Published in final edited form as:
Med Care. 2012 November ; 50(0): S48–S55. doi:10.1097/MLR.0b013e3182610ad1.

Can Hospital Cultural Competency Reduce Disparities in Patient Experiences with Care?

Robert Weech-Maldonado, PhD,
University of Alabama at Birmingham, 1675 University Boulevard, 520 Webb, Birmingham, AL 35294, Phone: (205) 996-5838, Fax: (205) 975-6608, rweech@uab.edu

Marc N. Elliott, PhD,
RAND Corporation, 1776 Main Street, Santa Monica, CA 90401, Phone: (310) 393-0411 x7931, Fax: (310)260-8160, elliott@rand.org

Rohit Pradhan, PhD,
University of Alabama at Birmingham, 1675 University Boulevard, 529 Webb, Birmingham, AL 35294, Phone: (205) 996-2336, Fax: (205) 975-6608, rpradhan@uab.edu

Cameron Schiller, MS,
Schiller Research Consulting, P.O Box 13853, Gainesville fl 32608, Phone: (352) 219-4464, k.cameron.schiller@gmail.com

Allyson Hall, PhD, and
University of Florida, P.O Box 100195, Gainesville, FL 32610, Phone: 352-273-5129, Fax: 352-273-5061, hallag@phhp.ufl.edu

Ron D. Hays, PhD
University of California, Los Angeles, 911 Broxton Plaza, Los Angeles, CA 90095-1736, (310) 794-2294, drhays@ucla.edu

RAND Corporation, 1776 Main Street, Santa Monica, CA 90401

Abstract

Background—Cultural competency has been espoused as an organizational strategy to reduce health disparities in care.

Objective—To examine the relationship between hospital cultural competency and inpatient experiences with care.

Research Design—The first model predicted Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores from hospital random effects, plus fixed effects for hospital cultural competency, individual race/ethnicity/language, and case-mix variables. The second model tested if the association between a hospital's cultural competency and HCAHPS scores differed for minority and non-Hispanic white patients.

Corresponding Author: Robert Weech-Maldonado, MBA, Ph.D., Professor & L.R. Jordan Endowed Chair, Department of Health Services Administration, University of Alabama at Birmingham, 1675 University Boulevard, 520 Webb, Birmingham, AL 35294, Phone: (205) 996-5838, Fax: (205) 975-6608, rweech@uab.edu.

Subjects—The National CAHPS® Benchmarking Database's (NCBD) HCAHPS Surveys and the Cultural Competency Assessment Tool of Hospitals (CCATH) Surveys for California hospitals were merged, resulting in 66 hospitals and 19,583 HCAHPS respondents in 2006.

Measures—Dependent variables include ten HCAHPS measures: six composites (communication with doctors, communication with nurses, staff responsiveness, pain control, communication about medications, and discharge information), two individual items (cleanliness, and quietness of patient rooms), and two global items (overall hospital rating, and whether patient would recommend hospital).

Results—Hospitals with greater cultural competency have better HCAHPS scores for doctor communication, hospital rating, and hospital recommendation. Furthermore, HCAHPS scores for minorities were higher at hospitals with greater cultural competency on four other dimensions: nurse communication, staff responsiveness, quiet room, and pain control.

Conclusions—Greater hospital cultural competency may improve overall patient experiences, but may particularly benefit minorities in their interactions with nurses and hospital staff. Such effort may not only serve longstanding goals of reducing racial/ethnic disparities in inpatient experience, but may also contribute to general quality improvement.

Keywords

cultural competency; diversity management; Cultural Competency Assessment Tool for Hospitals (CCATH); CAHPS; health disparities

Health care organizations are increasingly recognizing cultural competency as an organizational strategy to address the needs of diverse patient populations.[1] Cultural competency has been defined as an "ongoing commitment or institutionalization of appropriate practices and policies for diverse populations"[2] (p. 183). Similarly, the National Quality Forum (NQF)[3] (p.2) has defined cultural competency as the "ongoing capacity of health care systems, organizations, and professionals to provide for diverse patient populations high-quality care that is safe, patient and family centered, evidence based, and equitable."

Cultural competency has been espoused as a strategy to enhance customer satisfaction, facilitate internal communication within the workforce, and improve organizational performance.[3–5] Similarly, cultural competency has been proposed as a way for health care organizations to reduce disparities in care.[2] Studies have examined the impact of specific practices (e.g., use of interpreters, recruitment and retention of minority staff, and diversity training) on racial/ethnic disparities in care.[6] However, very few studies have examined the impact of system-wide organizational cultural competency on patient outcomes. Lieu et al.[7] found that practice sites with highest cultural competence reported better asthma outcomes for Medicaid recipients. This study was limited to asthma and children. Our study makes a contribution to the literature by studying the relationship of hospital cultural competency with patient experiences with care in California hospitals.

Measuring Hospital Cultural Competency

Successful implementation of cultural competency requires an organizational commitment towards a systems approach.[8] System level cultural competency has been defined as "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enable that system, agency, or those professionals to work effectively in cross-cultural situations"[9] (p.20). Health care organizations (HCOs) that adopt a systems approach integrate cultural competency practices throughout their management

and clinical sub-systems Furthermore, HCOs engage their communities in meaningful participation in the organization's decision making and power structures.[9]

To evaluate whether organizational structures and processes meet the needs of a diverse patient population, a holistic measurement framework is required. Organizational assessments provide a useful tool to evaluate the structure (policies, programs) and processes (practices, culture) for cultural competency. The Cultural Competency Assessment Tool for Hospitals (CCATH) draws from two organizational cultural competency frameworks: 1) The US Department of Health and Human Services' (DHHS) Office of Minority Health national standards for culturally and linguistically appropriate services (CLAS) in health care;[10] and 2) NQF's[3] "A Comprehensive Framework and Preferred Practices for Measuring and Reporting Cultural Competency."

