Resident Physicians' Preparedness to Provide Cross-Cultural Care

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Context Two recent reports from the Institute of Medicine cited cross-cultural training as a mechanism to address racial and ethnic disparities in health care, but little is known about residents' educational experience in this area.

Objective To assess residents' attitudes about cross-cultural care, perceptions of their preparedness to deliver quality care to diverse patient populations, and educational experiences and educational climate regarding cross-cultural training.

Design, Setting, and Participants A survey was mailed in the winter of 2003 to a stratified random sample of 3435 resident physicians in their final year of training in emergency medicine, family practice, internal medicine, obstetrics/gynecology, pediatrics, psychiatry, or general surgery at US academic health centers.

Results Responses were obtained from 2047 (60%) of the sample. Virtually all (96%) of the residents indicated that it was moderately or very important to address cultural issues when providing care. The number of respondents who indicated that they believed they were not prepared to care for diverse cultures in a general sense was only 8%. However, a larger percentage of respondents believed they were not prepared to provide specific components of cross-cultural care, including caring for patients with health beliefs at odds with Western medicine (25%), new immigrants (25%), and patients whose religious beliefs affect treatment (20%). In addition, 24% indicated that they lacked the skills to identify relevant cultural customs that impact medical care. In contrast, only a small percentage of respondents (1%-2%) indicated that they were not prepared to treat clinical conditions or perform procedures common in their specialty. 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. Forty-one percent (family medicine) to 83% (surgery and obstetrics/gynecology) of respondents reported receiving little or no evaluation in cross-cultural care during their residencies. Barriers to delivering cross-cultural care included lack of time (58%) and lack of role models (31%).

Conclusions Resident physicians' self-reported preparedness to deliver cross-cultural care lags well behind preparedness in other clinical and technical areas. Although cross-cultural care was perceived to be important, there was little clinical time allotted during residency to address cultural issues, and there was little training, formal evaluation, or role modeling. These mixed educational messages indicate the need for significant improvement in cross-cultural education to help eliminate racial and ethnic disparities in health care.

JAMA. 2005;294:1058-1067 www.jama.com

As the United States becomes more diverse, there is a growing body of literature that delineates the impact of sociocultural factors such as race and ethnicity on health and clinical care.[1] Sociocultural differences between patients and physicians influence communication and clinical decision making, and there is evidence that patient-physician communication is directly linked to patient satisfaction, adherence, and overall quality of care.[2,3] Unexplored or misunderstood sociocultural differences between patients and physicians can lead to patient dissatisfaction, poor adherence to treatment, and poor health outcomes.[4] In an effort to provide health care professionals with the knowledge and skills to effectively care for diverse populations, an educational movement in "cross-cultural care" has emerged.[5] This field is not new, but has received a new emphasis during the past 10 years as a result of statements made by the American Medical Association (AMA) and the Accreditation Council for Graduate Medical Education, among others, that cross-cultural training is necessary for the effective practice of medicine in the United States.[6,7]

Two recent reports from the Institute of Medicine (*Crossing the Quality Chasm*[8] and *Unequal Treatment*[4]) highlight the importance of patient-centered care and cross-cultural training as a means of improving quality and

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eliminating persistent racial and ethnic disparities. These recommendations are based on the premise that improving patient-physician communication is an important component of addressing differences in quality of care that are associated with patient race, ethnicity, or culture. As a result, there is growing interest in the field of cross-cultural training—education that focuses on improving clinicians' ability to understand, communicate with, and provide quality care to patients from diverse backgrounds—as a mechanism of addressing disparities.[9]

This attention to cross-cultural care and education for clinicians coincides with a broader US interest in assessing the quality of graduate medical education (GME) and the preparedness of residents to function at optimal levels in the health care system. As part of this, professionals in training must be able to recognize the limits of their knowledge and then address those limits. Thus, the Accreditation Council for Graduate Medical Education recognizes the value of self-assessment as a critical component of professionalism in addition to evaluations by peers and supervisors.[10,11] The preparedness of resident physicians to provide common clinical services as indicators of educational quality[12] and to treat low-income populations[13] have been studied.

The objectives of this study were to assess the self-perceived preparedness of resident physicians to provide quality care to diverse patient populations and to determine whether they reported receiving formal training and evaluation in cross-cultural care during their residency. In addition, because trainees' enthusiasm and preparation can be affected by implicit training experiences, sometimes called the "hidden curriculum,"[14-17] the educational climate and support for cross-cultural training at GME training sites, including perceived barriers to delivering cross-cultural care, were also measured. To accomplish this, surveys were mailed to approximately 3500 residents in 7 specialties in their final year of training at major US teaching hospitals.

