



ENHANCING PUBLIC HOSPITALS' REPORTING OF DATA ON RACIAL AND ETHNIC DISPARITIES IN CARE

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ABSTRACT: To assess the ability of hospitals with large minority populations to use existing quality-of-care measures to reduce racial/ethnic disparities, the researchers analyzed quality-related data on acute myocardial infarction, heart failure, and pneumonia by patients' race and ethnicity from five major public hospitals. Senior clinical and administrative leaders were interviewed about their use of quality data and views on disparities and public data reporting. These hospitals exceeded national norms on most measures, and high performance was mostly consistent across racial and ethnic groups. While the findings should be interpreted cautiously, the data indicated some disparities in performance measures related to patient communication. The study also revealed limitations in use of commonly accepted quality measures for detecting disparities. None of the study hospitals had previously looked at these measures by race or ethnicity, and hospital leaders were not in agreement as to whether such data should be publicly reported.

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EXECUTIVE SUMMARY

Persistent health care disparities are a challenge to efforts to improve quality of care. Disparities demonstrate a continuing failure to address one of the key domains of quality: equity. But, according to emerging evidence, targeted quality measurement and improvement strategies may be able to reduce or even eliminate disparities while improving care for all. With ongoing advances in the science and acceptance of quality measurement and increased transparency through public reporting, it is appropriate to investigate whether major health care providers with large numbers of minority patients can use and adapt existing measurement schemes to detect and reduce disparities in health care. There is evidence that public reporting of quality measures promotes improvement activities by providers. Hence, we sought to investigate whether current public reporting efforts could be used to report data by race or ethnicity and thus spur efforts to reduce disparities.

In particular, we sought to:

- assess the feasibility of using the Hospital Quality Alliance (HQA) framework to collect quality measures by race and ethnicity in major safety net institutions treating large minority populations;
- gauge the usefulness of the HQA measures for measuring disparities in care and supporting hospital quality improvement activities designed to reduce disparities; and
- compare the study hospitals' reported measures by race and ethnicity to the measures now reported in the aggregate by other U.S. hospitals.

We selected six geographically dispersed public hospitals with large African American and/or Hispanic patient populations. These institutions were asked to provide quality data by race and ethnicity using the HQA measures, which are now publicly reported by the Centers for Medicare and Medicaid Services (CMS). We also conducted in-depth interviews with senior clinical and administrative leaders at each site. One hospital was unable to participate, except for an initial interview; the events of Hurricane Katrina precluded its completion of the study.

All of the remaining five study hospitals were able to report data by race or ethnicity. There was little evidence of consistent disparities in care in each institution, although there was some evidence that, for a subset of these hospitals, Hispanic patients fared worse on measures dependent on patient-provider communication (e.g., smoking

cessation counseling). On most measures, these public hospitals actually exceeded national norms. Notably, none had conducted analyses of quality data by race or ethnicity using the HQA measures prior to participation in this project. Nevertheless, when interviewed prior to data collection, most hospital leaders were certain—even in the absence of data—that there were no inequities in their care of patients. For many measures, the sample size was low, despite significant numbers of patients receiving services at the hospitals. We surmised that this occurred because many patients with relevant diagnoses were not included in the measures as a result of various exclusion criteria. Thus, our ability to analyze the data and draw conclusions was limited. In addition, due in part to extremely limited information from one of the five hospitals, the race and ethnicity of many patients were not known. Even when reported, race and ethnicity categories were not uniform across the sites, making comparisons by these factors difficult.

Several themes emerged from the data collection process and interviews. Like most hospitals, the study hospitals depend on outside vendors for the software and other tools needed for collecting and reporting quality data. At three of the five hospitals, this analysis required the commissioning of a protracted, ad hoc data analysis at additional cost to the hospital. Hence, any new quality initiative is likely to consume scarce resources, compete with other demands for information, and produce data that are less than timely. Participants at the hospitals also tended to view the issue of disparities as a function of coverage, socioeconomic status, and, in some cases, language. They were less certain that race or ethnicity were important independent determinants of care (though they had no data analysis to support these hypotheses). Finally, respondents were divided on the question of whether quality data should be publicly reported by race and ethnicity. Some welcomed the opportunity to do so, while others believed such reporting “could be misinterpreted” and lead them to “find problems [they] can’t fix.” Most of the key clinical and quality improvement leaders did not think about quality improvement initiatives from the perspective of racial and ethnic health disparities. Efforts to address disparities in these institutions centered on improving access to care and were not linked to quality improvement activities.

To encourage hospitals to focus on disparities as part of quality improvement, several developments are necessary. We need to determine whether existing measure sets such as the HQA set can detect disparities. The HQA measures were developed to evaluate the quality of care provided to all Americans across all acute care hospitals in the United States. Thus, they may not be suited to the much narrower task of measuring differences in the care provided to particular subpopulations. The measures capture information on populations that are often too small for meaningful comparison. They

include conditions that may or may not be prevalent at many institutions. For instance, the large number of AMI, heart failure, and surgical measures may make these measures less relevant for understanding quality of care for vulnerable populations at hospitals that have relatively small cardiac and surgical service lines (which is often the case at public hospitals). The HQA measures generally focus on a single intervention during a given episode of care. But quality of care for vulnerable populations may be less dependent on whether a given patient received an aspirin after a myocardial infarction, and more dependent on the patient being able to navigate the transition from hospital to home and comply with a complex medication regimen after hospital discharge. Such transitions are especially important for minority patients who are more likely than non-minority patients to experience communication barriers and less likely to have a stable source of primary or specialty care. Measurement of disparities needs to gauge performance over these transitions and multiple care settings.

Hospitals need to be challenged by organizations such as the Joint Commission on Accreditation of Healthcare Organizations, the National Quality Forum, and CMS to think of disparities as problems related to the quality of care, and to believe that accurate collection of patient data on race, ethnicity, and language is worthwhile. Businesses spend billions each year learning about their customers' identities and preferences. It is troubling how little effort hospitals devote to knowing who their patients are.

In addition, disparities reduction efforts will need to be firmly tied to the measurement and quality improvement efforts of the organizations noted above. Finally, as the country moves toward national certification standards for health information systems, there need to be clear standards for the uniform collection and storage of race and ethnicity data.

Recommendations

We offer the following recommendations to link quality improvement efforts with disparities initiatives.

- **Identify measures that can detect racial and ethnic health disparities.** Health disparities may not manifest themselves as a withheld aspirin, but may instead be visible in whether a patient receives the full range of recommended care while in the hospital and is able to avoid a readmission or emergency department visit after the transition from hospital to community care. The emergence of “bundled” and transition measures that take into account a broader view of care may help, but we do not believe, based on this study and our work in other

institutions, that most hospitals are using such measures routinely. More in-depth research is needed to identify a core set of measures that can be used to measure quality of care for vulnerable populations and pinpoint disparities.