The CLAS standards provide guidelines on policies and practices aimed at developing culturally appropriate systems of care.[10] The CLAS standards were developed through an extensive process that included: 1) an initial draft of the national standards by the Resources for Cross Cultural Health Care and the Center for the Advancement of Health; 2) review of the proposed standards by a national advisory committee (NAC) constituted by representatives from Federal and state health agencies, provider groups, and academic research; 3) focus group designed to evaluate the revised set of standards recommended by the NAC; 4) a national process of public comment to facilitate input from stakeholder groups on the draft standards; and a final version of the CLAS standards in 2000.[10] The 14 CLAS standards are categorized into three themes: Culturally Competent Care (Standards 1–3), Language Access Services (Standards 4–7), and Organizational Supports for Cultural Competence (Standards 8–14).

Based on NQF's framework, we propose six domains for hospital cultural competency: 1) leadership; 2) integration into management systems and operations; 3) workforce diversity and training; 4) community engagement; 5) patient-provider communication; and 6) care delivery and supporting mechanisms.[3] *Leadership* recognizes that organizational leaders, including clinical leaders, administrative leaders, and the Board of Trustees, play an essential role in developing and implementing cultural competency activities, in setting organizational policy and strategy, and in monitoring organizational performance. *Integration into management systems and operations* focuses on whether cultural competency is integrated throughout all management practices of the organization. *Workforce diversity and training* can be viewed as a mean to providing more effective services for culturally diverse populations via human resource practices; it also relates to whether training and development activities include state-of-the-art content in cultural competency. *Community engagement* refers to active outreach as well as community inclusion and partnership in organizational decision-making. *Patient-provider communication* includes all communication between the patient and clinicians as well as support staff. *Care delivery and supporting mechanisms* encompasses the delivery of care, the physical environment of where the care is delivered, and links to supportive services and providers. While the first four domains pertain to management sub-systems, the latter two are considered clinical sub-systems. Based on the systems approach, organizations become culturally competent by adapting their management and clinical sub-systems to the needs of a more diverse workforce and patient population. Appendix 1 shows the relationship between the NQF cultural competency domains and the CLAS standards.

Conceptual Framework

Donabedian's[11] Structure-Process-Outcome (SPO) model has been used in health services research to examine the relationship between organizational characteristics, such as size,

profit status and chain affiliation with outcomes of care.[12–16] In the SPO model, structure is defined as the professional and organizational resources that can be associated with providing care, such as facility operating capacities, human resources and staff credentials.[17] The organization of the physical and human resources, and the quality of those resources is also construed as part of organizational structure.[18] Process refers to actions that are performed on or done to patients, such as the communication between staff and patients.[19] Outcomes are the states that result from care processes, such as improvements in health status [20] or patient satisfaction with care.[18], [21] Appropriate structures increase the likelihood of good processes, and appropriate processes increase the likelihood of good outcomes.

We developed a model that explicitly links hospital cultural competency (structure) with patient experiences with care (outcomes of care). The degree of hospital cultural competency is a structural element, since it implies having policies and practices in place that facilitate the delivery of appropriate services to diverse populations including understanding the needs of the population that they serve; training staff to be culturally competent; and providing interpreters and translation services.

Patient reports and ratings of health care experiences serve as an indicator of the quality of care provided by health plans and health care providers. These evaluations provide important information about how well providers meet the needs of their consumers[22], [23] The Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Hospital Survey scores are included in the Centers for Medicare and Medicaid Services' (CMS) public reporting of hospital quality of care, known as Hospital Compare.[24] [25] These measures are used as outcomes of care in this study.

In summary, it is expected that patients in hospitals with greater cultural competency will have better reports of inpatient care. Furthermore, we expect this to be an overall positive effect across all racial/ethnic groups and not limited to racial/ethnic minority groups. Cultural competency policies and practices are intended to facilitate cross-cultural interactions across a range of sociocultural factors, such as "race/ethnicity, nationality, language, health literacy, gender, socioeconomic status, immigrant status, (age at immigration and length of time in the United States), physical and mental ability, mental health, sexual orientation and gender identity, religion, age, and occupation" [3] (p.2). Therefore, a system-wide effort towards cultural competency is likely to have an overall positive effect across all hospital patients.

Hypothesis 1: Patients receiving care in hospitals with greater cultural competency will report better experiences with inpatient care.

Generally cultural competency activities have focused on racial/ethnic and language issues. As such, racial/ethnic/linguistic minorities stand to benefit the most from cultural competency policies and practices. Therefore, compared to non-Hispanic White English speakers, racial/ethnic minorities are hypothesized to have better patient experiences in hospitals with greater cultural competency.

Hypothesis 2: The experiences of minority patients relative to non-Hispanic White English-speaking patients will be better at hospitals with a higher degree of cultural competency than at hospitals with lower degree of cultural competency.

METHODS

Data

Two sources of data are used: the 2006 National CAHPS Benchmarking Database's (NCBD) Hospital Surveys (HCAHPS) and the 2006 CCATH Surveys for California hospitals in 2006. The 2006 NCBD HCAHPS includes data from sponsors that voluntarily participate, and includes patients discharged between December 2005 and September 2006.[26] HCAHPS targets a random sample of adult patients (18 years of age or older) with a non-psychiatric primary discharge diagnosis for medical, surgical, or maternity care; who had an overnight stay (or longer) as an inpatient; and who were alive at discharge.[24] In the NCBD data 148,210 surveys (78%) were completed by mail; 36,822 (19%) by telephone; and 5,658 (3%) by interactive voice response (IVR). There were 7,274 surveys (4%) completed in Spanish and 112 (0.1%) in Chinese. Surveys completed in Chinese were dropped from the analytic sample due to their small number. Once we apply additional hospital-level exclusion criteria (response rate < 10%, number of completes < 50, and hospital located outside of California), the hospital analytic sample consists of 138 hospitals. The average response rate for the hospitals in the analytic sample was 30%.

