

Personal Characteristics Associated with Resident Physicians' Self Perceptions of Preparedness to Deliver Cross-Cultural Care

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BACKGROUND: Recent reports from the Institute of Medicine emphasize patient-centered care and cross-cultural training as a means of improving the quality of medical care and eliminating racial and ethnic disparities.

OBJECTIVE: To determine whether, controlling for training received in medical school or during residency, resident physician socio-cultural characteristics influence self-perceived preparedness and skill in delivering cross-cultural care.

DESIGN: National survey of resident physicians.

PARTICIPANTS: A probability sample of residents in seven specialties in their final year of training at US academic health centers.

MEASUREMENT: Nine resident characteristics were analyzed. Differences in preparedness and skill were assessed using the χ^2 statistic and multivariate logistic regression.

RESULTS: Fifty-eight percent (2047/3500) of residents responded. The most important factor associated with improved perceived skill level in performing selected tasks or services believed to be useful in treating culturally diverse patients was having received cross-cultural skills training during residency (OR range 1.71–4.22). Compared with white residents, African American physicians felt more prepared to deal with patients with distrust in the US healthcare system (OR 1.63) and with racial or ethnic minorities (OR 1.61), Latinos reported feeling more prepared to deal with new immigrants (OR 1.88) and Asians reported feeling more prepared to deal with patients with health beliefs at odds with Western medicine (1.43).

CONCLUSIONS: Cross-cultural care skills training is associated with increased self-perceived preparedness to care for diverse patient populations providing support for the importance of such training in graduate medical education. In addition, selected resident characteristics are associated with being more or less prepared for different aspects of cross-cultural care.

This underscores the need to both include medical residents from diverse backgrounds in all training programs and tailor such programs to individual resident needs in order to maximize the chances that such training is likely to have an impact on the quality of care.

KEY WORDS: cross-cultural care; graduate medical education; workforce diversity.

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INTRODUCTION

Two recent reports from the Institute of Medicine (*Crossing the Quality Chasm* and *Unequal Treatment*) emphasize patient-centered care and cross-cultural training as a means of improving the quality of medical care and eliminating racial and ethnic disparities^{1,2}. Many medical schools have implemented cross-cultural education in their curricula, yet less is known about this area of education in residency programs³. In a series of focus groups, residents reported that they were told that cross-cultural care is important, yet they received little formal training and did not have time to treat diverse patients in a culturally sensitive manner⁴. A recent nationally representative survey of resident physicians in seven specialties (medicine, surgery, obstetrics-gynecology, psychiatry, family medicine, pediatrics, and emergency medicine) by Weissman et al. showed that 96% felt it was important to consider the patient's culture when providing care⁵. However, approximately one third to half of the respondents reported receiving little or no instruction in specific areas of cross-cultural care beyond what was learned in medical school.

One of the aims of cultural competence is to bridge the "cultural distance" that exists between physicians and patients^{6–8}. Aside from training received in medical school or during residency, other factors such as the socio-cultural background of the physician could be responsible for differences in preparedness and skill in providing cross-cultural care. Indeed, residents' self-reported preparedness and skill may be a function of their personal backgrounds and experiences prior to residency, and students with stronger interpersonal skills or more culturally diverse experiences may

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gravitate toward certain specialties or institutions that have more formal training in cross-cultural care. The objective of this study was to determine resident physician's characteristics that influence self-perceived preparedness and skill in delivering cross-cultural care.

METHODS

Sample Selection

This is a secondary analysis of a national survey data collected by Weissman et al. which was mailed to approximately 3,500 residents in seven specialties in their final year of training at major US teaching hospitals⁵. A stratified random sample of residents in the specialties of emergency medicine, family practice, internal medicine, obstetrics/gynecology, pediatrics, psychiatry, and general surgery who were scheduled to complete their training in June 2004 was designed. A multi-stage sampling approach was used and is detailed elsewhere⁵. The sampling scheme used in this study followed a similar strategy as that used in related research^{6,9-11}. In the final sampling stage, residents were randomly selected from each selected internal medicine program to achieve the overall target sample of 500 otherwise all residents in each of the other selected programs were sampled. The final sample included 3500 residents at 149 hospitals, including 563 different programs ranging from 43 programs sampled in pediatrics to 113 programs sampled in general surgery.

Survey Design and Administration

The survey instrument was developed based on literature review, focus groups with residents in each specialty, comments from expert colleagues and cognitive testing was performed by the Center for Survey Research at the University of Massachusetts, Boston⁴.

