

Cross-cultural Medical Education: Conceptual Approaches and Frameworks for Evaluation

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ABSTRACT

Given that understanding the sociocultural dimensions underlying a patient's health values, beliefs, and behaviors is critical to a successful clinical encounter, cross-cultural curricula have been incorporated into undergraduate medical education. The goal of these curricula is to prepare students to care for patients from diverse social and cultural backgrounds, and to recognize and appropriately address racial, cultural, and gender biases in health care delivery. Despite progress in the field of

cross-cultural medical education, several challenges exist. Foremost among these is the need to develop strategies to evaluate the impact of these curricular interventions. This article provides conceptual approaches for cross-cultural medical education, and describes a framework for student evaluation that focuses on strategies to assess attitudes, knowledge, and skills, and the impact of curricular interventions on health outcomes.

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The 2000 Census confirmed what demographers had been predicting all along—our country has become more diverse than ever before.¹ This expansion has been fueled by growth of our minority populations, in addition to significant immigrant influx.² Our success as a nation hinges on how we meet the challenges diversity poses, while capitalizing on the strengths it provides. Many sectors have responded proactively to our demographic evolution, understanding there are financial and market imperatives to better understanding, communicating, servicing, and partnering with those from diverse backgrounds. This has resulted in the focusing of major educational efforts, through training and corporate development, on how to better “manage” diversity at the workplace and in business/service relations.³

A growing literature delineates the impacts of sociocultural factors, race, and ethnicity on health and clinical

care.^{4,5} Clinicians aren't shielded from diversity, as patients present varied perspectives, values, beliefs, and behaviors regarding health and well-being. These include variations in patient recognition of symptoms, thresholds for seeking care, ability to communicate symptoms to a provider who understands their meaning, ability to understand the prescribed management strategy, expectations of care (including preferences for or against diagnostic and therapeutic procedures), and adherence to preventive measures and medications.^{6–12}

Sociocultural differences between patient and physician influence communications and clinical decision making.¹³ Evidence suggests that provider–patient communication is directly linked to patient satisfaction and adherence and subsequently to health outcomes.¹⁴ Thus, when sociocultural differences between patient and provider aren't appreciated, explored, understood, or communicated in the medical encounter, patient dissatisfaction, poor adherence, and poorer health outcomes result.^{7,8,14–17} It is not only the patient's culture that matters; the provider's “culture” is equally important.^{18,19} Historical factors for patient mistrust, provider bias, and their impacts on physicians' decision making have also been documented.^{20–22} Failure to take sociocultural factors into account may lead to stereotyping, and, in the worst cases, biased or discriminatory treatment of patients based on race, culture, language proficiency, or social status.^{21–23}

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THE FOUNDATION OF CROSS-CULTURAL EDUCATION

The meaning of “culture” has been widely debated and broadly defined, with certain common themes emerging. To summarize, culture can be seen as an integrated pattern of learned beliefs and behaviors that can be shared among groups and include thoughts, styles of communicating, ways of interacting, views of roles and relationships, values, practices, and customs.^{19,23} Culture shapes how we explain and value our world, and provides us with the lens through which we find meaning.¹⁸ It should be considered not as “exotic” or about “others,”^{24,25} but instead as part of all of us and our individual influences (including socioeconomic status, religion, gender, sexual orientation, occupation, disability, etc.). We all are influenced by, and belong to, multiple cultures that include, but go beyond, race and ethnicity.

Given that sociocultural factors are critical to the medical encounter, cross-cultural curricula have been incorporated into undergraduate medical education.²⁶ The goal of these curricula is to prepare students to care for patients from diverse social and cultural backgrounds, and to recognize and appropriately address racial, cultural, and gender biases in health care delivery.^{27,28}

Cross-cultural medical education has emerged because of three major factors. First, cross-cultural education has been deemed critical in preparing providers to meet the health needs of the growing, diverse population.²⁸ Second, it has been hypothesized that cross-cultural education could improve provider–patient communication and help eliminate the pervasive racial/ethnic disparities in medical care seen today.¹² Third, accreditation bodies for medical training (i.e., the Liaison Committee on Medical Education) now have standards that require cross-cultural curricula as part of undergraduate medical education.²⁷ Although these standards are general in their language, they are good guidelines, and remain enforceable.

APPROACHES TO CROSS-CULTURAL EDUCATION

Training in cross-cultural medicine can be divided into three conceptual approaches focusing on *attitudes*, *knowledge*, and *skills*. Like the proverbial three-legged stool, each approach plays a crucial role, but is unable to support any weight when not fully supported by the other two.