The sampling frame for the CCATH mail survey consisted of all 344 general and children hospitals listed in the California Hospital Association Directory in 2006. We followed a modified approach to the Total Design Method.[27] A cover letter, explaining the purpose of the survey along with the actual survey was mailed to the Chief Executive Officer (CEO). The CEO was asked to designate a survey coordinator to collect all the information and respond to the survey. We included a letter of support from the California Institute for Health Systems Performance. In addition, a $25 incentive payment was included for the survey coordinator. A reminder was mailed to those who had not returned the survey within two weeks. A second mailing targeted participants not responding within one month, and a new survey was included with the mailing. If the survey had not been returned within seven weeks, phone calls were made to request respondents to complete the survey. This was followed by email reminders for those who had not returned the survey within ten weeks. Finally, an email with an electronic version of the survey was sent to those who had not responded within fourteen weeks. We obtained a 37 percent response rate (125 hospitals) with this multi-stage approach.

Sample

The final analytic file contained data on 19,583 patients from 66 hospitals that participated in both the HCAHPS Survey and the CCATH Survey. We assessed potential non-response bias by comparing respondent hospitals with non-respondent hospitals. Hospitals in the final analytic sample were more likely to be not-for-profit compared to other hospitals in California (67% vs. 53%), have a large bed size (39% vs. 25%), have a low proportion of Medicaid patient days (21% vs. 31%), and have a high proportion of managed care patient days (38% vs. 29%). These findings are largely consistent with other descriptions of early HCAHPS participants.[28], [29] However, respondent hospitals were not significantly different ($p < 0.05$) than non-respondent hospitals in terms of teaching status, health system affiliation, % of non-White inpatients, total profit margin, market competition (Herfindahl-Hirschman Index), % of non-White population in the county, % of non-English speakers in the county, being in a metropolitan area, and per capita income.

Variables

Dependent variables—The study included 10 HCAHPS measures of patient experience with care: six composite measures, two individual reports, and two global ratings. The six composite measures are constructed from 14 HCAHPS items: communication with doctors,

communication with nurses, staff responsiveness, pain control, communication about medications, and discharge information.[30] Composites were scored as the average of applicable items within a composite.[31–33] Support for the reliability and validity of these domains of care has been provided in prior work. [25, 31, 34–36] In addition, the two stand-alone report items (cleanliness of hospital environment and quietness of hospital environment) and the two global items (recommendation of hospital to friends and family, and overall rating of hospital) were included. Response options are *always*, *usually*, *sometimes*, or *never* for all composite items; *yes* or *no* for the cleanliness and quietness items; *definitely no*, *probably no*, *probably yes*, and *definitely yes* for the recommendation to friends and family; and 0 to 10 for the overall rating item (with 0 labeled *worst possible* and 10 labeled *best possible*). To facilitate comparisons, all dependent variables were transformed linearly to a 0–100 possible range.

Independent variables—The independent variables of primary interest were hospital cultural competency and the patient-level indicators of race/ethnicity/ language. The degree of hospital cultural competency is represented as an average of the CCATH scales. The CCATH measures were developed to reflect the six NQF domains and fourteen CLAS standards .[5] The CCATH has been subject to pilot testing, focus groups, cognitive interviews, and field testing.[5, 37]

Exploratory and confirmatory factor analysis of field test data supported 12 CCATH composite scales: Leadership and Strategic Planning, Data Collection on Inpatient Population, Data Collection on Service Area, Performance Management Systems and Quality Improvement, Human Resources Practices, Diversity Training, Community Representation, Availability of Interpreter Services, Interpreter Services Policies, Quality of Interpreter Services, Translation of Written Materials, and Clinical Cultural Competency Practices. The 12-factor model provided good fit to the data: Chi-square= 90.8 (p-value = 0.17); Comparative Fit Index (CFI)= 0.96; Tucker-Lewis Index (TLI)= 0.97; and the Root Mean Square Error of Approximation (RMSEA)= 0.04. [5] Appendix 1 shows the relationship between the NQF domains, the CCATH scales, and the CLAS standards, while Appendix 2 shows the CCATH scales and items. Table 1 provides Cronbach's [5] coefficient alphas and the mean score for each CCATH scale. All the CCATH scales had alphas greater than 0.60, and nine of the 12 composites had alphas greater than 0.70. Mean scores for each CCATH composite were obtained by: 1) linear transformation of each item to a 0–100 possible range; and 2) calculating the average of the items within each composite.

An average score for the 12 CCATH scales was calculated and used as the dependent variable. Second-order factor analysis results confirmed that it was appropriate to aggregate the CCATH composites to obtain an overall mean: Chi-square= 92.9 (p-value = 0.12); CFI= 0.95; TLI= 0.96; and RMSEA= 0.039.