- **Disparities reduction efforts need to be “hardwired” into quality improvement.** It is clear that health disparities and quality improvement are separate issues in the minds of hospital leaders and quality improvement professionals. For meaningful change to occur, administrators and clinicians need to view equity as a domain of quality.
- **Wait for further evidence on the determinants of disparities.** Some researchers and observers have proposed that racial and ethnic health care disparities do not necessarily result from individual providers delivering lower-quality care to certain patients. Rather, several recent studies suggest that disparities result from minority patients disproportionately seeking care from lower-quality health professionals, who are most likely providing similar quality care to all of their patients. Hence, many observers suggest that quality improvement approaches targeting hospitals that serve large minority populations will address disparities in care. Our work leads us to urge caution. We simply do not know enough yet to dismiss the theory that some disparities are caused by providers treating their patients differently. Our study of five hospitals that serve large minority populations found that these hospitals actually exceed national norms on several performance measures. Quality improvement activities should target hospitals that serve large minority populations and also have demonstrated quality problems or deficiencies. Merely identifying hospitals that serve large minority populations should not serve as a proxy for identifying low-performing institutions.
- **Disparities reduction efforts need to take into account patients’ socioeconomic status, coverage source, and primary language.** According to the hospital leaders we interviewed, factors affecting patients’ access to care are much more relevant to health disparities than race and ethnicity. This may be driven in part by their unwillingness to believe that health professionals treat patients differently solely because of their race or ethnicity. Still, it may be important to document differences in recommended care by patients’ income, health insurance coverage, and primary language as well as their race and ethnicity.
- **The collection of race, ethnicity, and language data should be standardized as part of the standardization of health information technology.** In developing standards for electronic health records, the Commission on the Certification of Health Information Technology Standardization must consider collection of race, ethnicity, and language data.

It could, for example, mandate that electronic health record systems support collection and storage of information on patients' race, ethnicity, and primary language in order to be certified. Given the current emphasis on accelerating the adoption of health information technology, we must not lose this opportunity to enhance the ability of information systems to provide useful data on measures of health care equity.

ENHANCING PUBLIC HOSPITALS' REPORTING OF DATA ON RACIAL AND ETHNIC DISPARITIES IN CARE

INTRODUCTION

The rapid growth in the number and percentage of minorities in the U.S. population underscores the importance of addressing racial and ethnic health care disparities among minority populations. Should these disparities persist, they will have significant implications for a nation in which the population is expected to include equal numbers of “majority” and “minority” residents by 2050.¹ The landmark Institute of Medicine report, *Unequal Treatment*, documented disparities based on patients’ race or ethnicity that appear to persist even when factors such as insurance coverage and income are taken into account.² The report called for use of evidence-based quality improvement tools to reduce disparities, with enhanced data collection and reporting across a broad spectrum of health care sectors. So strong has the link between quality and health disparities become that the Institute of Medicine recommended that health care accreditation bodies include measures of racial and ethnic disparities in performance measurement.

Racial and ethnic disparities in health care are a reflection of the difficulties minority Americans face in obtaining a full range of safe and effective health care services. But while disparities in hospital settings have been extensively documented, little has been done to encourage hospitals to measure and address them.³ Furthermore, there are no tools or approaches to support systematic identification and reporting of disparities across health care facilities.

The time has come to change this landscape. We have begun to see evidence that quality improvement efforts, driven by the systematic collection of data by race and ethnicity, can reduce disparities in care. For example, the Medicare quality improvement project for hemodialysis patients succeeded in dramatically reducing disparities in adequate hemodialysis dose (as measured by urea reduction) between black and white patients.⁴

Data collection and reporting may have additional benefits. Public reporting of quality data has spurred providers to initiate quality improvement efforts, especially in hospitals.⁵ While there is little evidence that public reporting has yet had a significant effect on patient behavior, a recent study indicates that explicit quality information can affect patient choice.⁶ Reporting disparities data could be an effective driver of quality improvement and disparities reduction.

Understanding of the most reliable approaches to collecting data on patients' race and ethnicity has advanced. Previous Commonwealth Fund-supported work has found that "health plans *can* obtain data on the race and ethnicity of their members using standard measures of health quality"⁷ The situation in hospitals may be less clear, although ongoing research, including a Fund-supported project led by the Health Research and Education Trust, is illuminating current data collection practices in hospitals.⁸ More recently, the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) has begun to weigh new accreditation requirements that would mandate the collection of such data. Collecting information on patients' race and ethnicity and using it to measure quality is not only feasible, but may soon be an expected practice.

In 2002, accredited hospitals began collecting data on standardized performance measures as part of their JCAHO accreditation process. In addition, many hospitals have participated in voluntary membership organization projects involving quality reporting and analysis. However, these hospital quality data were not in the public domain, and thus were inaccessible to patients. This changed dramatically with the emergence of the National Voluntary Hospital Reporting Initiative and the subsequent passage of the Prescription Drug, Improvement and Modernization Act of 2003 (commonly referred to as the Medicare Modernization Act). The Medicare Modernization Act includes incentives for acute care hospitals to submit hospital quality measures to the Centers for Medicare and Medicaid Services (CMS) under the aegis of a Hospital Quality Alliance (HQA) and allow those measures to be publicly reported. The incentives are significant: hospitals that voluntarily reported data received their full Medicare market-basket update (i.e., payment increases for hospital care reflecting the rise in costs of products and services used in delivering care). Hospitals that chose not to participate in public reporting had their update decreased by 0.4 percent (pegged to the fiscal year 2005 payment update). Public reporting on 10 measures related to acute myocardial infarction, heart failure, and pneumonia care began in October 2003 with the launch of the "Hospital Compare" Web site. Nearly all U.S. acute care hospitals are now reporting data on a set of 20 quality-related measures to CMS on a quarterly basis.

With the rise of national hospital quality reporting, the time is ripe to consider disparities as a domain of hospital quality measurement and reporting. Toward this end, our investigation had three purposes:

- to assess the feasibility of using the HQA framework to collect quality measures by race and ethnicity in major safety net institutions treating large minority populations;

- to gauge the usefulness of the HQA measures for measuring disparities in care and supporting hospital quality improvement activities designed to reduce disparities; and
- to compare the study hospitals' reported measures by race and ethnicity to the measures now reported in the aggregate by other U.S. hospitals.

We focused on public hospitals that treat substantial numbers of African American and/or Hispanic patients. This focus is appropriate, given the varying dynamics that might underlie disparities in care. Many assume that disparities are the effect of providers treating “different patients differently.” But recent work has theorized that disparities might result from minorities disproportionately seeing providers who offer lower-quality care.⁹ Depending on how these hypotheses are weighed, disparities reduction strategies might focus on assisting providers in improving care for specific vulnerable populations or on general quality improvement aimed at providers with the greatest numbers of minority patients. In either case, hospitals that treat large numbers of minority patients will be central to these efforts.

METHODOLOGY

We conducted a preparatory series of interviews with representatives of key organizations that have experience and interest in quality and disparities. These included individuals with CMS, JCAHO, a quality improvement organization, the National Quality Forum, and the Agency for Healthcare Research and Quality. These interviews were designed to help us understand the process of collecting, analyzing, and disclosing quality data under the HQA from the perspective of hospitals and other stakeholders.

We used two national databases to select geographically diverse public hospitals with significant minority populations and large numbers of discharges relevant to the HQA measures (i.e., cardiac and pneumonia cases).¹⁰ After initial discussions with 10 hospitals, we found six institutions that were willing to participate in the study. Of these, two had majority African American patients, three had majority Hispanic patients, and one served a diverse population without any single group in the majority. The six hospitals currently participate in the HQA and publicly report data on quality measures related to the delivery of care for patients with acute myocardial infarction (AMI), heart failure (HF), and pneumonia (PNE). We asked the hospitals to stratify these measures by the race and ethnicity of their patients. Five hospitals provided data; the sixth was unable to do so due to events unrelated to data collection and quality improvement. The specific measures we requested are shown in Table 1. Ten of these, the so-called “core measures,” are associated with requirements for receiving the full Medicare market basket update. The remaining seven are optional and are not linked with any Medicare payment incentive.