METHODS

Sample Selection

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, were selected. The sample was limited to these 7 specialties in which physicians have direct contact with patients. The sampling scheme used in this study followed a similar strategy as that used in previous research.[12,13,18,19] The study population was limited to residents in their last year of training so that they might assess the entirety of their GME experiences and because they are in the best position to evaluate their preparedness for practice at the completion of their residency. Residents at *academic health centers*, defined as medical schools and their closely affiliated or owned clinical facilities, were chosen for this study because these institutions are generally considered to be leaders in GME and educational reform.

A multistage sampling approach was used. In the first stage, hospitals from academic health centers were selected. Using lists available from the Association of American Medical Colleges, we identified 121 four-year medical schools in the United States. The Uniformed Services and academic health centers in Puerto Rico were excluded. The major teaching hospitals under common ownership with each medical school or hospitals for which the majority of chiefs of service were also chairs of medical school departments were selected for inclusion. If no hospital met these criteria for a particular medical school, the hospital with a major affiliation was selected. If more than 1 hospital met the criteria, the facility with the most residents was selected. Finally, any hospital among the 100 with the largest number of residents nationally that had not already been selected was added. This resulted in 157 of the most educationally intensive hospitals in the United States.

In the second stage, residency programs were listed for selection. Using the AMA's GME directories and databases,[20-22] we identified all training programs in the selected specialties either sponsored by or having a major affiliation with one of the academic health center hospitals identified above, resulting in 837 programs. For all specialties except internal medicine, a sufficient number of programs within each specialty to achieve the target sample of 500 residents per specialty was randomly selected (mean [SD], 80 [27]). Because internal medicine programs tend to be large, a similar number of programs as the other specialties was selected.

In the final sampling stage, residents were randomly selected from each selected internal medicine program to achieve the overall target sample of 500. All of the residents in each of the other selected programs were sampled (sampling with certainty). 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

A draft of the survey instrument was developed based on literature review, focus groups with residents in each specialty,[23] and comments from expert colleagues. The survey instrument underwent cognitive testing by the Center for Survey Research at the University of Massachusetts, Boston, and was subsequently revised.

Our intent was to measure aspects of residents' preparedness to deliver high-quality care to diverse patient populations rather than to assess awareness or knowledge of particular cultures. In the final version of the survey instrument, residents were instructed to think about their interactions with *culturally diverse patients* defined as "patients who are members of a culture different from your own." The survey instrument then posed questions related to attitudes toward cross-cultural care, preparedness to care for diverse patient popu-

lations, self-assessment of skills, and reports of educational experiences.

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. Resident names and program affiliations were obtained from the AMA. To find residents' contact information, the following sources were used: Telematch, a database company that matches telephone numbers to names and cities[24]; Web searches; and the paging services at all of the study hospitals. Response-enhancement techniques included multiple mailings, telephone reminders, and monetary incentives (random prize drawings of $1000 each and a $20 incentive). The protocol was approved by institutional review boards at the Massachusetts General Hospital and the University of Massachusetts, Boston. Completion and return of the survey constituted consent.

Variables

Attitudes, Preparedness, and Skills. Three constructs related to preparedness were measured: (1) attitudes about the importance of cross-cultural care and its consequences for patient care; (2) self-reported preparedness to treat specific types of patients, manage specific issues and situations, or to provide certain services; and (3) self-assessment of skills.

To assess attitudes toward cross-cultural care, residents were asked about the importance of considering the patient's culture when providing care and about their perceptions of the potential impact on care processes and outcomes. Overall importance was indicated as a response of 1 for "not at all"; 2, "not very"; 3, "moderately"; and 4, "very" important. Residents were also asked to judge how often in their experience cross-cultural issues (including language barriers) had consequences for longer than average patient visits, delays in obtaining patient consent, increased length of hospital stay, patient compliance, and performance of unnecessary tests (a response of 1 for "never"; 2, "rarely"; 3, "sometimes"; and 4, "often").

To assess their own preparedness, residents were asked to indicate how prepared they believed they were to care for a series of types of patients or pediatric patients' families (a response of 1 for "very unprepared"; 2, "somewhat unprepared"; 3, "somewhat prepared"; 4, "well-prepared"; and 5, "very well prepared"). The list included patients from cultures different from their own, patients with health beliefs at odds with Western medicine, patients with religious beliefs that might affect treatment, new immigrants, patients with limited English proficiency, and patients who receive alternative or complementary medical treatments. Responses of "very unprepared" or "somewhat unprepared" were combined to indicate lack of preparedness.