Respondents were assigned to racial/ethnic/language categories based on their self-reported race, ethnicity, and language spoken at home, as well as the survey language.[5, 33] First, any respondent that was of Hispanic or Latino origin or descent was categorized as Hispanic, regardless of stated race. The remaining respondents were categorized as White, Black, Asian or Pacific Islander, American Indian, Multi-Racial and Missing Race/Ethnicity based on the race categories selected. These categories were further subdivided by language preference, based on survey language and language spoken at home. Language subgroups for Blacks, American Indians, or Multi-Racial were not large enough for separate analysis. Any respondent not selecting any race/ethnicity or language question was categorized as Missing Race/Ethnicity or Language. The final groupings were: White, English Survey, English Spoken at Home (White English speakers); White, English Survey, Non-English Spoken at Home (White Non-English speakers); Hispanic, English Survey, English Spoken

at Home (Hispanic English speakers); Hispanic, English Survey, Spanish Spoken at Home (Hispanic Bilinguals); Hispanic, Spanish Survey, Spanish Spoken at Home (Hispanic Spanish speakers); Black, English Survey, English Spoken at Home (Black); Asian or Pacific Islander, English Survey, English Spoken at Home (Asian English speakers); Asian or Pacific Islander, English Survey, Other Language Spoken at Home (Asian Non-English speakers); American Indian; Multi-Racial; and Missing Race/Ethnicity or Language. A similar classification of racial/ethnic and language groups was used in prior CAHPS research.[5, 33]

Case-mix adjustment—An additional set of variables known to be related to systematic differences in survey responses was used as case-mix adjustors: age, education, self-reported health status, service line, and emergency room admission. [5] Age was a categorical variable with eight categories: 18–29, 30–39, 40–49, 50–59, 60–69, 70–79, 80–89, and 90 or older. Education was a categorical variable with six categories: eighth grade or less, some high school but did not graduate, high school graduate or GED, Some College/Two-Year Degree, Four-Year College Graduate, and More than Four-Year College Degree. Health status was a categorical variable measuring how respondents rate their overall health: excellent, very good, good, fair, and poor. Service line was a three-category variable (obstetric, medical, or surgical). Interaction terms of age and service line was included as an additional case-mix adjustor. This approach is similar to what is currently used in HCAHPS public reporting. [5, 25] Educational attainment and self-rated health status were obtained from the survey response; other casemix variables came from administrative records.

Analyses—Descriptive statistics were calculated for the independent and dependent variables, and then two linear mixed effect regression models were fitted to the data. The first model predicted overall HCAHPS scores from hospital random effects, plus fixed effects for hospital's degree of cultural competency, individual race/ethnicity/language, and case-mix variables. The second model tested if the association between a hospital's degree of cultural competency and HCAHPS scores differed for minority and non-minority patients by adding a fixed effects interaction between hospital cultural competency and a patient minority racial/ethnic or language group indicator (an indicator of all groups other than English-speaking non-Hispanic whites, collapsed to improve statistical power); an interaction between hospital cultural competency and missing racial/ethnic/language status was also included. For ease of interpretation, hospital cultural competency was entered into the models as a standardized score. Although all tests corresponded to a priori hypotheses, Bonferroni adjustments for multiple comparisons were run as sensitivity tests.

RESULTS

Descriptive statistics for the dependent and independent variables are shown in Table 2, while Table 3 shows the regression results for the first model. Greater degree of cultural competency was positively associated with doctor communication ($p<0.05$), the overall hospital rating ($p<0.01$), and hospital recommendation ($p<0.01$); providing partial support for hypothesis 1. Hospital recommendation remained statistically significant after Bonferroni adjustment for multiple testing ($p<0.05$). Each additional standard deviation in the cultural competency score is associated with an increase of 0.7 points in doctor communication (0.4 hospital-level standard deviations), 1.2 points in hospital rating (0.4 hospital-level standard deviations), and 1.6 points in hospital recommendation (0.5 hospital-level standard deviations). Overall, patient experiences are better in hospitals with higher degree of cultural competency. These effects are small to medium size at the hospital level[38] and are noteworthy; one standard deviation of degree of cultural competency is associated with approximately 6–19 percentiles of hospital rank in HCAHPS.

The addition of an interaction between degree of cultural competency and a patient-level minority racial/ethnic/language indicator provided evidence of significantly greater relative benefits to those who were not English-speaking non-Hispanic Whites for 4 of the 10 measures examined: nurse communication ($p<.01$), staff responsiveness ($p< 0.01$), quiet room ($p< 0.05$) and pain control ($p<0.001$) (Table 4). This provided partial support for hypothesis 2. Pain control and staff responsiveness remained statistically significant after Bonferroni adjustment for multiple testing. Among minorities, each additional standard deviation in the cultural competency score results in an increase of 0.9 points in nurse communication (0.4 hospital-level standard deviations), 1.3 points in staff responsiveness (0.5 hospital-level standard deviations), 1.0 points in quiet room (0.2 hospital-level standard deviations), and 1.5 points in pain control (0.5 hospital-level standard deviations). These are small to medium effect sizes.[38]

CONCLUSIONS

The national CLAS standards in health care and the NQF framework for measuring and reporting cultural competency were intended to provide guidelines on policies and practices for culturally competent systems of care.[3], [10] We used Donabedian's SPO model to examine the relationship between hospital cultural competency (structure) and inpatient experiences with care (outcome). Results indicate that hospitals with greater cultural competency have better scores for doctor communication, hospital rating, and hospital recommendation. Organizational structural attributes associated with cultural competency, therefore, are associated with improved processes of care. These findings suggest that cultural competency activities may both improve patients' overall hospital experiences and doctor communication in general, perhaps by emphasizing attentive, tailored, and patient-centered care. [39]

While the degree of cultural competency is associated with better overall patient experiences for some dimensions of care, our results suggest that the impact of cultural competency on other dimensions of care is greater among minority patients compared to non-Hispanic White English speakers and in particular extends to dimensions that include interaction with non-physician hospital staff. Particular benefit to minority patients was apparent for nurse communication, staff responsiveness, quiet room, and pain control. Improved cultural competency thus has the potential to reduce racial/ethnic disparities on these important dimensions of hospital care. The potential benefit to minority patients in nurse communication is notable, given research showing that Communication with Nurses is the strongest predictor of overall assessments.[40], [41] The targeted benefit of cultural competency for minority patients for dimensions such as staff responsiveness and nurse communications suggests that lack of cultural competency in some hospitals may adversely affect minority patients on those dimensions in particular.

