

IDENTIFYING RACIAL AND ETHNIC DISPARITIES IN HOSPITAL QUALITY: MONTGOMERY COUNTY HOSPITAL CARE EQUITY INITIATIVE

Health care equity is key to health care quality. It is well documented that racial and ethnic minorities suffer disproportionately from increased rates of disease and poor health status in the United States.¹ They are also subject to disparities in the quality of treatment they receive, even when insurance coverage and socioeconomic status are similar.²

Health care policymakers have invested in national efforts to identify and document health care disparities, but there have been few initiatives to document disparities at a local or regional level. Some of the challenges in collecting and analyzing data on health care disparities at a local level include limited funding, provider resistance, and recognition that to achieve meaningful results, quality data must be aggregated across providers in a region.

Despite these barriers, it is clear that local-level data will be instrumental in developing targeted interventions that ultimately improve care quality. This issue brief documents a process for aggregating regional hospital performance data, stratified by race and ethnicity, to create a local-level model for measuring and monitoring health care disparities. We also document challenges to identifying disparities, and describe strategies for overcoming these challenges.

Reducing Disparities through High-Value Health Care

The High-Value Health Care (HVHC) Project is working to make valid, timely, and consistent information about the quality and cost of health care widely available in the United States. One part of this effort, the Racial/Ethnic Health Care Equity Initiative, focuses on promoting equity in health care quality. The initiative engages stakeholders from across the public and private sectors in developing standards and models for collecting and reporting r/e/l data and ensuring that performance measures are stratified accordingly. HVHC is directed by the Engelberg Center for Health Care Reform at Brookings and supported by the Robert Wood Johnson Foundation.

GOALS OF THE PILOT PROGRAM

With funding from the Robert Wood Johnson Foundation, the Engelberg Center for Health Care Reform at Brookings launched the Montgomery County Hospital Care Equity Initiative (MCHCEI) as a pilot program designed to provide a model for such efforts. The goals of the pilot were to:

1. Improve patient demographic data collection in order to accurately quantify racial and ethnic disparities in health care.

2. Engage and communicate with the hospital care and broader public health community about race and ethnicity data collection and use.
3. Build greater collaboration among community stakeholders to address disparities in health care.

Montgomery County, Md. was selected as the pilot site based on its high concentration of minority patients,ⁱ its high hospital concentration,ⁱⁱ and its proximity to Washington, DC’s health care policymakers.

METHODOLOGY

In order to minimize the additional resources that this data aggregation effort would require from the five participating hospitals, MCHCEI selected a set of quality measures that were already required for hospitals to report to the Maryland Health Services Cost Review Commission. The measures are also part of the Joint Commission’s list of CORE National Hospital Quality Measures. In addition, the hospitals are also required by the state to gather race and ethnicity data for all patients, and the program identified a level of granularity in the race and ethnicity identifiers that could be standardized across the hospitals. Although the quality data were not stratified by race or ethnicity, the hospitals needed only to crosswalk their patient demographic data with the quality measures.

The four measure sets selected for the study — pneumonia, surgical care, acute myocardial infarction, and heart failure — represented 27 different measures of care quality.

To ensure standardization within and among all five participating hospitals, MCHCEI trained admitting staff on how to collect racial and ethnic data using

patient self-identification. This training emphasized the importance of directly asking each patient his or her race and ethnicity, and the prohibition against guessing or “eyeballing” as a substitute. Additionally, in anticipation of staff turnover, MCHCEI conducted a “train the trainer” session to equip staff to train new incoming staff on proper techniques.

Each of the participating hospitals collected results for the four sets of quality measures, stratified by race and ethnicity, for the second and third fiscal quarter of 2009. The Engelberg Center reviewed and aggregated the data, and then passed the complete data to Avalere Health, LLC for analysis. Avalere used the Chi-Square “goodness of fit” test to identify any statistically significant differences in compliance with the quality measures across racial groups and separately for Hispanic and non-Hispanic patients.