Table 1. Hospital Quality Measures

AMI aspirin at arrival ^a	HF assessment of LVF ^a
AMI aspirin at discharge ^a	HF ACE inhibitor for LVSD ^a
AMI ACE inhibitor for LVSD ^a	HF discharge instructions
AMI beta blocker at arrival ^a	HF adult smoking cessation advice
AMI beta blocker at discharge ^a	PNE oxygenation assessment ^a
AMI thrombolytic agent within 30 minutes	PNE initial antibiotic timing (within 4 hours) ^a
AMI PCI within 120 minutes	PNE pneumococcal vaccination ^a
AMI adult smoking cessation advice	PNE blood culture performed before antibiotic
	PNE adult smoking cessation advice

^a Core measure.

Note: AMI=acute myocardial infarction; HF=heart failure; ACE=angiotensin-converting enzyme; LVF=left ventricular function; LVSD= Left ventricular systolic dysfunction; PNE=pneumonia; PCI= percutaneous coronary intervention.

Source: Overview of Specifications of Measures Displayed on Hospital Compare as of 12/14/06; <http://www.cms.hhs.gov/HospitalQualityInits/downloads/HospitalOverviewOfSpecs200512.pdf>.

To facilitate uniform data collection, we sent participating hospitals a template, which they used to provide information on the numbers of patients who were eligible for the services or interventions in Table 1 as well as the number of patients who received such services or interventions. We requested aggregated data by race and ethnicity for the first and second quarters of 2004. In several cases it was necessary for the hospital to submit a data request to its vendor in order to obtain the information stratified by race and ethnicity.

The second component of data collection involved multiple interviews with leaders at the participating hospitals who were identified as having a stake in quality improvement and, potentially, disparities reduction. Interviews lasted approximately one hour and used a semi-structured questionnaire (see Appendix). These interviews included at a minimum individuals in the following positions (or their equivalent):

- Chief Executive Officer
- Chief Nursing Officer
- Chief Medical Officer
- Director of Quality Improvement
- Director of Medical Records.

FINDINGS FROM HOSPITAL QUALITY MEASURES

Four hospitals that participated in our project provided data for the requested 17 hospital quality measures; a fifth hospital provided data for the 10 core measures only. All five of the hospitals were able to provide quality measures stratified by the race and/or ethnicity of their patients, although the collection of such data varied across the sites. Two hospitals were able to provide the quality measures separately by race and ethnicity, while three could only report by race, and so included “Hispanic” as a race category. One site did not have race information for a relatively high percentage of its patients. For example, for 144 of 191 patients (76%) who were eligible for pneumonia oxygenation assessment at this site, the race classification was “unknown.” The percentage of patients whose race was unknown at this site ranged from 28 percent to 76 percent across the 17 measures.

The numbers and percentages of all eligible patients who received the recommended care for the hospital quality measures are shown in Tables 2 and 3.¹¹ The identity of the hospitals remains confidential. For each of the tables, Hospital A represents the hospital with the highest value and Hospital E represents the hospital with the lowest. Hospitals were not consistent in their order from highest to lowest across the measures; facilities that scored the highest on certain measures were not necessarily out front on others.

For nine of the 17 quality measures, the participating hospitals met or exceeded the average performance level among U.S. hospitals (Table 2). For example, nationwide, 91 percent of patients who met the eligibility criteria for aspirin therapy upon arrival for AMI actually received the therapy. In four of the five study hospitals, higher percentages of eligible patients received the therapy. Likewise, across all reporting hospitals in the U.S., 79 percent of patients with heart failure who met the eligibility criteria for assessment of left ventricular function actually received the assessment. By contrast, more than 90 and up to 100 percent of eligible patients at the participating hospitals received this assessment.

Table 2. Study Hospital Performance that Meets or Exceeds National Averages

	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E	Average for U.S. Hospitals 4/04–3/05
AMI						
Aspirin on arrival (N)	28	56	32	105	83	
Aspirin on arrival (%)	100%	98%	97%	97%	87%	91%
Aspirin at discharge (N)	30	182	39	45	84	
Aspirin at discharge (%)	100%	97%	95%	93%	93%	87%
ACE for LVSD (N)	8	13	44	10	29	
ACE for LVSD (%)	100%	92%	91%	90%	72%	80%*
Beta blocker on arrival (N)	50	74	22	29	79	
Beta blocker on arrival (%)	98%	97%	97%	90%	84%	84%
Beta blocker at discharge (N)	29	162	97	38	43	
Beta blocker at discharge (%)	100%	98%	93%	92%	91%	86%
Heart Failure						
Assess LVF (N)	75	135	340	159	210	
Assess LVF (%)	100%	97%	96%	96%	90%	79%
ACE for LVSD (N)	36	72	106	196	90	
ACE for LVSD (%)	97%	96%	88%	85%	76%	79%*
Pneumonia						
Oxygenation assessment (N)	198	217	182	191	218	
Oxygenation assessment (%)	100%	100%	99%	99%	99%	98%
Smoking advice (N)	67	106	40			
Smoking advice (%)	96%	89%	48%			66%

* Data are from the first quarter of 2005.

Note: Data for the individual hospitals cover the first two quarters of 2004 (1/1/04–6/30/04). Comparison data for the overall U.S. average for all hospitals generally cover the 12-month period 4/01/04–3/31/05, except where noted.

Source: Authors' analysis of hospital quality measures. Average for U.S. hospitals obtained from the Department of Health and Human Services Web site: <http://www.hospitalcompare.hhs.gov/>.

On seven measures, performance was below national averages among the hospitals that provided data for these measures (Table 3). For example, across hospitals nationally, 75 percent of eligible patients with pneumonia receive initial antibiotic therapy within four hours of arrival. Performance on this measure was lower at four of the study hospitals.

Table 3. Study Hospital Performance Below National Averages

	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E	Average for U.S. Hospitals 4/04–3/05
AMI						
PCI within 120 minutes (N)	15	11	2			
PCI within 120 minutes (%)	87%	18%	0%			61%*
Smoking advice (N)	81	18	31	16		
Smoking advice (%)	98%	67%	45%	31%		75%
Heart Failure						
Discharge instructions (N)	127	326	193	58		
Discharge instructions (%)	52%	21%	13%	5%		48%
Smoking advice (N)	118	32	59	61		
Smoking advice (%)	93%	56%	46%	21%		68%
Pneumonia						
Pneumococcal vaccination (N)	57	53	31	27	36	
Pneumococcal vaccination (%)	49%	45%	26%	7%	6%	51%
Initial antibiotic timing (N)	206	185	177	211		
Initial antibiotic timing (%)	68%	63%	59%	51%		75%
Blood culture (N)	154	146	187			
Blood culture (%)	83%	75%	74%			82%

* Data are from the first quarter of 2005.

Notes: Data for the individual hospitals cover the first two quarters of 2004 (1/1/04–6/30/04). Comparison data for the overall U.S. average for all hospitals generally cover the 12-month period 4/01/04–3/31/05, except where noted. The blanks in the table occur because Hospitals D and E did not provide data for some measures.

Source: Authors' analysis of hospital quality measures. Average for U.S. hospitals obtained from the Department of Health and Human Services Web site: <http://www.hospitalcompare.hhs.gov/>.

On measures that involve patient–provider communication, participating hospitals appear to be performing at lower levels than the average among U.S. hospitals. For example, only one of four hospitals outperformed national norms for providing smoking cessation advice to eligible patients with AMI, and only one outperformed national norms for providing smoking cessation advice to eligible patients with heart failure.

Several of the measures were reported for very small numbers of eligible patients. We did not anticipate such small numbers of eligible cases, since we selected these hospitals for the study in part because they had relatively large numbers of patients with heart-related and pneumonia admissions. Evidently, many patients who are treated for these conditions at the participating hospitals are not included due to multiple exclusion criteria for reporting cases to CMS.

