AI/AN*	34 (83.9)	4 (16.2)		0.51 (0.18–1.46)
Other/unknown	272 (90.4)	29 (9.6)		0.66 (0.44–0.99)
Age (mean ± SD)	62.1 ± 18.2	61.1 ± 18.0	0.281	0.99 (0.98–1.00)
Gender				
Female	2,137 (85.5)	362 (14.5)	0.248	Ref
Male	1,603 (83.9)	307 (16.1)		1.08 (0.87–1.33)
PCP type				
Attending/NP	2,848 (85.4)	488 (14.6)	0.125	Ref
Resident	892 (83.1)	181 (16.9)		1.05 (0.85–1.31)
Observation status				
Inpatient	3,063 (83.9)	587 (16.1)	< 0.001	Ref
Observation	677 (89.2)	82 (10.8)		1.26 (0.32–5.01)
Insurance type				
Private/Private + Medicare	1,058 (90.0)	117 (10.0)	< 0.001	Ref
Medicare	2,014 (84.0)	384 (16.0)		1.71 (1.25–2.34)
Medicaid	668 (79.9)	168 (20.1)		1.79 (1.33–2.43)
Severity of illness score				
Minor	637 (91.0)	63 (9.0)	< 0.001	Ref
Moderate	1,300 (85.4)	222 (14.6)		1.42 (1.04–1.92)
Major	952 (78.9)	254 (21.1)		1.82 (1.31–2.55)
Extreme	172 (78.5)	47 (21.5)		1.61 (0.99–2.64)
Missing	679 (89.1)	83 (10.9)		0.79 (0.19–3.24)
ICU stay Index Admission	408 (83.3)	82 (16.7)	0.312	1.00 (0.74–1.34)
Length of stay index admission (days; mean ± SD)	4.2 ± 8.1	5.0 ± 6.0	0.055	1.00 (0.99–1.01)
Comorbidity Index (mean ± SD)	1.29 ± 1.78	1.79 ± 2.05	< 0.001	1.07 (1.02–1.13)

\*PI Pacific Islander; AI American Indian, AN Alaska native

\*\*Model adjusted for all variables in table and for discharge service

**Table 2 Characteristics of African-American Primary Care Patients with Prior Hospitalizations Participating in Qualitative Interviews**

Characteristic	N (%)
Gender	
Female	12 (50)
Age (mean, range)	59.8 (44–86)
Education level	
Some high school	1 (4.4)
High school or GED equivalent	7 (30.4)
Technology/vocational school	2 (8.7)
Some college	12 (52.7)
College graduate	1 (4.4)
Marital/partner status	
Single	16 (72.7)
Not enough money to meet daily needs	15 (65.2)
Adequate health literacy <sup>46</sup>	15 (65.2)
Health self-management	
Self manages medications	15 (65.2)
Self manages appointments	20 (87.0)
Self manages transportation	14 (60.9)
Self-designated health status <sup>47</sup>	
Very good	2 (8.7)
Good	6 (26.1)
Fair	11 (47.8)
Poor	4 (17.3)

**Dependable Patient-Physician Relationship.** Participants valued honest patient-physician relationships, and positive opinions of their physician influenced their overall experience with the healthcare system:

“He’s a great doctor. I wouldn’t want no other doctor – he shows all the concern and care that a doctor’s supposed to do. He gets on me, ‘You been playing with your health. You’ve been my patient for [many] years now.’ So let’s do this.”

Physicians who were able to demonstrate an extra level of concern for their patients’ wellbeing, either in the clinic visit or through post-visit communications, were perceived as stronger allies in the therapeutic relationship. As one participant stated:

“Well he stays on me. He’ll have people actually call and check up on me to see if I did this, do that. He’s thorough...then there’s the stern hand if I don’t do what I’m supposed to do. So he’s an exceptionally great doctor. I really like him.”

Participants also emphasized the importance of strong communication skills, especially having a physician who listened and enabled open conversation between the patient and physician. This participant described:

“He does listen. He asks me, ‘Well, what do you want me to do?’ And we talk about it. I mean, I might ask him, ‘What do you suggest?’... That’s the thing, we can talk.”