The survey was mailed to resident physicians in the winter of 2003 by the Center for Survey Research and the surveys were processed in the spring of 2004. Response-enhancement techniques were used. Completion and return of the survey constituted consent. This study was IRB approved.

Variables

Socio-Demographics. The following personal characteristics were included in our analyses: sex, multilingualism, race, having received any training outside the US, US birth, US medical graduate, having received cross-cultural skills training in residency and the resident's response to the question, "How important is it to you to practice in a setting that has a diverse racial and ethnic patient mix?" Residents selected their race and ethnicity from a list of designations used by the AMA and the Association of American Medical Colleges¹².

Preparedness and Skills

We assessed the following factors: (1) self-reported preparedness to treat specific types of patients, manage specific issues and situations, or to provide certain services; and (2) self-assessment of skills in delivering cross-cultural care. Each

category was originally assessed using a 5-point scale (very unprepared (1) to very well prepared (5) and not at all skillful (1) to very skillful (5)). For purposes of these analyses, the first two categories were collapsed, resulting in four categories of preparedness/skillfulness each.

Analysis

The original sample selection process sought to enroll an equal number of residents from each specialty in order to maximize power when comparing any two specialties. A 65% response rate from an expected 325 interviews per specialty was assumed. Power calculations were based on an α level of .05 and a clinically significant difference of ± 10 percentage points. The power to detect differences between any two specialties was 73%, and between one specialty and all of the other specialties, combined, was 92%.

All pooled analyses were weighted to correct for nonresponse and for the probability of selection within physician specialty. We hypothesized that self-reported preparedness and skill levels would vary by other resident characteristics controlling for specialty. We examined differences in individual items of preparedness and skill using the χ^2 statistic to test for significant differences. Based on the results of this unadjusted analysis, a multivariate ordinal logistic regression model was constructed to assess whether particular resident characteristics were associated with reporting better preparedness. In the final multivariate model, three variables (US born, US medical graduate, and any training outside US) were collinear based on collinearity diagnostics and bivariable analysis. However, we kept "any training outside US" because it would capture the content of the other two variables, simplify our modeling process and better capture the unique caveat that medical residents who spent time outside the US may be better prepared for cross-cultural care.

For each resident characteristic, we report adjusted odds ratios (OR) and 99% confidence intervals (99% CIs) to account for the large number of reported results. One sampling weight, reflecting nonresponse and sampling scheme, was included in all statistical programming in SAS. All statistical analyses were performed using SAS version 9.1 (SAS Institute Inc, Cary, North Carolina).

RESULTS

Respondent Characteristics

Of the 3,500 residents in the original sample, 65 had left the program, graduated or were terminated. Of the 3,435 survey packets sent to eligible residents, 2,047 returned their surveys (response rate of 60%). Almost half of the respondents were male (49%), 71% were US born, 77% attended US medical school, 64% had no training outside the US and 69% reported being multilingual. The majority of the respondents were white non-Hispanic (62%), 20% were Asian/Pacific Islander, 6% were black non-Hispanic and 6% were Hispanic. More than half of the respondents (68%) felt it was moderately important to very important to practice in a setting with a diverse racial and ethnic patient mix. Each of the seven specialties represented 13-15% of the sample. We compared respondents with non-respondents by race, ethnicity, gender, and whether the

resident was a US medical school graduate and found that more respondents were white, and more likely to be in the specialties of family medicine and psychiatry.

Preparedness and Skill by Physician Characteristic

The mean response for the preparedness domains was 3.27 [s.d 0.91] and 3.50 [s.d 0.88] for the skill domains. The adjusted analyses from an ordinal logistic regression model are presented in Tables 1 and 2.

Men generally were more likely to self-report better perceived preparedness than females in most domains of cross-cultural care in adjusted analyses of patients with particular cross-cultural needs and cross-cultural skills (10 out of 18 domains).

The adjusted model predicted the importance of the practice setting as having a significant association between residents' perceived preparedness and patients' particular cross-cultural needs in 4 out of 8 domains.

African American physicians were significantly better prepared to deal with patients who had distrust in the healthcare system, with racial or ethnic minorities and reported being more skillful on knowing how a patient wants to be addressed. Latino physicians reported feeling significantly better prepared to work with new immigrants, and they reported more perceived skillfulness in two domains of cross-cultural care. Asian physicians felt less prepared to care for patients who used alternative medicine and with racial and ethnic minorities.