Analysis of Quality Measures by Race and Ethnicity

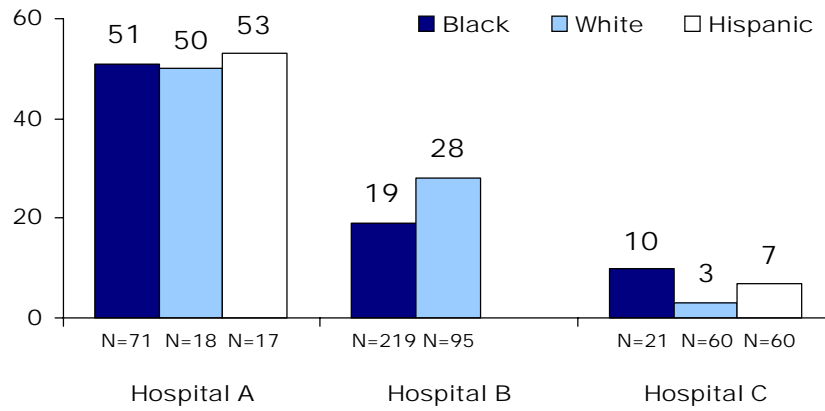
We compared measures for patients by their race and ethnicity but were cautious about interpreting these data due to the small numbers of patients. Our analysis of the quality measures did not reveal patterns of disparate care among the racial and ethnic groups in the participating hospitals. In some cases, the percent of minorities receiving recommended care equaled or exceeded percentages among white patients.

Because the data were limited and did not permit analysis of all of the measures at every hospital, we took a multi-tiered approach to determine whether hospitals were providing disparate care to their patients. First, we identified selected measures and compared them across all of the hospitals reporting those measures by race and ethnicity. This analysis provided information on disparities across hospitals. Next, we compared several measures reported by a single hospital to determine whether there were disparities within the individual hospital. Finally, we analyzed measures in the aggregate for the five hospitals to determine whether there were aggregate disparities by race and ethnicity.

Figures 1 and 2 illustrate two quality measures that had sufficient numbers of eligible white, black, and Hispanic patients for examination at three hospitals. With respect to recommended care for heart failure discharge instructions, Hospital A's performance was nearly identical across the race/ethnicity categories, Hospital B's was somewhat higher for white patients, and Hospital C's was higher for Hispanic and black patients (Figure 1). For another measure—blood culture before pneumonia antibiotic administration—there was even less variation across race and ethnicity (Figure 2).¹²

Figure 1. Heart Failure: Discharge Instructions by Race and Ethnicity, Three Hospitals

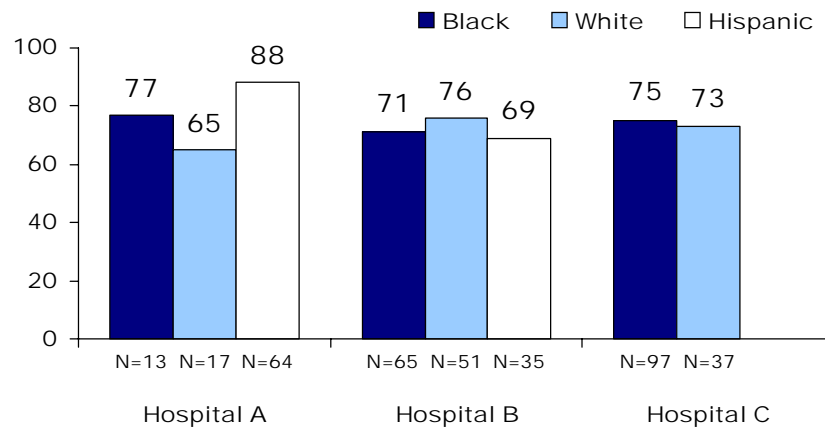
Percent of patients receiving recommended treatment



Source: Authors' analysis of hospital quality measures by race and ethnicity.

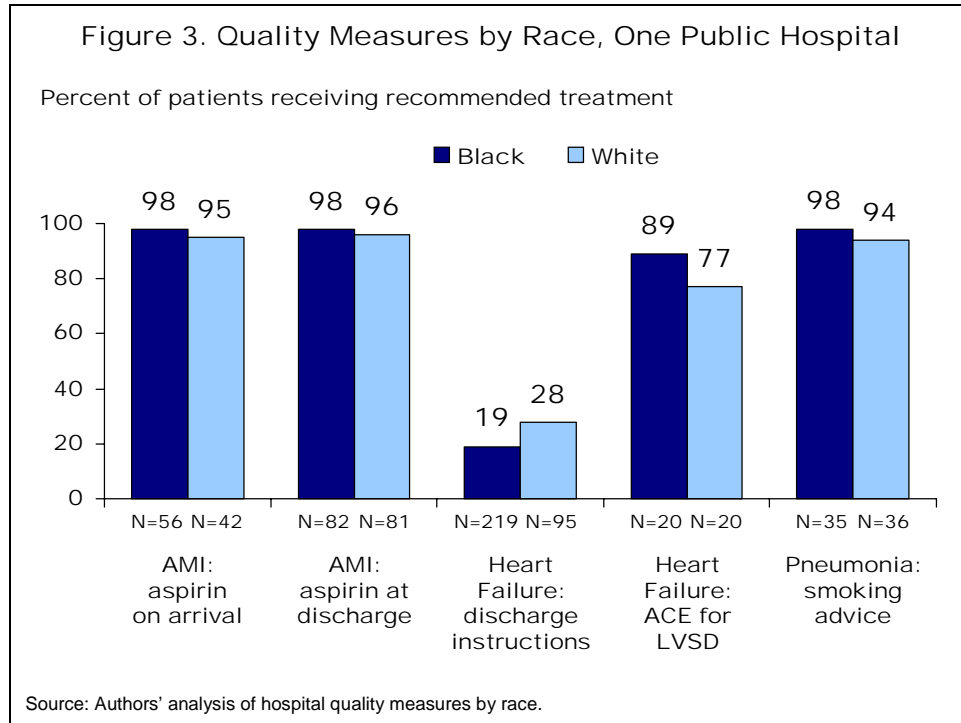
Figure 2. Pneumonia: Blood Culture Before Antibiotic by Race and Ethnicity, Three Hospitals

Percent of patients receiving recommended treatment



Source: Authors' analysis of hospital quality measures by race and ethnicity.

Figure 3 illustrates selected quality measures for a single hospital with sufficient cases for analysis purposes. It depicts results for five measures; the distribution was similar for the remaining measures. For all measures, the percent of patients given the appropriate treatment was very similar for black and white patients, with no evidence of systematic disparities. Regardless of the race of the patient, performance was quite high on three of the measures and quite poor on heart failure discharge instructions.