Conversely, participants who had negative perceptions of the physician-patient relationship described ineffective communication styles by their physician, with participants feeling unheard, frustrated, or patronized:

“You never get the same answer. That’s why I am going to change my doctor. I try to talk to this one, and it’s like she is ignoring you. It’s like ‘I’m the doctor, you’re the patient, and I know what’s best for you.’ But I know my body.”

**Care Coordination and Information Sharing.** Multiple participants described the relief they felt when they realized the inpatient and outpatient teams were coordinating at hospital discharge to share information and management decisions. “The fact that when I was released [from the hospital] – and I had to follow up with my primary care four weeks later – to see that it’s true they kept communicating together. They were literally communicating as a team.” This transfer of information was also appreciated when it occurred between primary care and specialty providers, and explicit knowledge regarding this coordinated care effort was viewed positively by patients. One participant described a visit intended to review her hospitalization course to her primary care physician:

“She was already well aware of what happened. The communications between the hospital, my PCP, the kidney doctor, and the heart doctor – everybody gets the information...Everybody’s on the same page.”

When real-time coordination between inpatient and outpatient physicians was less evident to participants, they perceived their care to be inferior. One participant mentioned a delay in appropriate management that she attributed to untimely conversations between her outpatient gastroenterologist and the inpatient team:

“I think if the inpatient team talked to my GI [doctor], they would have said, ‘hey, this is what we usually do.’ Because that’s what GI deals with.”

Participants desired a more streamlined communication strategy within the primary care practice itself. Participants described frustration with lack of information shared between provider and support staff. One participant shared the example of medication reconciliation performed in his PCP’s office:

“I come in clinic, they go through everything, then my PCP gets on the computer. For some reason every time



I go there, they print the medications, and half the medications I don't actually take anymore."

Another participant revealed the number of lingering questions that remain after the clinic visit, many which get redirected to the front desk staff who are also unaware of the physician's thought process behind post-visit instructions:

"I've seen people checking out still asking questions – why did the doctor do this? Why did he say this? Matter of fact, I've been in that line too still asking questions."

**Continuity with the Primary Care Provider.** Multiple individuals stressed the significance of having a continuous, long-term relationship with their PCP. Common themes of trust, familiarity, and loyalty emerged as participants positively described more longitudinal patient-physician relationships with their PCP.

"Well I can contact him if I have any questions or concerns. [He] knows my chronic condition and has been taking care of me for the past 10 years."

"My doctor, I've had her for years. This doctor has gotten me through some really difficult times in my life."

"My relationship with my doctor will be eternal. She helped validate a lot of stuff that I was in the dark about with the rest of the medical team."

But other individuals commented on the perceived fragmented, disjointed care they receive when they attend their primary care clinic.

"I see different doctors – I don't know what's going on, but every 6 months it seems like I got a new doctor."

Participants also described utilizing the Emergency Department, knowing they would likely see a doctor other than their own PCP due to lack of access to PCP for urgent issues.

"If I'm borderline on deciding ER or [my PCP's] office, I have to choose the ER. I know my PCP is not going to be able to see me. I'll have to see another doctor – I don't like seeing an outside doctor."

**Barriers to Disease Self-management.** Participants acknowledged several barriers to successfully managing disease independently. First, participants recognized that minimizing the implications of the diagnosis, misreading care instructions, or misinterpreting return precautions could contribute to hospitalization. One person narrated a story of newly diagnosed diabetes and misunderstanding recommended dietary changes for weight loss. The participant, who subsequently was admitted for diabetic ketoacidosis, explained:

"Well, I was making aggressive attempts to lose weight, so I cut back on portion sizes. Then I made the mistake of getting these nectar-type juices from Costco, thinking that they would help curb my appetite, not realizing that they had all this sugar in them."

Others described a sense of denial regarding their medical conditions—"that's not me, that must be another guy, you got me mixed up with someone else" and "I feel fine, look fine – you know, out of sight, out of mind"—leading to health difficulties.

Many participants also encouraged providers to disclose candid, straightforward information about the patient's life-style choices, even if the conversation might be difficult to hear:

"I wasn't put off about it. If [my PCP] didn't say anything about me smoking cocaine, he wouldn't be doing his job. If his job is looking out for my best interests, then as the old saying go, 'help me help you'. I appreciated it."