Multilingualism was a strong predictor of increased perceived preparedness and skillfulness. Residents who spoke

other languages were more likely to report feeling more prepared to deal with multiple domains of patients' cultural needs (three out of eight domains) and more skillfulness than those who did not (five out of ten domains).

Having received any training outside the US was associated with an increased perceived preparedness in caring for new immigrants and in assessing a patient's understanding of illness. In the unadjusted analysis, international medical graduates reported being less prepared to deal with racial and ethnic minorities (OR 0.47, CI 0.37 – 0.61) and those who use alternative/complementary medicine (OR 0.79, CI 0.60 – 1.02). However, they did feel more prepared to deal with new immigrants (OR 1.78, CI 1.39 – 2.27) and those with health beliefs or practices at odds with Western medicine (OR 1.61, CI 1.24 – 2.08).

Having received cross-cultural instruction during residency was strongly associated with reporting a high perceived skill level in performing selected tasks in all skill domains believed to be useful in treating culturally diverse patients or pediatric patients' families (OR range 1.71–4.22).

DISCUSSION

This survey of a national probability sample of resident physicians in their final year of training describes their self-perceived preparedness to care for culturally diverse populations in 2004. Our study has two major findings. First, resident physicians who received training in the area of cross-cultural care felt more prepared to care for diverse

Table 1. Associations between Resident Physician Characteristics and Self-Reported Perceptions of Preparedness to Provide Cross-Cultural Care: Results from Ordinal Logistic Regression Models*

Patient cross-cultural characteristics	Resident Physician Characteristics			
	Male	Important to practice in diverse patient mix	Any training outside US	Speak other languages
		(Yes)	(Yes)	(Yes)
A. Culture different from own	1.39 (1.02 – 1.91)	1.60 (1.15 – 2.23)	1.22 (0.89 – 1.69)	1.45 (1.03 – 2.03)
B. Health beliefs at odds with Western medicine	1.44 (1.05 – 1.98)	1.34 (0.95 – 1.87)	1.20 (0.88 – 1.65)	1.34 (0.96 – 1.88)
C. With distrust in US healthcare system	1.47 (1.07 – 2.02)	1.37 (0.99 – 1.90)	0.93 (0.68 – 1.28)	1.21 (0.87 – 1.69)
D. With limited English proficiency	1.19 (0.87 – 1.62)	1.61 (1.16 – 2.24)	1.00 (0.73 – 1.38)	1.95 (1.41 – 2.70)
E. New immigrants	1.52 (1.11 – 2.08)	1.46 (1.05 – 2.04)	1.35 (0.98 – 1.85)	1.92 (1.38 – 2.66)
F. Whose religious beliefs affect treatment	1.76 (1.28 – 2.41)	1.34 (0.97 – 1.87)	0.94 (0.68 – 1.31)	1.19 (0.85 – 1.65)
G. Who use alternative medicine	1.57 (1.14 – 2.15)	1.20 (0.86 – 1.67)	0.93 (0.67 – 1.30)	1.08 (0.77 – 1.51)
H. Racial or ethnic minorities	1.26 (0.92 – 1.72)	1.43 (1.04 – 1.96)	0.64 (0.46 – 0.88)	1.16 (0.84 – 1.61)
Patient cross-cultural characteristics		Resident physician personal characteristics		
		Race/Ethnicity		
		Black	Asian	Latino
A. Culture different from own		1.47 (0.76 – 2.85)	1.01 (0.69 – 1.48)	0.88 (0.45 – 1.73)
B. Health beliefs at odds with Western medicine		1.43 (0.80 – 2.54)	1.43 (0.98 – 2.09)	0.78 (0.42 – 1.46)
C. With distrust in US healthcare system		1.63 (1.03 – 2.88)	0.93 (0.63 – 1.38)	0.64 (0.35 – 1.19)
D. With limited English proficiency		0.67 (0.38 – 1.20)	0.91 (0.61 – 1.33)	1.30 (0.75 – 2.25)
E. New immigrants		1.02 (0.61 – 1.68)	1.17 (0.79 – 1.73)	1.88 (1.01 – 3.51)
F. Whose religious beliefs affect treatment		1.08 (0.62 – 1.86)	0.78 (0.53 – 1.16)	0.72 (0.37 – 1.40)
G. Who use alternative medicine		0.65 (0.34 – 1.25)	0.60 (0.41 – 0.88)	0.72 (0.36 – 1.45)
H. Racial or ethnic minorities		1.61 (1.05 – 2.76)	0.63 (0.42 – 0.93)	1.13 (0.60 – 2.11)

*Odds ratios represent the odds of being in a higher quartile of preparedness, compared with reference group, adjusted for specialty. Reference groups are as follows: For "male," reference group is "female." For survey questions with "yes" answers, reference group is "no." For all of the race variables, the reference group is "white". 99% Confidence Intervals are presented.