The aggregated data for black, white, and Hispanic patients at all sites are shown in Table 4. The Hispanic column only includes data for those hospitals that considered “Hispanic” to be one of the mutually exclusive race categories. For the two hospitals that record each patient’s ethnicity as well as their race, only the race category (black or white) is shown.¹³

Table 4. Aggregate Hospital Performance by Race/Ethnicity

	Black	Hispanic^a	White
AMI			
Aspirin on arrival (N)	91	43	103
Aspirin on arrival (%)	97%	93%	94%
Aspirin at discharge (N)	116	47	132
Aspirin at discharge (%)	97%	94%	95%
ACE for LVSD (N)	32	15	33
ACE for LVSD (%)	97%	87%	82%
Beta blocker on arrival (N)	69	39	85
Beta blocker on arrival (%)	99%	82%	93%
Beta blocker at discharge (N)	103	51	127
Beta blocker at discharge (%)	96%	90%	98%
PCI within 120 minutes (N)	*	*	*
PCI within 120 minutes (%)			
Smoking advice (N)	52	14	60
Smoking advice (%)	75%	50%	82%
Heart Failure			
Assess LVF (N)	378	145	260
Assess LVF (%)	96%	96%	95%
ACE for LVSD (N)	223	78	149
ACE for LVSD (%)	88%	86%	83%
Discharge instructions (N)	326	87	187
Discharge instructions (%)	24%	23%	20%
Smoking advice (N)	141	23	76
Smoking advice (%)	72%	26%	62%
Pneumonia			
Oxygenation assessment (N)	258	191	284
Oxygenation assessment (%)	100%	99%	99%
Pneumococcal vaccination (N)	37	45	53
Pneumococcal vaccination (%)	24%	51%	15%
Initial antibiotic timing (N)	233	179	248
Initial antibiotic timing (%)	55%	60%	63%
Blood culture (N)	175	99	105
Blood culture (%)	74%	81%	73%
Smoking advice (N)	100	17	68
Smoking advice (%)	88%	94%	85%

^a Includes only counts for those hospitals that include Hispanic as a race category.

* Number of eligible very small (<10 for 2 of the race categories)

Notes: For hospitals that record ethnicity separately from race, persons are counted in the race categories of black or white as appropriate. LVF=left ventricular function; PCI= percutaneous coronary intervention; ACE= angiotensin-converting enzyme. Chi square tests were computed for the aggregate data, including other race categories. A few of these tests were statistically significant (p<.05) but are not presented here for various reasons.¹⁴

Source: Authors' analysis of hospital quality measures by race and ethnicity.

For two of the measures that involve communication—smoking advice after heart attack and smoking advice for heart failure cases—the percent of patients receiving the recommended advice appears to be considerably lower for Hispanics than for black or white patients. Following a heart attack, only 50 percent of eligible Hispanics received smoking advice, compared with 75 percent of blacks and 82 percent of whites. Among heart failure patients, 72 percent of blacks and 62 percent of whites received smoking advice while only 26 percent of Hispanics received this intervention. This finding should be interpreted with caution since the number of cases is quite small and the data are taken from just three hospitals. Nevertheless, it warrants further research to determine whether disparities exist in the delivery of these interventions to Hispanic patients and, if so, to identify barriers to their effective implementation.

FINDINGS FROM INTERVIEWS

Several important themes emerged from the interviews we conducted with chief executive officers, chief medical officers, chief nursing officers, directors of quality improvement, and other leaders from the five participating hospitals (Table 5). The comments offer insights into ways that busy health professionals view disparities-related data collection and quality improvement efforts.

Table 5. Summary of Interview Themes and Key Findings

Themes				
	Need to Report Quality Data by Race/Ethnicity	Assumptions About Equity of Care	Ease of Race/Ethnicity Data Collection and Analysis	Utility of Public Reporting of Race/Ethnicity Quality Data
Findings	Disparities not linked to ongoing quality improvement activities	Believe all patients treated “the same”	Most rely on outside vendors for quality analysis and reports	Interviewees divided on perceived utility
	Little focus on accurate collection of race/ethnicity data	Few or no prior analyses to evaluate equity of care	Analysis of data by race/ethnicity requires “ad hoc” reports, potential added expense	Some concerned that public reports showing disparities could be “misinterpreted”
	Considerable variation in patient classification between hospitals	Believe any data will demonstrate equity	Many other internal and external demands for quality reporting may take precedence	Some not sure what to do if disparities identified
	No prior analysis of HQA measures by race/ethnicity	View socioeconomic status, coverage, language as potential key independent variables		

Source: Authors’ interviews with representatives of key organizations.

None of the hospitals had analyzed these HQA measures by race or ethnicity prior to our request. Given our other findings, discussed below, this is probably not surprising. In our discussions it became clear that the hospital professionals care much about the quality of care they provide and think a great deal about the needs of their minority patients. However, they seemed to regard disparities efforts as being related to ensuring access to care in the community through health clinics, and achieving cultural and linguistic competence through diversity training and better interpreter services. While some hospitals had previously analyzed patient outcomes and other measures by race and ethnicity, they had not linked disparities to their ongoing quality measurement and improvement activities. No hospital named addressing disparities in care as a quality improvement priority for the coming year, and none had discussed potential racial and ethnic differences in the care they provided in meetings of their executive staff or governing body.

The fact that some hospital leaders do not see a connection between disparities and health care quality may undermine hospitals' efforts to ensure accurate collection of race and ethnicity data during patient registration. Given that these data are not yet viewed as important, hospitals may not focus on collecting them. This can result in unreliable or incomplete data, including large numbers of patients for whom there is no identifying race or ethnicity data, leading to their identification in reports as "unknowns." Even among the four hospitals that had fairly complete data, there was variation in terms of the way race and ethnicity data were recorded. This made analysis by patients' ethnicity (e.g., Hispanic versus non-Hispanic) extremely difficult.

These findings are consistent with other research we have conducted. In a recent review of 122 hospitals' applications for a national demonstration project, 118 reported they collect data on patients' race and ethnicity and 84 stated they could analyze quality data by race and ethnicity. Yet, only six of the hospitals indicated that they had planned or implemented formal quality improvement initiatives specifically designed to reduce ethnic or racial disparities in hospital care.¹⁵

Interviewees think that they treat all of their patients equally. We were struck by this common theme. All hospital leaders believed their institution treated all patients "the same." While we had no reason to dispute this assertion, we found it notable that none of the hospitals had previously analyzed their HQA quality data by race and ethnicity. The hospital leaders believed they provided equitable treatment for all patients without having an empirical basis for this belief. Indeed, several leaders from one hospital did not see the need to perform an analysis of race and ethnicity data. Leaders from other hospitals thought this would be a worthwhile exercise, if only to confirm their impressions about the care they provide.

Many hospitals don't "own their data." At three of the five hospitals reporting data, the analysis of the HQA measures by race and ethnicity required the commissioning of ad hoc reports by the vendors that provide the hospitals with data abstraction and reporting software. This entailed delays ranging from several weeks to several months and multiple communications between the hospital, vendors, and ourselves. As one interviewee noted, with "clunky" data systems that "we don't control," every new data request is a major initiative.

There are many competing demands for data on quality. All of the hospitals noted that they are being compelled or asked to provide rapidly increasing amounts of quality data by outside organizations. One hospital reported they are now producing reports for state regulators, CMS, and JCAHO, as well as data requested under special initiatives of the Institute for Healthcare Improvement and Premier, Inc. The number of measures reported to the federal government alone through the Hospital Quality Initiative has doubled in the past two and one-half years. Given these demands, most interviewees did not expect they would make reporting of disparities-related quality data an organizational priority in the absence of some mandate or incentive.

Many interviewees think disparities are rooted in socioeconomic status, health coverage, and perhaps language—not race and ethnicity. Many of our interviewees simply did not view the stratification of data by race and ethnicity as the most relevant framework for understanding disparities. None disputed that disparities in health care may exist, independent of factors such as income and insurance coverage. But they saw socioeconomic factors as being the most significant influence on the health and health care of their patients. Several suggested that, in any disparities reporting scheme, the variables should be socioeconomic status and insurance coverage, not race and ethnicity. Interviewees from two hospitals also considered language as a key variable that may underlie any observed racial and ethnic differences.