To maximize the value of the findings from this effort, the Engelberg Center commissioned Summit Health Institute for Research and Education, Inc. (SHIRE) to help engage the broader public health community in identifying potential uses for the information. SHIRE interviewed the hospitals involved in MCHCEI as well as representatives from the following six community organizations about the key challenges of collecting race/ethnicity data and addressing inequalities:

- African American Health Program
- Asian American Health Initiative
- Latino American Health Initiative
- Montgomery County Department of Health and Human Services
- Montgomery Health Care ACTION
- Primary Care Coalition of Montgomery Country

i. The county has a denser and more diverse minority population than the United States.

ii. Five community hospitals, and a physician-to-patient ratio of 82 percent compared to a national average of 25 percent.

Community organizations currently use disparities data to educate residents and policymakers, inform interventions, and justify population-specific program funding. This program, however, identified additional uses for such data, including raising awareness of disparities among providers, improving data collection, and prioritizing funding.

FINDINGS AND ANALYSIS

The data revealed that only one of the 27 hospital quality measures showed statistically significant evidence of a disparity. In the pneumonia set, data showed that pneumonia patients who identified themselves as Hispanic were significantly less likely than non-Hispanic patients to receive a blood culture within 24 hours of arriving at the hospital, a procedure that is recommended for inpatient treatment of severe pneumonia cases. No other measures showed evidence of a racial or ethnic disparity. Table 1 shows the results for all the pneumonia measures.

When interviewed about performance on the PN-3a measure, some hospital staff noted that this measure was not being tracked as closely as other inpatient measures. It is possible that compliance was actually lower than reported. On the other hand, some staff felt that non-compliance was likely due to procedural issues in specific departments and communication between those departments, such as the emergency department and the intensive care unit, rather than a result of disparate treatment across ethnic groups.

There are two possible reasons why the data showed almost no evidence of racial or ethnic disparities:

1. There were no disparities in care among the studied measures. Since hospitals are already required to report on these measures and

results are publicly posted, some of these measures may be “topped-out,” meaning that hospitals have achieved nearly complete compliance with the measure. By collecting measures that hospitals already report, the initiative may have narrowed the sample to measures that already reflect unusually high quality and few, if any, disparities.

2. There were disparities, but data limitations prevented statistically significant results. The main limitation of the data was the small sample size; even when aggregated across hospitals, minority populations have an inherently smaller sample size, which is often compounded by limited access. Second, the six-month time window of the initiative may have limited the results. There is also a possibility that aggregating data across hospitals may have cancelled out disparities from one facility to another. While the aggregation across hospitals was a methodological choice in order to garner higher sample sizes and encourage hospital participation, it may have obscured disparities in quality of care between facilities. Finally, there is the chance that some disparities may not have appeared due to inaccuracies in the collection of racial and ethnic identifying data.

LESSONS LEARNED

MCHEI achieved the goals that were set in this pilot program. The following are five lessons learned from the effort:

1. **Improve patient demographic data collection in order to accurately quantify racial and ethnic disparities in health care.** MCHCEI created a new model to allow regional hospitals to standardize demographic data collection in a way that allowed aggregation and analysis of race and ethnicity data.

2. Engage and communicate with the community about race and ethnicity data collection and use.

MCHCEI helped to increase community awareness about potential health care disparities in the region. Community involvement helped to enhance the value of the program by suggesting strategies for providers and the broader public health community to engage in the process of ameliorating poor outcomes associated with health care disparities.

3. Build greater collaboration among community stakeholders to address disparities in health care performance.

By using a third-party partner for data aggregation and analysis, MCHCEI alleviated many of the logistical hurdles that had prevented this type of local effort.

4. Develop aggregation models that incorporate longer time frames.

The project also revealed the difficulty of compiling enough data to make accurate determinations about the existence of health care disparities locally, even though the methodology used was designed to anticipate these challenges. Collecting data over a longer period of time or across a larger geographic region might address this challenge.