Residents also were asked to assess their skill level in performing selected tasks or services believed to be useful in treating culturally diverse patients or pediatric patients' families (a response of 1 for "not at all skillful" to 5 for "very skillful"). These included determining how to address patients from different cultures, assessing patients' understanding of their illness, identifying mistrust, negotiating treatment plans, assessing English proficiency, identifying relevant cultural and religious beliefs, understanding decision-making roles, and working with interpreters.

Residents were presented with 2 additional batteries on clinical preparedness modeled on previous research[12] to provide a context from which to interpret responses with respect to cross-cultural care. One set of questions asked about medical conditions (such as asthma) or selected clinical procedures (such as intubation) commonly encountered in their specialties. A second set of questions asked about treatment of psychosocial issues, such as substance abuse and domestic violence, and counseling for sociobehavioral concerns, such as smoking and weight loss. For both sets of questions, residents were first asked to indicate which conditions, procedures, or counseling services they expected to encounter within their specialty during their medical career. For each positive answer, residents were asked to rate their preparedness to perform the service with a response of 1 for "very unprepared" to 5 for "very well prepared." Results are provided only for those responding that they expected to encounter the patient or service during their career.

Quantity of Training, Assessment of Educational Climate, and Other Variables. To assess the quantity of training received during the residency period, residents were asked how much additional training beyond what they received in medical school was devoted during residency to teaching them the cross-cultural aspects of each of the skills listed previously (a response of 1 for "none"; 2, "very little"; 3, "some"; and 4, "a lot"). For comparison, we identified whether each program provided educational opportunities in "cultural competence awareness" as reported by program directors in a survey conducted by the AMA.[25]

To assess educational climate, 3 sets of questions were posed. Because residency training needs to be accompanied by formal evaluation to be effective, residents were asked how often they were formally evaluated with respect to physician-patient communication (a response of 1 for "often"; 2, "sometimes"; 3, "rarely"; and 4, "never"). For those who gave any response other than "never," they also were asked how much attention was paid to their ability to handle cross-cultural situations (a response of 1 for "none"; 2, "very little"; 3, "some"; and 4, "a lot"). Because didactic training needs to be supplemented with opportunities for applied clinical practice, residents were asked to identify problems they had in delivering cross-cultural care at their institutions, including lack of time, lack of experience, lack of materials written in other languages, dismissive attitudes of faculty and fellow residents, and lack of good role models. Because good role models influence educational outcomes,[26]

residents were asked to report how many, if any, role models they had who they thought were good at providing cross-cultural care.

Other questions assessed resident characteristics including sex, graduate of a US medical school compared with graduate of an international medical school, and birth country. In addition, residents self-identified their race and ethnicity from a list of categories provided by the investigators, corresponding to designations used by the AMA and the Association of American Medical Colleges.[25] This information was collected to determine whether nonwhite residents responded differently than their minority counterparts, particularly in their level of preparedness to care for racially and ethnically diverse populations.

Analysis

The sample size of 500 per specialty was determined in part by expected data collection limits based on funding and was similar in size to previously published resident surveys.[12] Because one of the goals was to contrast answers given by respondents in the 7 sampled specialties, an equal number of residents from each specialty was sought to maximize power when comparing any 2 specialties. A 65% response rate, expecting 325 interviews per specialty, was assumed. Using a conservative variance assumption with an α level of .05 and a clinically important difference of ±10 percentage points, the power to detect differences between 2 specialties was 73%; the power to detect a difference between 1 specialty and all of the other specialties was 92%.

For analytic purposes, some answers were collapsed into dichotomous variables: "unprepared" (responses of 1 or 2) compared with other (responses of 3, 4, or 5) and "low skill level" (responses of 1 or 2) compared with other (responses of 3, 4, or 5). All pooled analyses were weighted to correct for nonresponse and for the probability of selection within physician specialty. Although most of our analyses were primarily intended to be descriptive, we hypothesized that self-reported preparedness and skill levels would vary by specialty and by other resident characteristics. In bivariate analyses, the χ^2 statistic was used to test for significant differences, but no characteristic other than specialty produced consistently significant results for each of the measures, nor did these other variables confound the results by specialty. Therefore, the majority of the results are provided as tabulations by specialty without multivariable adjustment.

In a separate analysis, we hypothesized that reports of training received during residency, being in a program that offered cultural competence awareness, and the presence of high-quality role models would correlate with self-assessed skill levels. Therefore, a dichotomous dependent variable for each skill area was created (low skill level = 1, other responses = 0) and separate logistic regressions were estimated to assess the association with level of training (little or none vs a lot), presence of a good role model (yes or no), and opportunity for cultural awareness (yes or no), controlling for specialty, race/ethnicity, and sex. The significance of individual coefficients was determined by the Wald χ^2 test. The results were used to calculate regression-adjusted percentages of residents who reported low skill levels. $P<.05$ was considered statistically significant for all analyses. All statistical analyses were performed using SPSS software, version 12.0 (SPSS Inc, Chicago, Ill).