Interviewees and hospitals were divided on whether quality data by race and ethnicity should be part of public reporting. Some thought the reporting of quality measures stratified by race and ethnicity would be worthwhile, especially since they believed their hospital report would not reveal racial and ethnic disparities. However, others were very much opposed to public reporting, believing that income and coverage are more important determinants in the quality of care than race or ethnicity. Several respondents were also concerned that such data "could be misinterpreted" without a great deal of context and qualifications. Many interviewees believed such reporting "will raise questions we can't answer" or lead to a situation where "we'll find problems we can't fix."

DISCUSSION AND CONCLUSIONS

Our study began with several goals related to the use of quality-related data to advance our understanding of disparities in health care delivery within U.S. hospitals. In particular, our work focused on a set of public hospitals with a common mission to provide care to all patients in need, regardless of their ability to pay. We selected these hospitals in part because they care for large numbers of minority patients.

When we started our inquiry, we were not certain that all of the hospitals could provide quality measures by the race and ethnicity of their patients. By selecting hospitals with large minority patient populations, we assumed that the sample of patients who were eligible for treatments reflected in the Hospital Quality Alliance measures would be large enough for analytical purposes. We also assumed that if one or more hospitals were unable to stratify data by race/ethnicity, their aggregate measures could serve as a proxy for stratified results. In other words, by selecting a hospital with more than 50 percent African American or Hispanic patients, we assumed that their aggregate measure would be a good reflection of care delivered to their minority patients.

We found that all of the hospitals were capable of providing the quality measures by race or ethnicity, although these data were uneven across the five hospitals and the task was relatively complex for several. In initial conversations with the sites, we learned that the racial and ethnic categories that the hospitals used to record information on their patients were highly variable. We did not wish to impose burdensome reporting requirements for this study and therefore asked hospitals to stratify the data according to the racial and ethnic categories already in use at their site. Despite these complications, we conclude that it is indeed feasible for hospitals to use the HQA framework to collect quality measures by race and ethnicity.

The lack of consistent categories for race and ethnicity was not the greatest challenge, however. Although the hospitals treat large volumes of patients with heart conditions, the numbers who were eligible for treatments covered by the HQA measures during the six-month study period were often too small to enable meaningful analysis by race and ethnicity. This is certainly due in part to the exclusion criteria associated with each quality measure. For instance, patients with acute myocardial infarction (AMI) who have a heart rate under 60 beats per minute are excluded from the measure for beta blocker on arrival. Nevertheless, the volumes appear to be lower than one would expect, even allowing for these exclusions. The hospitals hypothesized that this may be due to two additional factors: 1) for these measures the index problem must be the primary diagnosis, hence patients with a secondary diagnosis of AMI are not counted; 2) inconsistencies or

errors in how some patients' diagnoses are assigned can result in underreporting various conditions. We have found in our communications with some hospitals that they often code AMI patients in the ICD-9 series for "other forms of chronic ischemic heart disease" instead of using more specific codes used to identify patients for the HQA measures. Thus, the HQA measures can be useful for measuring disparities and supporting quality improvement efforts designed to reduce disparities. But their usefulness will depend on a particular hospital's volumes in given diagnoses, demographics, and medical abstraction and coding practices.

Our analysis of the quality measures by the race and ethnicity of patients generally support the hospitals' assertions that they indeed treat everyone the same. Although the findings are not conclusive, when combined with the findings from the aggregate data they seem to indicate that, within this set of public hospitals, African American and Hispanic patients are just as likely (or in some cases, more likely) to receive appropriate care as white patients. In fact, despite treating disproportionately high numbers of minority patients, these hospitals outperform the average among U.S. hospitals on several quality measures. This finding contradicts evidence from other studies linking poor quality to hospitals with large volumes of minority patients.¹⁶ Given that these hospitals had not previously analyzed these measures by race or ethnicity, this high quality care does not seem to have been the result of any response to a perceived disparity, but instead a product of an overall approach to patient care.

The data also indicate areas for improvement. Two of the three hospitals that reported on smoking cessation advice for patients with pneumonia outperformed national averages. In general, however, the hospitals performed less well on measures related to communication and those requiring treatment within a prescribed period of time. Additionally, Hispanic patients were less likely than other patients to receive certain communication-related interventions. This could be related to Hispanic patients' limited English proficiency. While the data do not enable identification of patients' language abilities or preferences, we believe that language services should become a focus of hospital quality improvement activity. In addition, mechanisms to improve the timely initiation and delivery of various interventions are needed. Given that these hospitals treat large numbers of African American and Hispanic patients, efforts to improve provision of discharge instructions and smoking cessation information will have important implications for overall quality of care for minority patients with AMI, heart failure, and pneumonia.

The hospitals that participated in the study are unlikely to incorporate requests for data stratified by race and ethnicity into their quality improvement reports. There are two

likely reasons for this. First, while technically feasible, this is not part of the routine set of reports the hospitals generate on a monthly or quarterly basis. In fact, some of the hospitals needed to commission analyses from external vendors to generate these data from their own hospital patient records.

Second, and perhaps more important, most of the clinical and quality improvement leaders do not think about quality improvement initiatives from a disparities perspective. Likewise, most hospital-based disparities work is focused on increasing access for specific populations, for example, by creating new community clinics. It is not centered on measuring and improving the quality of care provided to specific populations. The divide between the two frameworks—quality improvement and disparities—transcends structural or systemic considerations. Because the majority of hospital leaders we interviewed believe that disparities are a function of poverty and lack of health coverage—factors well beyond their control—they do not see the value of using quality improvement methods to eliminate disparities.

Reporting and analyzing quality data by race and ethnicity would provide an enormous boost to efforts to link quality improvement and disparities, but hospitals are not at all convinced that this is an appropriate next step in public reporting. Our study found that, for some hospitals, such reports are difficult to access and take a back seat to the many other demands that are already a routine part of hospital quality reporting.

Finally, we should note that the fact that this study could even be conducted is a tribute to how far the quality movement has traveled. Five years ago we could not have done this study. There would not have been a common quality measure set and vocabulary that could serve as the foundation for exploring disparities in care across multiple institutions. Due to the efforts of JCAHO, CMS, NQF, hospitals and many others, we can now begin to understand the quality of care provided to all Americans.

RECOMMENDATIONS

Many entities will need to be engaged in any initiative to make equity central to the health care quality agenda. Major organizations in the quality movement will need to redouble their focus on equity. While JCAHO has already begun this process, CMS, NQF, the Commission on the Certification of Health Information Technology (CCHIT), and other organizations have critical roles to play. Specifically, we urge JCAHO to persist in its efforts to strengthen hospital reporting of data by race, ethnicity, and language. CMS, working through the quality improvement organizations, needs to make disparities a clinical quality imperative. The NQF could help establish a set of measures to be used in the measurement

of equity, and the CCHIT could ensure that America's future health information technology infrastructure is able to capture the diversity of Americans and measure equity.

1. Identify measures that can detect racial and ethnic health disparities.

The HQA measures were developed to assess the quality of care provided to all Americans across all acute care hospitals in the United States. Thus, they may not be suited to the much narrower task of measuring differences in the care provided to given subpopulations. This shortcoming plays out in several ways. Given their design, the measures capture populations that are often too small for meaningful comparison. In addition, they emphasize conditions that may or may not be prevalent at many institutions. For instance, the large number of AMI, heart failure, and surgical measures in the HQA set may make these measures less relevant for understanding quality of care for vulnerable populations at hospitals that have relatively small cardiac and surgical service lines (which is often the case at public hospitals).