Table 2. Associations Between Resident Physician Characteristics and Self-Reported Perceptions of Skillfulness to Provide Cross-Cultural Care: Results from Ordinal Logistic Regression Models*

Cross-cultural skills	Resident physician personal characteristics				
	Male	Important to practice in diverse patient mix	Any training outside US	Speak other languages	Received skills training in residency
	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)
A. How patient wants to be addressed	1.23 (0.89 – 1.70)	1.25 (0.88 – 1.79)	1.04 (0.75 – 1.44)	1.46 (1.03 – 2.07)	1.71 (1.24 – 2.35)
B. Take social history	1.24 (0.90 – 1.70)	1.16 (0.84 – 1.62)	0.91 (0.66 – 1.25)	1.20 (0.85 – 1.71)	2.81 (2.02 – 3.91)
C. Assess understanding of illness	1.56 (1.13 – 2.16)	0.97 (0.69 – 1.35)	1.30 (0.93 – 1.80)	1.12 (0.80 – 1.56)	2.05 (1.47 – 2.86)
D. Identify mistrust	1.19 (0.86 – 1.63)	1.17 (0.85 – 1.61)	0.90 (0.65 – 1.23)	1.48 (1.05 – 2.07)	2.57 (1.88 – 3.51)
E. Negotiate treatment plan	1.60 (1.16 – 2.19)	1.26 (0.91 – 1.75)	1.14 (0.83 – 1.55)	1.43 (1.01 – 2.02)	2.16 (1.57 – 2.98)
F. Identify read & write English	1.67 (1.23 – 2.28)	0.89 (0.65 – 1.23)	1.27 (0.92 – 1.74)	1.44 (1.03 – 2.01)	3.65 (2.68 – 4.96)
G. Identify religious beliefs	1.50 (1.10 – 2.06)	0.99 (0.71 – 1.37)	1.07 (0.78 – 1.47)	1.16 (0.83 – 1.62)	4.22 (3.09 – 5.77)
H. Identify customs	1.08 (0.79 – 1.49)	1.00 (0.71 – 1.40)	1.07 (0.77 – 1.47)	1.69 (1.20 – 2.37)	3.55 (2.59 – 4.88)
I. Decision-making structure	1.12 (0.81 – 1.55)	1.24 (0.89 – 1.73)	0.96 (0.69 – 1.33)	1.15 (0.82 – 1.61)	3.82 (2.76 – 5.28)
J. Using medical interpreter	1.23 (0.89 – 1.68)	1.04 (0.76 – 1.44)	0.86 (0.62 – 1.18)	1.30 (0.93 – 1.81)	3.87 (2.77 – 5.41)
Resident physicians' personal characteristics					
Race/Ethnicity					
Black					
A. How patient wants to be addressed	1.97 (1.08 – 3.59)	0.89 (0.60 – 1.32)	1.17 (0.63 – 2.16)		
B. Take social history	1.60 (0.89 – 2.88)	0.79 (0.54 – 1.16)	1.65 (0.93 – 2.94)		
C. Assess understanding of illness	1.59 (0.83 – 3.05)	0.81 (0.55 – 1.20)	1.38 (0.66 – 2.90)		
D. Identify mistrust	1.35 (0.70 – 2.58)	0.84 (0.57 – 1.23)	1.04 (0.54 – 2.01)		
E. Negotiate treatment plan	1.43 (0.74 – 2.77)	0.76 (0.52 – 1.13)	1.37 (0.78 – 2.43)		
F. Identify read & write English	1.55 (0.76 – 3.13)	1.22 (0.85 – 1.75)	1.66 (0.86 – 3.21)		
G. Identify religious beliefs	1.71 (0.89 – 3.30)	1.11 (0.76 – 1.63)	0.76 (0.43 – 1.35)		
H. Identify customs	1.77 (0.90 – 3.46)	1.24 (0.84 – 1.85)	1.32 (0.72 – 2.44)		
I. Decision-making structure	1.77 (0.95 – 3.32)	1.22 (0.81 – 1.82)	1.41 (0.81 – 2.43)		
J. Using medical interpreter	1.27 (0.71 – 2.26)	1.25 (0.86 – 1.82)	0.76 (0.36 – 1.61)		
Asian					
Latino					