5. Use disparities-sensitive, ambulatory care measures to identify and monitor trends in health care disparities.

In addition, monitoring measures outside of the inpatient setting, including ambulatory care measures, can help to overcome the challenges of limited data and “topped out” quality measures. The National Quality Forum has identified several outpatient measures that highlight racial and ethnic disparities in health care performance. Incorporating these measures, along with measures of readmission, may help to produce meaningful results for monitoring disparities in care.

Conversely, while aggregating the data across hospitals helped to enlarge the sample size, it also prevented individual hospitals from understanding their own performance regarding disparities, which many hospital interviewees wished to know. Future initiatives should identify ways to deliver hospital-specific data without publicly exposing specific hospital performance. Further, as public reporting programs proliferate, hospital-specific data may be helpful for consumers to make better choices about where to seek inpatient care. Hospital staff also suggested the need for more intensive staff training in demographic data collection. High turnover in hospital admissions staff is common, and more resources for “training the trainer” programs might improve data collection. Community organizations also cited inadequate resources for collecting and analyzing data.

Future initiatives could address the limitations of existing hospital information technology systems, which may constrain the level of detailed race and ethnicity information that hospitals are able to collect from their patients. System incompatibility between departments, or across hospitals, may impact the ability to create aggregated reports. Future initiatives could also strive to gain a better understanding of existing systems and encourage changes to data systems that would improve comparability across departments and hospitals.

CONCLUSION

The model developed by the MCHCEI for measuring disparities on the local level is an effective way to aggregate regional hospital performance data stratified by race and ethnicity in order to assess and monitor disparities in care. The study demonstrated the importance of choosing ‘disparities sensitive’ and patient-centered measures to assess and monitor care disparities. It also documented the need, even among broad regions, to have at least one year worth of data in order to acquire sufficient sample

sizes to monitor disparities. Further, indentifying regional trends in health care disparities can allow hospitals and communities to *collaboratively* consider interventions to address disparities in a cost-effective way, rather than identifying piece-

meal approaches to reduce disparities. This pilot program acknowledged a need to further address data and measurement limitations in order to appropriately identify and monitor disparities in care.

Table 1. Measuring Disparities by Race and Ethnicity

RACE RESULTS				ETHNICITY RESULTS		
	100%	100%	100%		100%	100%
p = 1.00				p = 1.00		
PN-2, Pneumococcal Vaccination						
n = 424				n = 486		
% Compliance:	White	Black	Asian	% Compliance:	Hispanic	Non-Hispanic
	85.5%	98.4%	65.4%		76.2%	86.9%
p = 0.50				p = 0.61		
PN-3a, Blood Culture Performed Before or After ICU Arrival						
n = 60				n = 84		
% Compliance:	White	Black	Asian	% Compliance:	Hispanic	Non-Hispanic
	97.5%	100%	100%		40.0%	98.6%
p = 1.00				p = 0.03*		
PN-3b, Blood Cultures Performed in the ED Prior to Antibiotic						
n = 376				n = 413		
% Compliance:	White	Black	Asian	% Compliance:	Hispanic	Non-Hispanic
	94.6%	91.4%	95.7%		100%	93.6%
p = 0.96				p = 0.76		
PN-4, Adult Smoking Cessation Advice/Counsel						
n = 60				n = 69		
% Compliance:	White	Black	Asian	% Compliance:	Hispanic	Non-Hispanic
	88.9%	75.0%	N/A		85.7%	85.5%
p = 0.56				p = 0.99		
PN-5c, Initial Antibiotic Received Within 6 Hours of Hospital Arrival						
n = 376				n = 425		
% Compliance:	White	Black	Asian	% Compliance:	Hispanic	Non-Hispanic
	98.1%	93.7%	95.5%		96.0%	97.0%
p = 0.93				p = 0.96		

*Statistically significant at p≤0.05.

1. Office of Minority Health. "Heart Disease Data and Statistics" (2009) <http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=3&lvlid=127>
2. Institute of Medicine. "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care" (2003).