The study has several limitations. First, it was limited to the state of California, which limits generalizability of the study findings. Despite this shortcoming, California is an important state to study issues related to cultural competency given that it is the most populous and one of the most diverse states in the U.S. in terms of race/ethnicity/language. Second, hospitals that were early participants in the HCAHPS survey and that also participated in the CCATH survey represent a subset of hospitals in California. Hospitals in the final analytic sample were more likely to be larger and not-for-profit, and had less Medicaid but more managed care patients. Elliott et al. have shown that smaller hospitals tend to perform better on HCAHPS scores. [42] Hospitals in our sample may have also been better than average or more interested than average in cultural competency issues. However, sample hospitals were not different from other hospitals in California in a large number of other variables. Moreover, any restriction of range of CCATH scores that might have resulted would have

served to underestimate the true association of CCATH with HCAHPS. Third, while we requested that hospitals designate a survey coordinator to collect the information and to respond to the survey, ultimately we had no control over how a particular hospital responded to the survey. Fourth, there is potential endogeneity of degree of cultural competency and patient experiences with care. High degree of cultural competency may be a proxy for other unobserved hospital characteristics associated with better care. However, given the differential impact of cultural competency on minority experiences with care, it is less likely that a third factor such as greater resources would explain this differential effect. Further research is needed using longitudinal data or instrumental variables to address potential endogeneity. Finally, not all findings retained statistical significance after adjustment for multiple testing, so some caution should be used in interpreting those findings. Nonetheless, evidence of the overall patterns cited here remains even after such adjustment.

Notwithstanding these limitations, this study provides an important examination of how system-wide hospital cultural competency activities may be associated with organizational processes of care. To the extent that cultural competency practices are associated with better patient experiences, there will be a market incentive for the implementation of such practices in more competitive markets. Better HCAHPS can result in greater market share and potentially better financial performance. Beginning in the fiscal year 2013, CMS will incorporate HCAHPS into its hospital value-based purchasing program providing direct financial incentives for scores improvement via the Affordable Care Act.[43]

Recent public reporting efforts by CMS of HCAHPS scores have resulted in quality improvement (QI) initiatives aimed at patient experiences with care[24], [44]and there is early evidence of improvement in HCAHPS scores.[42] QI activities tied to cultural competency efforts show notable promise for improving all HCAHPS scores, but particular promise for hospitals with significant racial/ethnic/language minority patient populations. This is especially important given evidence that the overall HCAHPS performance of hospitals serving more racial/ethnic minorities is currently lower on average than for hospitals serving primarily non-Hispanic White patients.[30] Thus the CCATH instrument may provide diagnostic and actionable information to hospitals seeking to both reduce racial/ethnic disparities and improve their overall patient experiences.

Acknowledgments

Disclosure of Funding: The authors acknowledge the assistance of the CCATH Project Advisory Committee (Shelby Dunster, Rupert Evans, Iris A. Garcia, James Plumb, Robert Riney, and Miguel Tirado). This project was supported in part by the Commonwealth Fund Project #20060407 (Project Officer- Anne Beal) and the DHHS Office of Minority Health Task Order # 7 (Contract Number 282-00-0005) (Project Officer- Guadalupe Pacheco). Dr. Weech-Maldonado was supported in part by the UAB Center of Excellence in Comparative Effectiveness for Eliminating Disparities (CERED), NIH/NCMHD Grant 3P60MD000502-08S1. Dr. Hays was supported in part by the UCLA Older Americans Independence Center, NIH/NIA Grant P30-AG028748, the UCLA Resource Center for Minority Aging Research/Center for Health Improvement in Minority Elderly (RCMAR/CHIME), NIH/NIA Grant Award Number P30AG021684, and the UCLA/ Drew Project EXPORT, NCMHD, 2P20MD000182.

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Appendix 1

NQF Cultural Competency Domains, CCATH Sub-Domains, and CLAS Standards

NQF Domains	CCATH Sub-Domains	CLAS Standards	
Leadership	**Leadership and Strategic Planning**	8.	Health care organizations should develop, implement and promote a written strategic plan that outlines clear goals, policies, operational plans and management accountability/ oversight mechanisms to provide

NQF Domains	CCATH Sub-Domains	CLAS Standards	
			culturally and linguistically appropriate services.
		14	Health care organizations are encouraged to regularly make available to the public information about their progress and successful innovations in implementing the CLAS standards and to provide public notice in their communities about the availability of this information.
Integration into Management Systems and Operations	**Data Collection on Inpatient Population**	10	Health care organizations should ensure that data on the individual patient's/consumer's race, ethnicity, and spoken and written language are collected in health records, integrated into the organization's management information systems, and periodically updated.
	Data Collection on Service Area	11.	Health care organizations should maintain a current demographic, cultural and epidemiological profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area.
	Performance Management Systems and Quality Improvement (QI)	9.	Health care organizations should conduct initial and ongoing organizational self-assessments of CLAS-related activities and are encouraged to integrate cultural and linguistic competence-related measures into their internal audits, performance improvement programs, patient satisfaction assessments, and outcomes-based evaluations.
Workforce Diversity and Training	**Human Resources Practices**	2.	Health care organizations should implement strategies to recruit, retain and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area.
	Diversity Training	3.	Health care organizations should ensure that staff at all levels and across all disciplines receive ongoing education and training in culturally and linguistically appropriate service delivery.
		13.	Health care organizations should ensure that conflict and grievance resolution processes are culturally and linguistically sensitive and capable of identifying, preventing and resolving cross-cultural conflicts or complaints by patients/consumers.
Community Engagement	**Community Representation**	12.	Health care organizations should develop participatory, collaborative partnerships with communities and utilize a variety of formal and informal mechanisms to facilitate community and patient/consumer involvement in designing and implementing CLAS-related activities.