* Odds ratios represent the odds of being in a higher quartile of skillfulness, compared with reference group, adjusted for specialty. Reference groups are as follows: For "male," reference group is "female." For survey questions with "yes" answers, reference group is "no." For all of the race variables, the reference group is "white." Confidence intervals of 99% are presented.

patient populations. Previous work has demonstrated that few residents report receiving cross-cultural care training in residency⁵. The second major finding is that selected resident physicians' characteristics, including personal and cultural backgrounds, linguistic abilities, and a sense of importance to practice in settings with diverse racial and ethnic patient mixes, were strongly associated with their sense of preparedness to provide cross-cultural care. However, at the same time, no single trait was exclusively predictive of preparedness across all patient types. These findings underscore the multi-dimensional nature of culture and how different personal characteristics inform self-perceptions of preparedness and skill in cross-cultural care. This warns against simplistic and generalized approaches to cross-cultural training.

The racial/ethnic background of a resident physician influenced their preparedness to deal with patients from similar backgrounds. This finding aligns with research that shows that interpersonal communication is sensitive to race concordance from the patient's perspective as well¹³⁻¹⁶. For instance, in a study of directly observed medical communication in the primary care setting, race concordance had an independent effect on patients' judgment of the visit regardless of the verbal nature of the medical dialogue¹³. Race concordant visits were longer and had higher ratings of patient positive affect compared with race-discordant visits. In addition, patients reported greater ease in discussing problems and making decisions perhaps reflecting mutual liking and respect, a sense of social or racial group affiliation and enhanced trustworthiness or positive expectations.

In the current study, African American resident physicians felt best prepared to deal with patients who had distrust in the healthcare system and more skillful in both knowing how a patient wants to be addressed and in negotiating a treatment plan with patients. These findings also align with what we know about the importance of trust¹⁷⁻¹⁹, the persistent mistrust by African Americans of the health care system²⁰, higher rates of reported communication difficulties in racial and ethnic minorities²¹⁻²², and reports by many African Americans that they would receive better care if they were of a different race or ethnicity²¹⁻²².

International medical graduates (IMGs), many of whom are recent immigrants to the United States, are confronted by many cross-cultural challenges as they complete their residency training. These challenges include differences in language, lifestyles, sex-role differences, discrimination, changes in status and feelings of inadequacy²³⁻²⁵. These reported challenges correlate with our findings that IMGs felt less prepared to deal with racial and ethnic minorities and those who used alternative or complementary medicine. While at the same time they report perceiving themselves as being more prepared to deal with new immigrants like themselves. These findings add to our understanding of the complexities of integrating IMGs into US training environments and suggest ways to tailor formal and informal residency orientation programs to the unique educational needs of IMGs²⁶.

Our findings are consistent with other studies of minority physicians who are more likely than white physicians to care for patients of similar racial and ethnic backgrounds, to

practice in underserved areas and to care for poor, underinsured or uninsured persons and those on Medicaid²⁷⁻²⁸. They are also more likely to conduct research that is inclusive of minority patients and concerns, and educate students in cultural competence²⁹⁻³¹. In addition to the data on race-concordance, improved communication and trust presented above, this research has led to a broad, nationwide call to continue efforts to diversify the health professions workforce³².

Our study had a number of limitations. As with any survey, the 60% response rate could introduce bias if those responding were differentially prepared compared with nonrespondents. This rate compares favorably with other surveys of residents¹²⁻¹⁴. Self-perceived preparedness may not predict future abilities, actual provision of care, or the quality of care provided³³⁻³⁴. Also, there is no criterion standard to assess preparedness. However, accurate self-assessments are acknowledged as an important component of adult and lifelong learning³⁴⁻³⁵ and have been used in previous studies of educational quality^{6-7,36} and shown to be valid predictors of examination scores³⁷, and faculty evaluations³⁸⁻⁴⁰.

Two reports by the Institute of Medicine—"Unequal Treatment" and "In the Nation's Compelling Interest"—unequivocally recommend both cross-cultural training and diversifying the health care workforce as a means to improve quality and eliminate racial and ethnic disparities^{1,2}. Our research supports this two-pronged approach⁸. Key recommendations for how to advance this area of graduate medical education are described in detail elsewhere⁴¹. It is essential that health care providers represent the diversity of our nation and have the training necessary to provide quality care to any patient they see, regardless of their race, ethnicity, culture, or language proficiency. Not only is this a key component of physician professionalism, but it will also help us bridge the quality chasm, which is much broader for patients who are at a greater cultural distance from Western medicine.

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