The Cultural Sensitivity/Awareness Approach: Focusing on Attitudes

The foundation of cross-cultural care is based in the *attitudes* central to professionalism—humility, empathy, curiosity, respect, sensitivity, and awareness of all outside influences on the patient.^{29,30} It is the added importance of

these attitudes in cross-cultural encounters, where the desire to explore and negotiate divergent health beliefs and behaviors is paramount, that has given rise to curricula designed to build or shape these attitudes within learners. This approach (see List 1, Approach A) incorporates exercises and techniques that promote self-reflection, including understanding one’s culture, biases, tendency to stereotype, and appreciation for diverse health values,

List 1

Three Conceptual Approaches to Cross-cultural Education

Approach A: Awareness/Sensitivity Approach

The primary focus is on provider *attitudes*.

The goal is to increase provider awareness of the impact of sociocultural factors on individual patients’ health values, beliefs, and behaviors, and ultimately on the quality of care and outcomes.

Students explore and reflect on culture, racism, classism, sexism, etc.

These factors are discussed as they relate to the provider and the patient culture, and how they may have an impact on clinical decision making.

The importance of curiosity, empathy, and respect in the medical encounter are highlighted.

This approach is primarily taught in early in the first and second years of medical school.

Approach B: Multicultural/Categorical Approach

The primary focus is on increasing provider *knowledge* of cross-cultural issues.

Point out limits of previous focus on teaching unifying cultural characteristics of cultural groups (patients of culture x believe...and behave...).

New focus is to teach methods of community assessment and evidence-based factors.

These include disease incidence/prevalence among groups, ethnopharmacology, and historical factors that might shape health behaviors.

This approach is taught throughout undergraduate medical education.

Approach C: Cross-cultural Approach

The primary focus is on developing *tools* and *skills* for providers.

Process-oriented instruction is used to meld medical interviewing and communication skills with sociocultural and ethnographic tools of medical anthropology. These include approaches to elicit patient’s explanatory model (patient’s conceptualization of illness), methods to assess patient’s social context, and strategies for provider–patient negotiation and facilitation of participatory decision making.

A foundation to care for diverse populations is laid through the development of interviewing frameworks.

This is a practical approach for the clinical years.

beliefs, and behaviors.³¹ Examples include having open conversations exploring the impacts of racism, classism, sexism, homophobia, and other types of discrimination in health care; determining whether providers have ever dealt with feeling “different” in some way and how they have dealt with that; attempting to identify—using patient descriptors or vignettes—hidden biases the student may have based on subconscious stereotypes; determining the student’s reaction to different visuals of patients of different races/ethnicities; and discussing ways in which individuals in the students’ families have interacted with the health care system.³²

From a practical perspective, efforts to change attitudes are labor-intensive, difficult, and complex to evaluate, and can seem abstract to those who are more clinically oriented (particularly medical students in their clinical years, and residents).³³ Nevertheless, attitudes such as curiosity, empathy, respect, and humility are critical to effective communication in the medical encounter, whether the patient is from a similar or different cultural background as the provider.

The Multicultural/Categorical Approach: Focusing on Knowledge

Traditionally, cross-cultural education has focused on a “multicultural,” or “categorical,” approach, providing *knowledge* about the attitudes, values, beliefs, and behaviors of certain cultural groups.³⁴ For example, methods to care for the “Asian” patient, or the “Hispanic” patient, would present a list of such patients’ common health beliefs, behaviors, and key practice “do’s and don’ts.” With the huge array of cultural, ethnic, national, and religious groups in the United States, and the multiple influences, such as acculturation and socioeconomic status, that lead to intra-group variability, it is difficult to teach a set of unifying facts or cultural norms (such as “fatalism” among Hispanics or “passivity” among Asians) about any particular group.^{3,5} These efforts can lead to stereotyping, and oversimplification of culture, without a respect for its fluidity.^{23,26} Research has shown that teaching “cultural knowledge,” when not done carefully, can be more detrimental than helpful.²⁴

There are, however, two instances where focusing on a knowledge-based approach can be effective.

- First, following the basic tenets of community-oriented primary care and community assessment, an individual can learn about the surrounding community in which he or she practices or trains. Some important factors include the social and historic context of the population (new immigrants or longstanding residents), the predominant socioeconomic status, the immigration experience (Was the immigration chosen or forced?), nutritional habits (diet high in protein, fiber, or fat), common occupations

(e.g., blue collar or service industry), patterns of housing (e.g., housing development), folk illnesses and healing practices (e.g., empacho, coining), and disease incidence and prevalence, among others. Several such models are described in the literature focusing on communities in U.S.–Mexican border towns, communities with a new influx of a specific immigrant group, and Native American reservations.^{34,35}

- Second, when the knowledge taught has specific, evidence-based impact on health care delivery. Just a few examples: Students should learn about ethnopharmacology; disease incidence, prevalence, and outcomes among distinct populations; the impact of the Tuskegee Syphilis Study and segregation as the causes of mistrust of the health care system in African Americans; the effect of war and torture on certain refugee populations and how this shapes their interactions with the health care system; and common cultural and spiritual practices that might interfere with prescribed therapies (such as Ramadan observance—the sunup-to-sundown fast practiced by Muslims—and how this might affect diabetics).