The HQA measures generally focus on a single medication, assessment, or intervention during a given episode of care. Quality of care for vulnerable populations may not be fully captured by understanding whether a given patient received an aspirin post-myocardial infarction. Instead, measures may need to gauge, for example, whether there was communication and trust between a patient and nurse that led to the patient complying with a complex medication regimen. We need to determine whether patients receive all recommended care in a timely fashion, and how patients perceive their care. It is also important to consider hospital readmissions or emergency department visits into the overall picture of quality. Measuring performance across care transitions is especially important for minority patients, who are more likely than other patients to confront communication barriers and lack a stable source of primary or specialty care.

The emergence of “bundled” or composite measures that provide this bigger picture of quality may help, but we do not believe most hospitals are yet using these measures routinely. These composite measures, as defined by the Institute of Medicine, are the “bundling of measures for specific conditions to determine whether all critical aspects of care for a given condition have been achieved for an individual patient”¹⁷ Hence, one would measure whether a heart failure patient received all the care recommended for that condition. This would provide an in-depth portrait of the reliability of a health care system, and could conceivably enable measurement of care across multiple providers. In addition, the development of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) could allow researchers and hospitals to analyze patient experience by race and ethnicity.

More in-depth research is needed to identify a core set of measures that can be used to assess quality of care for vulnerable populations and identify disparities in care. Such measures will need to take into account the complexity of patients' interactions with health systems. They may include the bundled measures noted above, HCAHPS, or measures that capture the risks in transitions from acute care to community-based care (e.g., readmission rates for congestive heart failure). We suspect that these types of measures may be more sensitive than the HQA measures to detecting disparities and gauging the quality of care provided to vulnerable populations. This work should eventually involve the National Quality Forum, which could articulate specific measures to detect failings in equity.

2. Disparities reduction efforts need to be “hardwired” into quality improvement. From our limited sample, it is clear that disparities and quality improvement are separate issues in the minds of hospital leaders and quality improvement professionals. Identifying measures to assess quality of care for minorities and underserved populations is an important first step in linking quality improvement and disparities reduction efforts. But until hospital administrators and clinicians appreciate that equity is a domain of quality, not much more will happen. This will require a number of steps. First, the leading organizations in quality today, such as NQF, JCAHO, CMS, and the Institute for Healthcare Improvement, need to transmit this message clearly and repeatedly. The proposed JCAHO requirement that hospitals record race, ethnicity, and language for all patients could help enormously, but to date only the collection of language data has been required. Businesses spend billions each year learning about their customers' identities and preferences. It is troubling how little effort hospitals devote to knowing who their patients are. Unfortunately, disparities have become less of a priority under CMS's Eighth Round Statement of Work for quality improvement organizations, which defines the agency's expectations for the organizations. We need tangible demonstration projects that create incentives for hospitals to identify and fix disparities.

We can conceive of a day when hospitals begin to publicly report data by race, ethnicity, and language. But our findings lead us to believe that this may not be imminent, given that we do not yet have the right measures and hospitals are far from convinced that health disparities should be part of the data reporting and quality improvement strategies. Therefore, we may need to do more work before we can advocate for any policy change that makes equity a part of public reporting of quality data.

3. Wait for further evidence on the determinants of disparities. Some researchers and observers have proposed that racial and ethnic health care disparities are not necessarily a result of individual providers delivering lower-quality care to certain

patients. Rather, several recent studies suggest that disparities result from minority patients disproportionately seeking care from lower-quality health professionals, who are most likely providing similar quality care to all of their patients. Hence, many observers are now suggesting that quality improvement approaches targeting hospitals that serve large minority populations will address disparities in care. Our work leads us to urge caution. These studies look at large numbers of hospitals and find general and broad associations. We simply do not know enough yet to dismiss the theory that some disparities are indeed caused by some providers treating different patients differently. Until we ask the right questions and find the right measures, we cannot conclude that intra-hospital disparities are either nonexistent or irrelevant. We should not jump to conclusions; indeed disparities may be driven by both dynamics (i.e., differences between providers as well as differing treatment by individual providers), and the relative contribution of each dynamic may vary across conditions, treatments, and measures.

Our study of five hospitals that serve large minority populations found that these hospitals actually exceed national norms on several performance measures. We suggest that any quality improvement strategy targeting hospitals with large minority populations should focus on institutions with demonstrated quality problems or deficiencies. Merely identifying hospitals that serve large minority populations should not serve as a proxy for identifying low-performing institutions.

Specifically, CMS could engage quality improvement organizations in collaborative projects with hospitals that 1) have large populations of minority patients as seen in the Healthcare Cost and Utilization Project (HCUP) or other data sets; and 2) evince quality opportunities through HQA or other data. This would be the most refined approach, and would avoid unfairly labeling all hospitals with large minority patients as lower-quality providers.

4. Disparities reduction efforts should take into account patients' socioeconomic status, coverage status, and primary language. According to the hospital leaders we interviewed, factors affecting patients' access to care are much more relevant to health disparities than race and ethnicity. This attitude may be driven in part by an unwillingness to believe that health professionals treat patients differently solely because of their race or ethnicity. Still, achieving buy-in to an equity agenda among hospital leaders and providers may require an analysis of quality-related data along these dimensions. We are fully cognizant of the fact that disparities have been defined as the lower-quality care that racial and ethnic minorities receive “even when access-related factors . . . are controlled.”¹⁸ But leaders at the five hospitals saw factors access-related

factors as the main drivers of differences in care. We recommend that future work on measuring hospital quality by race and ethnicity also attempt measurement by source of coverage, language, and, if possible, socioeconomic status. This approach would make such projects more accessible to hospital administrators and clinicians and would allow them to determine whether any racial and ethnic disparities they find are independent of other factors.

5. The collection of race, ethnicity, and language data should be standardized as part of the health information technology movement. We noted previously that hospitals depend on external information technology vendors for many of the systems that collect patient demographic data. We also found that these systems differed greatly in the classifications used to record this patient information. As long as these differences persist, it will be difficult to compare quality for minorities across providers. It is imperative that race, ethnicity, and language data be considered during the development of certification standards for electronic health records by the Commission on the Certification of Health Information Technology. System certification could include some minimum ability of any information technology product to collect and store patient race, ethnicity, and language data using standardized classifications, and to analyze patient data by these dimensions. Given the great emphasis on accelerating the adoption of health information technology, we must not lose this possibly brief opportunity to enhance the ability of information systems to provide useful data on patient equity.

NOTES

¹ U.S. Bureau of the Census, *Population Projections of the United States by Age, Sex, Race and Hispanic Origin: 1995 to 2050* (Washington, D.C.: Census Bureau, Feb. 1996; revised Apr. 1999).

² Institute of Medicine, Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (Washington, D.C.: National Academies Press, 2002).

³ The evidence around disparities is perhaps best developed for cardiac care. See *Racial/Ethnic Differences in Cardiac Care: The Weight of the Evidence* (Washington, D.C.: Henry J. Kaiser Family Foundation and American College of Cardiology Foundation, Oct. 2002).

⁴ A. R. Sehgal, “Impact of Quality Improvement Efforts on Race and Sex Disparities in Hemodialysis,” *Journal of the American Medical Association*, Feb. 26, 2003 289(8):996–1000.

⁵ M. N. Marshall, P. G. Shekelle, S. Leatherman et al., “The Public Release of Performance Data: What Do We Expect to Gain? A Review of the Evidence,” *Journal of the American Medical Association*, Apr. 12, 2000 283(14):1866–74.

⁶ D. B. Mukamel, D. L. Weimer, J. Zwanziger et al., “[Quality Report Cards, Selection of Cardiac Surgeons, and Racial Disparities: A Study of the Publication of the New York State Cardiac Surgery Reports](#),” *Inquiry*, Winter 2004/2005, 41(4):435–46.