Finally, participants disclosed the challenges of following through on medical advice in the face of competing priorities, such as financial or caregiver obligations. As one participant stated:

"I have a problem with being more concerned about my finances and making sure everything else is all right. That's one of the biggest reasons I ignore my health."

**Trust in Their Resident Physicians.** Evident throughout the interviews was a substantial amount of distrust of resident physicians. Multiple participants mentioned physicians' young appearance as an indication of inexperience; several used phrases like "experimenting," "investigators," "guinea pigs," and "another number...to learn from" in reference to care from resident physicians. Many participants described their resident physicians as

“beginners,” “students,” or “learners,” which ultimately affected their confidence in their PCP, as well as their level of engagement with primary care in general. As two participants elaborated:

“The young doctor come in talking like I’m their first patient and it’s their first time ever seeing somebody, physically, with the disease. They been studying books, looking at computers, analyzing the situation. But, having a physical body; you tell ‘em what’s going on, they say they don’t believe it. “Well, Miss, this ain’t your Apple computer.”

“[They called], said ‘man you’ve got a doctor’s appointment’. I said ‘yeah, I’m not going’, because those people don’t ever do anything. Young interns or whatever you call them, the beginners I always call them, they don’t know what to do. So what’s the use of me going there, they don’t tell me anything.”

**Recommendations from Participants.** Participant recommendations for improving primary care and reducing readmissions included more time during their primary care visit, direct communication during the visit, and better PCP access between visits.

“A little more time with our doctors, maybe more than 20 minutes, so I can tell her everything that’s going on in my life.”

“Be more direct with people, because sometimes it seems like they don’t even know what’s wrong with me. They don’t want me to know what’s wrong with me, like they’re keeping it a secret. They get on the computer and type, and I don’t even know what they wrote. Then I sit back and they tell me to go outside to schedule the next appointment.”

“Sometimes I have a problem getting my doctor to call me. I know they’re busy and they do get back to you at 6 or 7 o’clock, but I don’t want to talk to them at 6 or 7 o’clock. They should have a back up where somebody could fill that void.”

## DISCUSSION

After finding that our African-American primary care patients experience higher hospital readmission rates than other groups in our practice, we sought explanations, narratives, and perspectives from interviews with 24 of these patients. Participants highlighted the importance of the PCP in their

healthcare. In particular, they valued continuity with a single PCP, high quality patient-physician communication, coordination between care settings, and optimized disease self-management. When these themes were not present or unapparent to our African-American patients, it led to a lack of trust in primary care, delayed medical care, and the potential for hospitalization. By addressing these themes, we hope African-American patients might have a more enhanced primary care experience, and ultimately turn to utilizing primary care as a first-pass for disease management rather than the ER or hospital setting.

Compassionate and patient-centered communication remains a vital feature of the patient-doctor relationship. Perceived high-quality communication has been shown to affect patient satisfaction with overall healthcare experience,<sup>20, 21</sup> adoption of positive health-related behaviors,<sup>22</sup> achievement of disease-specific outcomes,<sup>23</sup> and self-engagement in disease management.<sup>24</sup> Conversely, ineffective communication is more often perceived and experienced by patients of discordant racial backgrounds,<sup>25–27</sup> which can perpetuate feelings of discrimination<sup>28</sup> and mistrust.<sup>29</sup> Street and colleagues found that physicians often misjudge African-Americans’ desire for partnership in their healthcare.<sup>30</sup> African-American patients’ perception and experience of lack of partnership and racial discrimination in healthcare contributes to low ratings of quality care,<sup>31, 32</sup> with downstream effects of both delayed and non-adherent medical care.<sup>33</sup> Our study demonstrated that patients respected transparent communication styles, even desiring to address difficult topics and know more around the logistics of care coordination that often occur outside of the primary care office. More direct, yet still empathetic, communication styles might facilitate greater patient-physician partnership, decrease perceived discrimination, and eliminate uncertainty around the lack of information-sharing with the patient and important members of their care team that several of our participants reported. Furthermore, our participants highlighted that, while some hospitalizations were unavoidable, seeking care from a trusted and mutually respectful PCP did often keep them out of the hospital.