When learning about “cultural groups,” it is important for educators and students to ask themselves several questions to avoid falling prey to ecologic fallacy: How accurate and generalizable is this group assumption? How current is it, given the fluidity of culture and diversity among groups? What are the limitations? How can I use this knowledge to deliver better care?²⁴ In summary, if a knowledge-based approach (see List 1, Approach B) is used, it should focus on community-oriented or specific, evidence-based factors. Learning as much as possible about the patient’s own sociocultural perspective and minimizing the reliance on generalizations are ideal.

The Cross-cultural Approach: Focusing on Skills

The cross-cultural approach teaches *skills* that meld those of medical interviewing with the ethnographic tools of medical anthropology.^{24,26} These framework-based approaches focus on communication skills and train learners to be aware of certain cross-cutting cultural issues, social issues, and health beliefs while providing methods to deal with information clinically once it is obtained.^{18,36,37} Curricula have focused on providing methods for eliciting patients’ explanatory models (that is, how they conceptualize and understand their illnesses) and agendas, identifying and negotiating different styles of communication, assessing decision-making preferences and the role of family, determining each patient’s perception of biomedicine and complementary and alternative medicine, recognizing sexual and gender issues, and being aware of issues of mistrust, prejudice, and racism,

among others.^{5,28,30} For example, providers are taught that while it is important to understand all patients' health beliefs, it may be particularly crucial to understand the health beliefs of those who come from different cultures or have different health care experiences. Instead of applying a deductive approach that applies broad rules and generalizations to the individual, this inductive approach focuses on the patient, rather than theory, as the starting point for discovery.²⁴ With the individual patient as teacher, learners are encouraged to adjust their practice styles accordingly to meet their specific needs. The cross-cultural approach has gained favor among educators, who see its clinical applicability as a framework for caring for either diverse or targeted populations (see List 1, Approach C).

In summary, cross-cultural medical education can be divided into three conceptual approaches focusing on *attitudes*, *knowledge*, and *skills*. The *awareness/sensitivity approach*, the *multicultural/categorical approach*, and the *cross-cultural approach* all have subtly different goals and focuses, yet ultimately act in unison to strengthen the learner's ability to care for patients from diverse populations.

EVALUATING STUDENTS

Curricular evaluation hinges on measuring whether the goals and objectives of a course have been met by determining whether the desired change in the learner's attitudes, knowledge, or skills has been achieved. For example, for a course on doctor-patient communication and "breaking bad news," it is important that the learner have the appropriate attitudes—such as awareness of the sensitivity of the issue—in addition to the knowledge regarding what types of statements are appropriate to convey. Finally, the learner needs the skills to adeptly address this exchange with the patient. Similarly, for a course on biochemistry, it is important that the learner have the awareness of the importance of key metabolic pathways in relation to medical conditions such as diabetes, the knowledge of what stimulates or inhibits some of these pathways, and, finally, the skills to bring these pieces together to manage a diabetic patient. All in all, evaluation strategies must make it possible to assess these components to assure that the learner has some baseline competencies as a physician. The evaluation of cross-cultural curricula has a similar goal: to ascertain whether the students have gained the new attitudes, knowledge, and skills to care for all patients, especially those who have different racial/ethnic, cultural, or social backgrounds.

IMPACT OF CROSS-CULTURAL MEDICAL EDUCATION

There has been limited evaluation published to date on the impact of cross-cultural medical education. Building

on the three-legged-stool model of attitudes, knowledge, and skills described above, we see some studies that have primarily shown improvements in cross-cultural knowledge (the types of knowledge have varied depending on the individual curricula taught). For example, Rubenstein et al., using a pre- and post-test method (in which learners are asked the same specific content questions before and after an educational intervention), demonstrated that students who had completed a "Culture, Communication, and Health" course had increased knowledge regarding:

- the way in which a physician's ignorance of a patient's health beliefs and practices can adversely affect the clinical encounter;
- the pervasiveness of non-conventional health beliefs and practices; and
- the types of resources available for learning about patients' health beliefs and practices.³⁷

Similarly, Nora et al., using multiple-choice questions, showed that an experimental group of students who had completed a "Spanish Language and Cultural Competence Curriculum" had greater knowledge of Hispanic health and cultural issues, including disease prevalence, cultural perceptions of illness, and traditional health practices, compared with such knowledge held by a control group.³⁵ In addition, the experimental group was found to be less ethnocentric and more comfortable with others than was the control group after the curricular intervention. Turning to graduate medical education, one published study found that family practice residents exposed to a three-year, multi-method cross-cultural curriculum had more cultural knowledge and cross-cultural skills, via self-report and faculty corroboration.³⁰