⁷ D. R. Nerenz, M. J. Gunter, M. García et al., [Developing a Health Plan Report Card on Quality of Care for Minority Populations](#) (New York: The Commonwealth Fund, July 2002).

⁸ See: R. Hasnain-Wynia, D. Pierce, M. A. Pittman, [Who, When and How: The Current State of Race, Ethnicity, and Primary Language Data Collection in Hospitals](#) (New York: The Commonwealth Fund, May 2004); M. Regenstein and D. Sickler, *Race, Ethnicity and Language of Patients: Hospital Practices Regarding Collection of Information to Address Disparities in Health Care* (Princeton, N.J., and Washington, D.C.: Robert Wood Johnson Foundation and National Public Health and Hospital Institute, Feb. 2006).

⁹ E. H. Bradley, J. Herrin, Y. Wang et al., “Racial and Ethnic Differences in Time to Acute Reperfusion Therapy for Patients Hospitalized with Acute Myocardial Infarction,” *Journal of the American Medical Association*, Oct. 6, 2004 292(13):1563–72; J. Skinner, A. Chandra, D. Staiger et al., “Mortality After Acute Myocardial Infarction in Hospitals that Disproportionately Treat Black Patients,” *Circulation*, Oct. 25, 2005 112(17):2634–41.

¹⁰ 2001 Healthcare Cost and Utilization Project (HCUP): unpublished analysis of 10 state databases (Washington, D.C.: National Association of Public Hospitals and Health Systems, 2005); I. Singer, L. Davison, J. Tolbert et al., *America’s Safety Net Hospitals and Health Systems: Results from the 2002 Annual Survey of Members* (Washington, D.C.: National Association of Public Hospitals and Health Systems, 2004).

¹¹ We have included data for 16 of the 17 quality measures currently reported to CMS. We do not show data for one measure, AMI: thrombolytic agent within 30 minutes, because of insufficient data.

¹² As in the tables, the hospital labels do not refer to the same site across graphs, e.g., Hospital A in Figure 1 is not the same site as Hospital A in Figure 2.

¹³ As mentioned previously, for the core measures the data represent all five participating hospitals while the remaining measures include data from only four hospitals.

¹⁴ In some cases, the expected value in a cell was too small and the assumptions of the chi square test were violated. In other cases, the results could be misleading because a single hospital skewed the results for the aggregate data.

¹⁵ B. Siegel, M. J. Wilson, L. Nolan et al., “Findings from the Planning and Launch of a National Disparities Collaborative,” abstract for the AcademyHealth Annual Research Meeting, Seattle, Wash., June 25–27, 2006.

¹⁶ See, for example, Skinner, “Mortality After Acute,” 2005.

¹⁷ Institute of Medicine, Committee on Redesigning Health Insurance Performance Measures, Payment, and Performance Improvement Programs, *Performance Measurement: Accelerating Improvement* (Washington, D.C.: National Academies Press, 2005), p. 78.

¹⁸ *Ibid.*, p. 1.

APPENDIX. FLEXIBLE INTERVIEW GUIDE

Introduction

1.a. Introduction of interviewing staff

1.b. Description of the purpose of the project:

To assess the feasibility of using the Hospital Quality Alliance (HQA) process and framework to collect established quality measures by race and ethnicity in major safety net institutions treating large minority populations.

Determine whether such data could be used to:

- Support quality improvement efforts
- Detect and measure disparities in care

1.c. Review consent process:

- Participation in this interview is entirely voluntary
- You may answer or decline to answer any questions you wish, and may end the interview at any time
- The discussion in this interview is completely confidential and we will not publish any information that could in any way identify you by name or by your official position
- No one person will be asked all of the questions that appear in this interview guide

1.d. Participant background

Organization:

Title:

Background Questions:

B.1. Please describe your organization. How is it governed? How many inpatient discharges and outpatient visits do you have annually? Describe your patients by race/ethnicity and coverage.

Research Question 1: Does Your Organization participate in Quality Improvement Initiatives designed to address disparities?

- 1.1. Please describe your organization's major quality improvement initiatives in the last two years.
- 1.2. How are quality improvement initiatives selected? Who is involved in that process (governing board, medical staff, administration, nursing, any advisory groups) and to what extent?
- 1.3. Briefly describe how racial and ethnic disparities in health or health care have been discussed at meetings of the hospital's senior management, if at all. What issues or problems were discussed, and what happened as a result of these meetings and discussions? Similarly for governing board? Medical Staff?
- 1.4. Are health care disparities addressed in your strategic plan? If yes, how so?
- 1.5. Does your hospital have specific QI initiatives designed to address disparities/quality for specific racial and/or ethnic populations? If so: what are they, their goals, and the outcomes?
- 1.6. If so, how were these disparities or quality issues identified and how did you decide to focus on them? What was the process and who were the participants?

Research Question 2: How and to whom does your organization report quality data?

- 2.1. Which measures are you currently reporting to CMS under the HQA?
- 2.2. How long have you been reporting measures to CMS?
- 2.3. Please describe the process used to report this information? Where is the information collected, recorded, and transmitted to CMS? What department is responsible for these activities? Who in your organization is involved in the HQA project? What does each of these individuals contribute to the process?
- 2.4. Do you have an electronic medical record? How has that affected the reporting of quality data?
- 2.5. To what other organizations do you report quality data?
- 2.6. What are the challenges of reporting to multiple organizations?
- 2.7. What vendor do you use (if any) to report this data?

- 2.8. We noticed seemingly small numbers of AMI and/or CHF patients in your reports? How do you code these admissions? Do you use non-specific codes (e.g., the ICD9 414 series instead of 410)? What proportion of your AMI and CHF patients may be in non-specific codes not used by the HQA?

Research Question 3: Feasibility of collecting HQA quality measures by race and ethnicity.

- 3.1. Do you report quality data by the race/ethnicity of the patient? If so, do you use OMB categories or another method for reporting race/ethnicity? What categories do you use?
- 3.2. If you report quality data by race and ethnicity, where is the race and ethnicity data collected? Admitting office, emergency department, financial counseling/billing, inpatient units, outpatient clinics, etc.?
- 3.3. If you are not currently collecting this data by race, how difficult would it be for your organization to do so? What would be the challenges?
- 3.4. If you began collecting this data by race/ethnicity, who would be responsible for this project?
- 3.5. If you do collect HQA data by race/ethnicity, what do you do with the results of the data? Do you analyze the results by race/ethnicity? Is the data used in clinical management or other activities designed to promote the health of your patients and/or community?
- 3.6. Does your organization have a sufficient number of patients to make analysis by race/ethnicity possible?
- 3.7. Do you believe that the collection of race/ethnicity data would support efforts to reduce hospital disparities? If so, why? How could this data be used by the institution?
- 3.8. Do you believe the HQA data should be reported publicly by race and ethnicity?

Research Question 4: Questions for non-Hospital Organizations

- 4.1. Is the issue of disparities in hospital care an important one for your organization?
- 4.2. What activities are currently under way to address disparities in health care?
- 4.3. Who in your organization has lead responsibility for reducing health disparities? To whom does this individual report?

- 4.4 Do you believe that the collection of race/ethnicity data would support efforts to reduce hospital disparities? If so, why? How could this data be used by the institution?
- 4.5 Does your organization participate in national efforts around quality improvement or disparities work? If so, please describe.
- 4.6 How is your organization governed? How are quality improvement initiatives selected? Are your boards or advisory groups involved in quality initiatives? If so, to what extent?

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