RESULTS

Respondent Characteristics

Of the 3500 residents in the original sample, 65 had left the program, graduated, or were terminated. Of the 3435 survey packets sent to eligible residents, 2047 returned their surveys (response rate of 60%). This rate compares favorably with other surveys of residents.[27-29] TABLE 1 provides unweighted and weighted characteristics of the sample. On a weighted basis, 51% of respondents were men, and the racial/ethnic characteristics were non-Hispanic white (57.1%), Asian/Pacific Islander (22.7%), non-Hispanic black (6.2%), Hispanic (5.0%), and other (4.2%). Overall, 25.6% were international medical school graduates. The weighted distributions of sex and race/ethnicity are nearly identical to those of all US residents as reported by the AMA and the Association of American Medical Colleges.[25] The characteristics of survey respondents were compared with nonrespondents using information from the AMA database of GME from which the sample was drawn.[22] There were no significant differences in terms of sex, Hispanic ethnicity, location of medical school (international vs United States), and country of origin. Compared with nonrespondents, more respondents were white (based on the AMA data, 64% vs 59%; $P=.02$), and there was overrepresentation in the specialties of family medicine and psychiatry ($P<.01$).

Attitudes, Preparedness, and Skills

Nearly all residents indicated that it was important to consider the patient's culture when providing care (26% reported "moderately important" and 70% reported "very important"). Residents in the specialties of emergency medicine and surgery were significantly less likely to respond "very important" (43% and 47%, respectively) compared with other specialties (67%-94%; $P<.001$).

Many residents indicated that cross-cultural issues "often" resulted in negative consequences for clinical care, including longer office visits (43%), patient noncompliance (21%), delays in obtaining consent (19%), unnecessary tests (9%), and lower quality of care (7%). These results did not vary markedly by specialty with 2 exceptions: fewer psychiatry residents reported that these events occurred often ($P<.01$ for each consequence) and more residents from emergency medicine, internal medicine, obstetrics/gynecology, and surgery reported problems obtaining consent (about 25% for these specialties vs between 6% and 16% for the other specialties).

Few residents indicated that they were "very unprepared" or "somewhat unprepared" to treat patients from diverse cultures (8%) or from racial and ethnic minorities (5%) (TABLE 2), although less than half responded that they were "well-prepared" or "very well prepared." The differences in lack of preparedness by specialty were not significant for these responses. These 2 questions addressed the issue of preparedness in a general sense. However, many more residents indicated that they did not believe they were prepared to deliver care to patients with specific characteristics that are likely to arise in cross-cultural situations. For example, more than 1 in 5 residents reported a lack of preparedness to treat patients who (1) have religious beliefs or practices at odds with Western medicine (25%); (2) have mistrust in the US health system (28%); (3) have religious beliefs that may affect treatment (20%); (4) use alternative/complementary medicine (26%); or (5) are new immigrants (25%). Most answers varied significantly by specialty, but the differences were not large. There was no pattern in the rankings, except that for many of the characteristics family physicians were less likely to report lack of preparedness than residents in other specialties.

By comparison, lack of preparedness to manage common clinical problems and deliver services that each resident expected to perform during his/her medical careers was quite low. For example, 2% or less of respondents in selected specialties reported lack of preparedness to treat depression (family medicine, emergency medicine, psychiatry), vaginitis (family medicine, emergency medicine, obstetrics/gynecology), or heart disease (family medicine, emergency medicine, internal medicine); to perform hysterectomies (obstetrics/gynecology) or laparascopies (general surgery); and to provide counseling for weight loss or smoking (1%-3% for all specialties except surgery). Overall, reports of lack of preparedness to counsel patients for psychosocial issues were higher, including substance abuse (8%), domestic violence (19%), eating disorders (17%), and terminal illness (7%).

The proportion of residents who rated themselves as having low skill levels for managing various aspects of cross-cultural encounters ranged from 5% to 25% depending on the skill area (TABLE 3). Approximately 1 in 5 residents indicated that they possessed low skills (responses of 1 or 2 "low skill level") for identifying mistrust (19%) and for identifying relevant cultural customs (24%) or relevant religious beliefs (25%) that impact care. Similar to the results for preparedness, responses varied significantly by program specialty. While fewer psychiatrists reported low skills for some of the components, no particular patterns emerged from among the other specialties.