NQF Domains	CCATH Sub-Domains	CLAS Standards	
Patient-Provider Communication	**Availability of Interpreter Services**	4.	Health care organizations must offer and provide language assistance services, including bilingual staff and interpreter services, at no cost to each patient/consumer with limited English proficiency at all points of contact, in a timely manner during all hours of operation.
	Interpreter Services Policies	5.	Health care organizations must offer and provide to patients/consumers in their preferred language both verbal offers and written notices informing them of their right to receive language assistance services.
	Quality of Interpreter Services	6.	Health care organizations must assure the competence of language assistance provided to limited English proficient patients/consumers by interpreters and bilingual staff. Family and friends should not be used to provide interpretation services (except on request by the patient/consumer).
	Translation of written materials	7.	Health care organizations must make available easily understood patient-related materials and post signage in the languages of the commonly encountered groups and/or groups represented in the service area.
Care Delivery and Supporting Mechanisms	**Clinical Cultural Competency Practices**	1.	Health care organizations should ensure that patients/consumers receive from all staff members effective, understandable and respectful care that is provided in a manner compatible with their cultural health beliefs and practices and preferred language.

Appendix 2

CCATH Domains and Items

Clinical Cultural Competency Practices	Coding
Does the hospital consider cultural and language needs during the discharge planning? (1b)	0= No 1= Yes, less than half of the departments 2= Yes, half or more of the departments
Does the hospital accommodate the ethnic/cultural dietary preferences of in-patients? (1c)	
Does the hospital tailor patient education materials for different cultural and language groups? (1d)	
Does the hospital tailor patient clinical assessments for different cultural and language groups? (1e)	
Human Resources Practices	
Which of the following benefits are available to staff? Formal mentoring program (5a) Management training (5b) Tuition assistance or tuition reimbursement for ongoing education (5c) Personal counseling or employee assistance programs 5(d) Flexible benefits such as domestic partner benefits, family illness, death, and personal leave policies that accommodate alternative definitions of family 5(e) Affinity (networking) groups for racial/ethnic minority staff 5(f)	0= No 1= Yes

Clinical Cultural Competency Practices	Coding
Work/life balance programs such as flextime, job sharing or telecommuting, child or elder care (5g)	
Diversity Training	
Does this hospital have a formal and ongoing training program on cultural and language diversity? (9) Note: This may consist of either a stand-alone training program or several training components integrated into other types of training. A hospital may have a voluntary program, a mandatory program or both voluntary and mandatory programs.	0= Yes 1= No
Do the staff involved in the formal complaint and grievance process Receive formal training in conflict resolution? (26a)	0= No 1= Training less than once per year 2= Training at least once per year
Do the staff involved in the formal complaint and grievance process Receive formal training about cultural or language differences? (26b)	
Availability of Interpreter Services	
Are interpreter services available for in-patients in Spanish? (12a)	0= No 1= Telephone only 2= Bilingual/Face to Face
Are interpreter services available for in-patients in Chinese? (12b)	
Are interpreter services available for in-patients in Vietnamese? (12c)	
Are interpreter services available for in-patients in Korean? (12d)	
Are interpreter services available for in-patients in Tagalog?(12e)	
Interpreter Services Policies	
Does this hospital have a written policy and procedures about the use of Bilingual staff as interpreters? (14a)	0= No 1= Yes
Does this hospital have a written policy and procedures about the use of Face-to-face professional interpreters? (14b)	
Does this hospital have a written policy and procedures about the use of Face-to-face volunteer interpreters? (14c)	
Does this hospital have a written policy and procedures about the use of Family or friends as interpreters? (14e)	
Quality of Interpreter Services	
Does this hospital include information on the availability of interpreter services in marketing and community outreach initiatives such as television advertising, marketing brochures, and health fairs? (13)	0= No 1= Yes
Does the hospital require an assessment of interpreter fluency in translating medical terms and procedures? (15a)	
Does the hospital require an assessment of interpreter accuracy and completeness? (15b)	
Translation of Written Materials	
What types of written materials does this hospital routinely provide to in-patients in languages other than English? Informed consent statements?(17a) Medication instructions? (17b) Discharge planning instructions? (17c) Patient advance directives? (17d) Health education material? (17e)	0= No translation 1= Translation into Spanish or an Asian language 2= Translation into 2 or more languages
Does this hospital post signs providing directions in languages other than English? (19)	0= No 1= Yes
Leadership and Strategic Planning	
Does this hospital's statement of strategic goals include Specific language about recruitment of a culturally diverse work force? (20a)	0= No 1= Yes
Does this hospital's statement of strategic goals include Specific language about retention of a culturally diverse work force? (20b)	