Our study demonstrated that patients preferred to see a single continuous provider. Transitional periods are critical; patients who have disjointed follow-up or newly assigned PCPs are at higher risk for hospital readmissions.<sup>34</sup> These transitions are especially common with resident training sites given the turnover in graduates every 3 years. The African-American participants in our study emphasized the importance of a longitudinal, consistent relationship with one provider. Longer-term relationships with a single provider facilitated more in-depth understanding of the patient’s medical history, a stronger therapeutic alliance, and a greater engagement in the primary care setting. Thus, when transitions are necessary, a targeted effort to encourage more engaging first encounters such as described by Dang et al.<sup>35</sup> might be warranted. Ideally, these visits would allow for overlap between the graduating resident and the resident assuming the patient’s care.

Sadly, our African-American participants commented on a pervasive level of mistrust of our resident physicians in the primary care setting. Some actively avoided their “beginner” PCP. Part of this mistrust might stem from patient handoffs between new and graduating resident physicians: loss of continuity, poor intra-provider communication, and lack of trust with starting over with a new provider.<sup>36</sup> However, some of this wariness may be attributed to lack of physician preparedness to manage cross-cultural differences. African-American patients are likely to experience race-discordant relationships with their PCPs. Only 6.8% of medical school graduates self-identify as African-American,<sup>37</sup> with the overwhelming majority of physicians identifying as White or Asian. Similar demographics are present in primary care residencies such as internal medicine.<sup>38</sup> In a national survey of resident physicians from multiple specialties, approximately 1 in 5 residents reported feeling unprepared to deal with patient mistrust; only half had received some formal training in identifying and understanding patient-physician differences.<sup>39</sup> Even fewer residents receive faculty observation or evaluation of delivery of culturally competent care.<sup>40</sup> The provision of culturally competent patient care despite differences is ripe for intervention, as multiple other studies have also identified the critical intersection with patient outcomes, perceived trust, and mutual respect.<sup>28, 41, 42</sup>

Time constraints perplex and trouble both patients and providers. Both parties agree that more time during a visit enables a greater understanding of patients’ life circumstances, while the current time constraints seemingly threaten patient-physician relationships.<sup>42, 43</sup> Our data suggest that patients identified as high risk for hospitalization should be given additional time to share their narratives. By prioritizing patients’ life stories, providers could develop more patient-centered treatment plans, spend time counseling patients on lifestyle modifications for disease management, and identify other necessary resources that could prevent hospitalization, such as home health, additional social support, or more rigorous care coordination.<sup>44</sup> In fact, our study and prior studies show that patients often want their PCPs to be the coordinators of other services and specialty care.<sup>45</sup>

## Limitations

The quantitative portion of our study was designed to examine disparities for the patient population in a single medical center, and by its nature may not be generalizable to other medical centers. It is also limited by those data available in the electronic medical record; thus, we were unable to examine potential important individual factors such as self-report of financial difficulties. The qualitative portion of the study was limited by a small sample size of 24 participants, and all participants were recruited from a single academic general medicine practice. Thus, our results might not apply to patients at other primary care practice settings, especially those without resident physicians. Participants were interviewed at different times

following hospital discharge, with some interviews occurring up to 1 year after their index hospitalization, perhaps contributing to increased recall bias. It should also be noted that many of our participants had multiple hospital admissions, but largely avoided 30-day readmission, placing our study at risk of selection bias. Lastly, the qualitative portion of our study focused entirely on our African-American population given our data indicating higher hospital readmission rates; it is unclear if similar themes would be as salient for other patient demographics or for African-Americans at other sites. However, the emphases on relationship, communication, care coordination, continuity, and self-management have relevance for primary care across populations and sites.

In conclusion, we identified multiple areas in primary care, many requiring communication-based skill sets, which could be leveraged to enhance primary care effectiveness in those patients at increased risk of hospitalization and readmission. At a time when patient-centered care is of utmost importance, communication skills are overdue for intervention in the academic setting, especially in postgraduate residency training. Ongoing efforts are needed to establish and implement best-practice communication trainings that promote cultural competency in primary care and, ideally, could contribute to decreased hospitalizations in vulnerable patient populations.

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## Compliance with Ethical Standards:

The institutional review board at the University of California San Francisco reviewed and granted an exemption for the study.

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

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