Table 1. Characteristics of Study Sample

	No. of Respondents (Unweighted %) (N = 2047)*	Distribution, Weighted %†
Sex		
Male	1004 (49.1)	50.6
Female	1043 (51.0)	49.4
Race/ethnicity		
White, non-Hispanic	1265 (61.8)	57.1
Asian/Pacific Islander	404 (19.7)	22.7
Black, non-Hispanic	119 (5.8)	6.2
Hispanic	115 (5.6)	5.0
Native American, Alaskan Native, or other	65 (3.2)	4.2
Missing	79 (3.9)	4.7
Location attended medical school		
In United States	1577 (77.0)	73.7
Outside United States	453 (22.1)	25.6
Missing	17 (0.8)	0.7
Born in United States		
Yes	1443 (70.5)	65.8
No	596 (29.1)	33.8
Missing	8 (0.4)	0.4
Specialty		
Psychiatry	312 (15.2)	9.4
Family medicine	308 (15.1)	9.1
Emergency medicine	299 (14.6)	9.2
Pediatrics	291 (14.2)	15.4
General surgery	278 (13.6)	8.3
Obstetrics/gynecology	276 (13.5)	7.9
Internal medicine	271 (13.2)	40.3
Missing	12 (0.6)	0.6

*Some categories do not total to 100% due to rounding. Number of respondents refers to valid responses in each category.
†Weighted adjustment for the differential probability of selection across specialties and the probability of response within each specialty.

Training, Evaluation, and Educational Climate

A large proportion of residents reported receiving little or no cross-cultural training in specific key areas beyond what they learned in medical school (TABLE 4). Approximately half reported receiving little or no training in understanding how to address patients from different cultures (50%), or how to identify patient mistrust (56%), relevant religious beliefs (50%), relevant cultural customs (48%), and decision-making structure (52%). Around 30% reported little or no training in the other 3 areas. Residents in general surgery and emergency medicine were significantly more likely to report a lack of training in each of these areas during residency compared with the other specialties. Residents from programs that offered opportunities in cultural competence aware-

ness according to the AMA (70.2% of residents in our sample) were significantly less likely to report receiving little or no training in each of these domains except in learning how to identify patient mistrust; however, the differences were not large (TABLE 5). For example, 45% of residents in programs offering cross-cultural training still reported little or no instruction in how to identify relevant cultural customs compared with 54% in other programs ($P<.001$).

About 10% of residents reported never being formally evaluated on patient-physician communication. Residents in family practice and psychiatry programs were far less likely to report never being evaluated (1% each; $P<.001$). Adding the responses of those who were never evaluated to the responses of all residents who were evaluated but who said that very little or no attention was paid to cross-cultural issues (56%) resulted in 66% of residents receiving little or no evaluation on cross-cultural aspects of patient-physician communication. This total ranged from about 80% for residents in surgery, obstetrics/gynecology, and emergency medicine to about 40% for family medicine and psychiatry ($P<.001$).

More than half of respondents (58%) said that lack of time presented a moderate or major problem for them in delivering cross-cultural care. Other frequently mentioned problems included lack of language-appropriate written materials (62%), poor access to interpreters (53%), and lack of experience (22%). Although dismissive attitudes of attendings or of resident colleagues have been suggested as possible problems from participants in previous focus groups,[23] only 18% of residents mentioned dismissive attitudes of attendings and 15% mentioned dismissive attitudes of resident colleagues in this study. About 30% cited

Table 2. Residents Who Reported Being Very or Somewhat Unprepared to Treat Types of Patients or Provide Specified Services,* by Specialty