Clinical Cultural Competency Practices	Coding
Does this hospital's statement of strategic goals include Specific language about the provision of culturally appropriate patient services? (20c)	
During the strategic planning process, does this hospital routinely assess achievement of its cultural diversity goals? (21)	
Is there a person, office or committee who has dedicated responsibility for promoting this hospital's cultural diversity goals? (22a)	
Does this hospital report information to the community at least once per year about its performance in meeting the cultural and language needs of the service area? (27) Note: This does not include EEO reporting to government agencies on workforce demographics.	
Performance Management Systems and QI	
Does the employee satisfaction survey include measures of diversity climate? (8)	0= No 1= Yes
Is the following assessment conducted at least once each year: Accessibility of interpreter services? (23a) Racial/ethnic differences in in-patient service use? (23b) Racial/ethnic differences in in-patient assessments of care (satisfaction)? (23c)	0= No 1= Assessment conducted at least once per year 2= Assessment conducted and used in quality improvement
Data Collection on Inpatient Population	
Does this hospital collect any ethnicity or racial data on individuals receiving in-patient services?(2)	0= No 1= Yes
Does this hospital collect data on the preferred language for individuals receiving in-patient services? (3)	
Data Collection on Service Area	
Does this hospital track changes in the race or ethnicity of its work force? (6)	0= No 1= Yes
Does this hospital collect or receive any of the following data on the population residing in the service area? Race/ethnicity (24a)	0= No 1= Yes, data collected 2= Yes, data collected and used in service planning
Does this hospital collect or receive any of the following data on the population residing in the service area? Languages spoken (24b)	
Does this hospital collect or receive any of the following data on the population residing in the service area? Income levels (24c)	
Does this hospital collect or receive any of the following data on the population residing in the service area? Education levels (24d)	
Does this hospital collect or receive any of the following data on the population residing in the service area? Health risk profiles (for diseases or conditions that disproportionately affect a particular racial/ethnic/gender group such as African American men, Latino women, or individuals of Jewish ethnicity) (24e)	
Does this hospital collect or receive any of the following data on the population residing in the service area? Utilization of health screening services (mammograms, prostate screening exams, PAP smears) (24f)	
Community Representation	
Are community representatives routinely involved in the planning and design of in-patient services for culturally diverse populations? (25a)	0= No 1= Yes
Are community representatives routinely involved in the evaluation of existing services for culturally diverse populations? (25b)	

Table 1

Cultural Competency Assessment Tool for Hospitals (CCATH) Scales, Number of Items, Internal Consistency Reliabilities, Means and Standard Deviations

CCATH Scale	Number of Items	Alpha	Mean[a]	Standard Deviation
Leadership and Strategic Planning	6	0.79	35.8	33.6
Data Collection on Inpatient Population	2	0.70	87.1	29.8
Data Collection on Service Area	7	0.84	60.5	31.3
Performance Management Systems and QI	3	0.78	33.3	35.0
Human Resources Practices	8	0.66	62.2	21.4
Diversity Training	3	0.68	53.7	35.5
Community Representation	2	0.84	40.2	45.6
Availability of Interpreter Services	4	0.87	70.2	25.7
Interpreter Services Policies	4	0.65	61.1	32.5
Quality of Interpreter Services	3	0.75	58.1	40.7
Translation of Written Materials	6	0.81	52.3	22.8
Clinical Cultural Competency Practices	4	0.76	81.4	23.3

[a]Possible range is 0–100, with 100 indicating full adherence to each respective CCATH sub-domain.

Table 2

Descriptive Statistics for Variables

Dependent Variables	
Nurse Communication, mean (SD)	84.9 (19.8)
Staff Responsiveness, mean (SD)	76.9 (25.7)
Doctor Communication, mean (SD)	88.7 (19.2)
Clean Room, mean (SD)	82.6 (28.1)
Quiet Room, mean (SD)	71.9 (30.2)
Pain Control, mean (SD)	84.2 (21.2)
Medication Communication, mean (SD)	69.3 (31.2)
Discharge Communication, mean (SD)	24.9 (35.2)
Hospital Rating, mean (SD)	83.5 (20.8)
Hospital Recommendations, mean (SD)	85.2 (23.8)
Independent Variables	
Degree of Cultural Competency, mean (SD)	63.6 (19.3)
Racial/Ethnic/Language Group %	
White Non-Hispanic	88.1
Hispanic English Speakers	14.3
Hispanic Bilinguals	5.4
Hispanic Spanish Speakers	11.8
Black non-Hispanic	6.5
Asian English Speakers	6.0
Asian English Non-Speakers	4.1
American Indian	0.9
Multi-Racial	2.5
Missing Race/Ethnicity/Language	13.8
Age Groups %	
18–24	6.1
25–34	12.4
35–44	8.3
45–54	9.6
55–64	13.9
65–74	18.5
75–84	19.9
85 plus	7.7
Education %	
8th Grade or Less	7.1
Some High School	8.6
High School Graduate/GED	23.6
Some College/2-year Degree	30.3
4-Year College Graduate	11.3
More than 4-years College Graduate	13.1
Self-Reported Health Status, %	

Dependent Variables	
Excellent	16.3
Very Good	27.6
Very Good	27.6
Good	28.6
Fair	18.5
Poor	6.0
Emergency Department Admission, %	28.8
Principal Reason for Admission, %	
Obstetric	19.2
Medical	46.5
Surgical	34.3

Table 3

Hospital CAHPS Reports and Ratings (0–100 scale) Predicted from Degree of Cultural Competency, Race/Ethnicity/Language, Hospital Random Effects, and Case-Mix Adjustors