		Specialty, %							
	All (N = 2047)†	Emergency Medicine (n = 299)	Family Medicine (n = 308)	Internal Medicine (n = 271)	General Surgery (n = 278)	Obstetrics/ Gynecology (n = 276)	Pediatrics (n = 291)‡	Psychiatry (n = 312)	*P* Value§
Treat Patient With Cross-Cultural Characteristic									
Culture different from own	8.0	10.5	5.2	7.1	10.8	9.9	9.3	6.1	.12
Racial/ethnic minority	4.6	2.7	3.5	5.2	4.0	4.4	5.7	4.2	.80
Religious beliefs or practices at odds with Western medicine	25.4	26.9	20.6	24.7	29.0	35.5	29.1	15.4	<.001
Distrust US health system	27.9	26.6	22.2	30.1	23.7	37.7	30.4	17.7	<.001
Limited English proficiency	21.6	17.1	17.8	24.7	20.5	12.5	18.6	30.3	<.001
New immigrants	25.2	22.9	20.3	27.6	24.8	23.1	23.5	27.4	.55
Religious beliefs affect treatment	19.5	23.9	15.1	18.8	17.7	19.4	25.5	14.2	.005
Use alternative/ complementary medicine	25.8	21.2	15.5	27.5	29.2	30.4	30.6	19.6	<.001
Treat Patient With Clinical Condition									
Depression	5.5	2.2	1.3	5.0	10.8	6.8	15.0	1.0	<.001
Schizophrenia	17.7	3.6	25.9	27.6	‖	‖	36.6	1.5	<.001
Vaginitis	3.6	1.0	1.3	5.4	‖	0.7	3.4	‖	<.001
Heart disease	2.3	1.0	0.9	1.6	3.9	8.4	5.0	‖	<.001
Asthma	2.0	1.1	1.3	2.5	4.3	3.0	0.7	‖	<.001
Provide Counseling for Patient With Sociobehavioral Concern									
Substance abuse disorder	7.9	1.7	5.7	6.4	7.6	7.6	21.3	1.3	<.001
Domestic violence	19.4	7.1	11.8	27.5	26.6	12.1	19.6	4.5	<.001
Weight loss	2.7	2.9	2.2	2.2	5.6	1.8	2.6	2.7	.18
Smoking	1.8	1.4	1.3	1.1	4.7	1.8	2.3	1.7	.04
Eating disorder	17.1	12.2	17.1	24.3	‖	21.7	15.2	5.5	<.001
Terminal illness	7.4	3.9	6.2	5.8	8.4	7.0	15.5	7.8	<.001
Perform Specific Procedure									
Hysterectomy	‖	‖	‖	‖	‖	0.8	‖	‖	¶
Intubation	9.3	1.0	16.9	12.7	3.7	‖	6.7	‖	<.001
Laparascopic cholecystectomy	‖	‖	‖	‖	1.6	‖	‖	‖	¶

*Response was 1 or 2 on a scale of 1 "very unprepared" to 5 "very well prepared."
†Data in column adjusted for the differential probability of selection across specialties and the probability of response within each specialty.
‡Each question allowed respondent to answer for the patient or for a pediatric patient's family.
§χ^2 Test of equality of all proportions.
‖Data are not provided for specialties with less than 50 (unweighted) respondents who expect to treat, counsel, or perform the specified service during their medical career.
¶Could not be calculated.

the lack of good role models as a problem and 31% stated in response to a separate question that they had no role models or mentors during their residencies who were good at providing cross-cultural care.

Impact of Training and Climate on Skills

Self-assessed skill levels in each specific area were significantly associated with the amount of training reported during residency and with the presence of good role models, but not with being in a program that offered cultural competency awareness. Compared with residents who had reported receiving a lot of instruction in assessing how patients from different cultures want to be addressed, those who reported receiving little or no instruction were 8 times more likely to report low skill levels (TABLE 6). In assessing patients' understanding of their illness, residents with little or no instruction were 10 times more likely to report low skills; and the ratio with respect to identifying relevant religious beliefs was nearly 20. The ratios comparing residents with and without good role models and mentors were smaller, but all differences were statistically significant.

COMMENT

This study of a national probability sample of resident physicians in their final year of training describes their self-perceived state of readiness to care for culturally diverse populations in 2004. The data suggest that there is substantial room for improvement in their GME. While few residents reported lack of preparedness in a general sense to care for patients from racial and ethnic minorities and from diverse cultures, far more reported lack of preparedness in caring for patients with specific cultural characteristics, including those who distrust the US health care system or who have health beliefs or practices at odds with Western medicine. Many residents also believed they were unskilled in managing key aspects of effective cross-cultural care, such as the ability to assess patients' understanding of their illness or to identify relevant cultural customs, both of which contribute to patients' values and behaviors.[30] The gap between perceptions of preparedness in the general sense and preparedness for specific situations could represent a failure by the

Table 3. Residents Who Reported Low Cross-Cultural Skill Levels* by Specialty

		Specialty, %							
	All (N = 2047)†	Emergency Medicine (n = 299)	Family Medicine (n = 308)	Internal Medicine (n = 271)	General Surgery (n = 278)	Obstetrics/ Gynecology (n = 276)	Pediatrics (n = 291)‡	Psychiatry (n = 312)	*P* Value§
How patient wants to be addressed	5.8	8.0	5.5	4.8	5.7	9.1	5.8	6.0	.39
Assess understanding of illness	7.2	5.7	7.0	8.5	5.5	7.3	8.6	2.5	.07
Negotiate about treatment plan	4.7	4.7	4.2	3.7	4.0	10.6	5.5	3.5	.003
Identify mistrust	18.9	25.9	24.5	17.8	18.1	23.3	18.9	8.3	<.001
Identify relevant religious beliefs	24.7	32.6	24.9	24.5	27.2	27.3	27.5	9.4	<.001
Identify relevant cultural customs	24.1	28.1	20.7	25.6	27.6	28.8	23.8	11.9	<.001
Identify decision-making structure	16.1	22.2	13.2	14.8	12.4	20.7	22.0	8.6	<.001
Work with interpreter	8.8	2.7	6.8	10.8	6.9	5.1	5.8	18.2	<.001

*Response was 1 or 2 "low skill level" on a scale of 1 to 5.
†Data in column adjusted for the differential probability of selection across specialties and the probability of response within each specialty.
‡Each question allowed respondent to answer for the patient or for a pediatric patient's family.
§χ^2 Test of equality of all proportions.