Effect	Nurse Communication	Staff Responsiveness	Doctor Communication	Clean Room	Quiet Room
Degree of Cultural Competency (per standard deviation)	0.38	0.10	0.73[b]	−0.23	0.12
Racial/Ethnic/Language Groups (Reference Group: White)					
Hispanic English Speakers	1.80[d]	1.42[b]	1.33[c]	−0.77	3.40[d]
Hispanic Bilinguals	0.78	1.99[a]	0.03	−0.62	6.15[d]
Hispanic Spanish Speakers	1.08[a]	1.63[a]	0.95	2.82[d]	10.03[d]
Black	2.87[d]	2.82[c]	3.20[d]	2.04[b]	11.21[d]
Asian English Speakers	0.72	−0.71	−1.27[a]	−1.31	4.18[d]
Asian Non English Speakers	−1.72[a]	−2.75[b]	−2.72[c]	−1.23	5.95[d]
American Indian	−2.48	−1.85	−0.25	−8.16[d]	−2.20
Multi-Racial	−0.33	−2.48[a]	0.42	−1.31	2.56
Missing Race/Ethnicity/Language	−0.40	−1.04	0.48	−1.97[c]	4.13[d]
Standard Deviation of Hospital-Level Random Effect	2.42[d]	3.37[d]	1.79[d]	3.10[d]	4.77[d]
Degree of Cultural Competency (per standard deviation)	0.11	−0.24	−0.55	1.22[c]	1.55[c]
Racial/Ethnic/Language Groups (Reference Group: White)					
Hispanic English Speakers	3.12[d]	2.61[b]	−0.17	2.24[d]	1.27[b]
Hispanic Bilinguals	3.94[d]	6.03[d]	−3.56[b]	3.56[d]	3.50[d]
Hispanic Spanish Speakers	2.17[c]	6.40[d]	−4.66[d]	7.58[d]	7.41[d]
Black	3.86[d]	5.19[c]	0.42	3.75[d]	1.92[b]
Asian English Speaker	0.36	2.26	2.41[a]	1.17	1.44[a]
Asian Non-English Speakers	−4.57[d]	1.40	−5.73[d]	0.31	1.14
American Indian	0.02	5.43	−9.17[c]	−0.27	−0.31
Multi-Racial	0.31	−0.59	1.52	−0.29	−0.52
Missing Race/Ethnicity/ Language	−1.12[a]	2.44[b]	0.05	0.98[a]	−0.41

Effect	Nurse Communication	Staff Responsiveness	Doctor Communication	Clean Room	Quiet Room
Standard Deviation of Hospital-Level Random Effect	2.10[d]	2.77[d]	3.29[d]	2.88[d]	3.44[d]

NOTES: Case-mix adjustors: age, education, self-reported health status, service line, and emergency room admission.

[a] p<0.10.

[b] p<0.05.

[c] p<0.01.

[d] p<0.001.

Table 4

Hospital CAHPS Reports and Ratings Predicted from Degree of Cultural Competency, Race/Ethnicity/Language, Hospital Random Effects, and Case-Mix Adjustors

Effect	Nurse Communi-cation	Staff Respon-siveness	Doctor Communi-cation	Clean Room	Quiet Room
Degree of Cultural Competency (per SD)	0.11	0.16	0.74^{b}	−0.38	−0.29
Degree of Cultural Competency (per SD)*minority indicator	0.88^{c}	1.32^{c}	−0.03	0.30	1.04^{b}
Degree of Cultural Competency (per SD)*missing race/ethnicity/language indicator	−0.08	−0.50	−0.04	0.75	1.01
Racial/Ethnic/Language Groups (Reference Group: White)					
Hispanic English Speakers	1.83^{d}	1.38^{a}	1.32^{c}	−0.75	3.45^{d}
Hispanic Bilinguals	0.72	1.90^{a}	0.04	−0.62	6.12^{d}
Hispanic Spanish Speakers	1.06	1.72^{a}	0.95	2.83^{c}	10.05^{d}
Black	2.82^{d}	2.82^{c}	3.20^{d}	2.03^{b}	11.17^{d}
Asian English Speakers	0.64	−0.70	−1.27^{a}	−1.32	4.11^{d}
Asian Non-English Speaker	−1.77^{a}	−2.62^{b}	−2.72^{c}	−1.24	5.92^{d}
American Indian	−2.01	−0.79	−0.27	−8.01^{d}	−1.64
Multi-Racial	0.08	−1.80	0.40	−1.18	3.04^{a}
Missing Race/Ethnicity/Language	−0.32	−0.96	0.48	−2.02^{c}	4.13^{d}
Hospital-Level Random Effects (Standard Deviation)	2.42^{d}	2.88^{d}	1.78^{d}	3.09^{d}	4.73^{d}
Degree of Cultural Competency	−0.48	−0.04	−0.46	1.11^{b}	1.66^{c}
Degree of Cultural Competency (per SD)*minority indicator	1.51^{d}	−0.41	−0.16	0.25	−0.15
Degree of Cultural Competency (per SD)*missing race/ethnicity/language indicator	1.09	−0.96	−0.57	0.39	−0.74
Racial/Ethnic/Language Groups (Reference Group: White)					
Hispanic English Speakers	3.21^{d}	2.60^{b}	−0.18	2.26^{d}	1.26^{b}
Hispanic English Bilinguals	3.91^{d}	6.05^{d}	−3.56^{b}	3.55^{d}	3.49^{d}
Hispanic Spanish Speakers	2.19^{c}	6.40^{d}	−4.68^{d}	7.59^{d}	7.39^{d}
Black	3.84^{d}	5.22^{c}	0.42	3.74^{d}	1.91^{b}
Asian English Speakers	0.28	2.28	2.41^{a}	1.16	1.44

Effect	Nurse Communi-cation	Staff Respon-siveness	Doctor Communi-cation	Clean Room	Quiet Room
Asian Non-English Speakers	−4.60[d]	1.42	−5.73[c]	0.31	1.14
American Indian	0.82	5.21	−9.24[c]	−0.14	−0.38
Multi-Racial	1.06	−0.76	1.46	−0.17	−0.59
Missing Race/Ethnicity/Language	−1.08	2.51[b]	0.11	−0.99[a]	−0.35
Hospital-Level Standard Deviation (Random Effect)	2.1[d]	2.76[d]	1.34[d]	2.89[d]	3.44[d]

NOTES: Case-mix adjustors: age, education, self-reported health status, service line, and emergency room admission.

[a] p<0.10.

[b] p<0.05.

[c] p<0.01.

[d] p<0.001