Table 4. Residents Who Reported Receiving Little or No Instruction in Cross-Cultural Care Beyond Medical School,* by Specialty

		Specialty, %						
	All (N = 2047)†	Emergency Medicine (n = 299)	Family Medicine (n = 308)	Internal Medicine (n = 271)	General Surgery (n = 278)	Obstetrics/ Gynecology (n = 276)	Pediatrics (n = 291)‡	Psychiatry (n = 312)
How patient wants to be addressed	50.4	68.9	28.8	49.9	75.2	62.7	46.8	29.3
Assess understanding of illness	35.6	49.5	16.1	37.3	56.7	42.8	31.0	16.6
Negotiate about treatment plan	33.0	46.3	17.1	30.3	55.2	43.8	30.8	20.8
Identify mistrust	56.3	73.2	42.6	52.8	78.7	69.9	58.8	32.4
Identify relevant religious beliefs	49.7	64.9	37.5	51.8	66.0	47.8	48.5	26.8
Identify relevant cultural customs	47.9	62.5	31.3	54.4	66.6	50.7	35.8	22.6
Identify decision-making structure	52.2	72.9	33.8	48.2	72.2	61.2	54.2	38.2
Work with interpreter	34.7	37.1	23.5	38.2	45.1	31.8	23.6	40.6

*Response was 1 "none" or 2 "very little" on a scale of 1 to 5 "a lot." $P<.001$ for all comparisons; χ^2 test of equality of all proportions used.
†Data in this column adjusted for the differential probability of selection across specialties and the probability of response within each specialty.
‡Each question allowed respondent to answer for the patient or for a pediatric patient's family.

residents to incorporate these key concepts into their working definition of cross-cultural care. Furthermore, the contrast between residents' preparedness to provide cross-cultural care and their preparedness to perform core clinical and technical tasks specific to their specialties was noteworthy. As well as providing a baseline measurement for comparison, our data highlight a potential overemphasis on technical competence relative to interpersonal skills, a tendency suggested by others.[31]

Our results suggest that residents may be receiving mixed educational messages. On the one hand, they perceive that cross-cultural care is important and that it has implications for delivering efficient and high-quality care. Relatively low levels of dismissive attitudes on the part of faculty and fellow trainees also suggest that training sites value cross-cultural issues. On the other hand, residents indicate that they do not have the time nor the mentors to deliver effective cross-cultural care, and are not evaluated on their ability to do so. Most residents reported that lack of time to adequately address cultural issues was a moderate or major problem for them. There are multiple pressures on residents' schedules given heavy caseloads, yet trainees need time with patients to develop their communication skills and style.

Nearly one third of residents reported lacking good role models or mentors for cross-cultural care, one third to half reported receiving little or no training in key areas since they left medical school, and perhaps most significant, two thirds reportedly were not evaluated in a meaningful way with regard to the cross-cultural aspects of their communication with patients. These phenomena were especially prevalent among residents in the specialties of general surgery and emergency medicine. A disconnect between advocating the importance of cultural competence and nurturing the appropriate climate to achieve this is troubling.

These findings have implications for how residency training programs prepare physicians to provide high-quality care to an increasingly diverse nation. The practice of medicine continues to be complex and it is difficult to achieve a high level of competence in all areas. Nevertheless, the views from residents indicate that a lot of additional training and the presence of good role models and mentors go a long way to ensure that they are sufficiently skilled to deliver high-quality medical care.

It is encouraging that curricular changes are occurring. Between 2000 and 2003, the proportion of residency programs providing opportunities to

Table 5. Residents Who Reported Receiving Little or No Instruction in Cross-Cultural Care Beyond Medical School,* by Opportunity for Cultural Competency in Their Residency Program†

	Opportunity for Cultural Competency, %*		
	Yes (n = 1437)	No (n = 610)	*P* Value‡
How patient wants to be addressed	47.6	56.8	<.001
Assess understanding of illness	33.3	41.0	<.001
Negotiate about treatment plan	30.3	39.3	<.001
Identify mistrust	55.5	58.1	.15
Identify relevant religious beliefs	47.9	53.8	.008
Identify relevant cultural customs	45.3	53.8	<.001
Identify decision-making structure	50.4	56.3	.009
Work with interpreter	32.8	39.3	.003

*Response was 1 "none" or 2 "very little" on a scale of 1 to 5 "a lot."
†Based on results of a survey of program directors reported by the American Medical Association and the Association of American Medical Colleges of program directors.[25]
‡χ^2 Test.

Table 6. Residents Who Reported Low Cross-Cultural Skill Levels,* by Amount of Instruction and Presence of Role Models†

	Reported Amount of Instruction Received Since Medical School, Weighted %‡			Reported Presence of a Role Model or Mentor Good at Cross-Cultural Care, Weighted %‡		
	Little or None	A Lot	*P* Value†	No	Yes	*P* Value§
How patient wants to be addressed	8.7	1.1	.006	8.6	4.5	.001
Assess understanding of illness	12.2	1.2	<.001	10.9	5.3	<.001
Negotiate about treatment plan	9.5	1.6	<.001	7.8	3.4	<.001
Identify mistrust	26.7	10.6	<.001	25.3	15.7	<.001
Identify relevant religious beliefs	39.1	2.2	<.001	31.2	21.4	<.001
Identify relevant cultural customs	37.9	5.3	<.001	31.5	20.6	<.001
Identify decision-making structure	24.8	3.1	<.001	19.8	14.7	.005
Work with interpreter	16.9	0.2	<.001	12.1	7.4	.001

*Response was 1 or 2 "low skill level" on a scale of 1 to 5
†Percentages adjusted by logistic regression, controlling for specialty, race/ethnicity, and sex.
‡The weighted adjustment is for the differential probability of selection across specialties and the probability of response within each specialty.
§Wald χ^2 test used.

develop cultural competence increased from 35.7% to 50.7%.[25] However, the impact of these changes on GME has yet to be realized by the residents in our survey. While residents in programs with cultural competency opportunities were significantly more likely to report that they had received training in the areas identified by the survey, these differences were not as large as might be expected; moreover, residents in these programs did not report higher levels of preparedness or skill in providing cross-cultural care. One possible explanation is that the availability of a medical educational opportunity does not guarantee that residents have the time or desire to take advantage of it. Another possibility is that residual skepticism by the faculty regarding the value of cross-cultural care[32] may complicate the successful administration of this challenging curricular development. Those programs that did not offer these opportunities may have expected that residents learn these skills on the job and through informal or ad hoc teaching that may occur in the course of their clinical experiences. Residency programs may benefit from integrating cross-cultural education into both formal and informal training experiences, including lectures, morning reports, case reviews, and rounds, as well as encouraging faculty with experience in cross-cultural care to mentor residents. Evaluation of residents' cross-cultural skills should be mandatory.

Our study had a number of limitations that may affect its generalizability. The 60% response rate could introduce bias if those responding were differentially prepared compared with nonrespondents. The overrepresentation of white respondents could also have affected our results. In addition, we sampled only 7 specialties and responses from residents in other specialties could be different. A potentially more important limitation is our reliance on self-assessment of residents' preparedness and skill levels. Self-perceived preparedness may not predict future abilities, actual provision of care, or the quality of care provided.[33] Residents' self-reported preparedness 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 gravitate toward certain specialties or institutions that have more formal training in cross-cultural care. However, there is no criterion standard to assess preparedness. Student evaluations are used widely as indicators of the educational experience and self-assessments are acknowledged as an important component of adult and lifelong learning.[34,35] Self-assessments have been used in previous studies of educational quality[12,13,36] and have been shown to be valid predictors of examination scores[37] and faculty evaluations.[38-40]

Our study is the first, to our knowledge, to obtain a national estimate of the readiness of new physicians to deliver high-quality care to culturally diverse populations. While attitudes regarding the importance of cross-cultural care seem to be positive, there appear to be relatively few opportunities for meaningful education and mentoring, and little evaluation. These findings highlight a need for significant improvement in cross-cultural education to help eliminate racial and ethnic disparities in health care.

Author Contributions: Dr Weissman had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
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Obtained funding: Weissman, Betancourt, Campbell, Park.
Administrative, technical, or material support: Weissman, Betancourt, Kim, Clarridge, Maina.
Study supervision: Betancourt, Clarridge, Blumenthal.
Financial Disclosures: None reported.
Funding/Support: This work was supported by grant 20021803 from The California Endowment and grant 20020727 from The Commonwealth Fund.
Role of the Sponsors: The funding organizations had no role in the design and conduct of the study, including data collection and management, analysis, interpretation of the data, and preparation, review, or approval of the manuscript.
Acknowledgment: We gratefully acknowledge Sarah Brotherton and the American Medical Association for help in constructing the sample list of residents. Matthew Jans was most helpful in his role as assistant study director at the Center for Survey Research.

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