Despite the lack of an extensive literature on cross-cultural curriculum evaluation, it is clearly possible to develop a framework of assessment that is modeled after those utilized for other educational processes. Historically, the hallmark of evaluation has been to measure whether the objectives of a course or curriculum have been met. Although there are no current standards or consensus on the core objectives and competencies that should be achieved through cross-cultural education, there seems to be general agreement among experts that learners should demonstrate certain attitudes, knowledge, and skills in order to deliver high-quality care to diverse populations. Like courses in professionalism, ethics, and other behavioral sciences, however, cross-cultural education poses significant challenges for evaluation. Standard formats of evaluation have limited applicability in this case, for the following three reasons:

- It is difficult to candidly measure a student’s “cross-cultural attitudes”—especially those that deal with perceptions of and reactions to issues of race, ethnicity, culture, and class—because of social desirability bias and its influence on survey and interview responses. Learners often identify the socially appropriate and safe answers to “charged” or “loaded” questions. Ultimately, their responses may not necessarily capture their true beliefs, or predict their clinical behaviors. Capturing behavior in real-time would be optimal, yet is exceedingly difficult short of videotaping or audiotaping encounters (which as a method itself induces social desirability bias).
- Simple knowledge, or fact-based evaluation, doesn’t necessarily lend itself well to cross-cultural educational evaluation, given the fluidity of culture and diversity among different racial, ethnic, or cultural groups. An evaluation that is focused on assessing knowledge about particular aspects of specific groups may in fact lead to stereotyping and categorization by the learner. However, using clinical cases, and assessing knowledge about processes in the clinical encounter, disease incidences and prevalences in specific groups, and common folk illnesses, for example, can be assessed via a knowledge-based evaluation.
- In general, given the political nature of evaluation, cross-cultural curricula that are viewed as “soft science” may be assessed more negatively by students than are other courses that are perceived as having a more practical and strong evidence base (“real medicine”). Any resistance among the students to discussing sometimes personal and private perceptions about race, ethnicity, culture, and class may inherently result in a less-than-favorable evaluation.

STRATEGIES FOR EVALUATING CROSS-CULTURAL CURRICULA

As a result of these challenges, mixed methods of evaluation that include both quantitative and qualitative strategies are required to appropriately assess the impact of cross-cultural curricula.^{18,32} Here is a model of how students who have completed a cross-cultural curriculum might be evaluated, based on a framework of changes in attitudes, knowledge, and skills (see Table 1):

Attitudes

Certain attitudes are particularly important if one is to effectively engage in cross-cultural care. These include, among others, humility, empathy, curiosity, respect, sensitivity, and awareness to one’s own internal predisposition to racial, cultural, gender, and class bias and categorization, in

Table 1

Evaluating Students in Cross-cultural Education	
Educational Approach	Evaluation Strategy
Focusing on attitudes	Standard surveying Structured interviewing Self-awareness assessment Presentation of clinical cases Objective structured clinical exam Videotaped/audiotaped clinical encounter
Focusing on knowledge	Pretest–posttests (multiple-choice, true-false, etc) Unknown clinical cases Presentation of clinical cases Objective structured clinical exams
Focusing on skills	Presentation of clinical cases Objective structured clinical exam Videotaped/audiotaped clinical encounter

addition to awareness of the myriad outside influences that affect the individual patient. Developing appropriate, feasible strategies to assess these attitudes, which are the lynchpin to motivating behavior in practice, has oftentimes been elusive. Social psychologists, behaviorists, and experts in social cognitive theory have perhaps been the most successful at evaluating change in attitudes, yet their quantitative tools are frequently lengthy and cumbersome, precluding their use in most medical education settings. To truly assess change in attitudes requires that certain key questions be embedded within other kinds of evaluation or in long surveys. Newer techniques have focused more on qualitative assessment, through either structured interviews or focus groups. These, too, are a bit labor-intensive. Despite the limitations of applying some of these methods directly to the evaluation process, there is much we can learn from the disciplines mentioned above when we consider assessing the impact of cross-cultural curricula on attitudes. We should seek to foster partnerships with social psychologists, behaviorists, and experts in social cognitive theory and not yet abandon standard surveying as an evaluation tool. Similarly, we might benefit from new qualitative methods, such as structured interviewing by faculty, that might provide us with insight about a student’s attitudes.

Self-awareness assessment is an example of an evaluation strategy that has been used to measure the impact of attitudinally-based curricula designed to address the motivational framework of feelings and values that underlie behavior.¹⁸ This type of evaluation usually takes the shape of facilitated small-group discussions in which students are asked to role-play a particular situation. For example, a student would be asked to play the role of Mr. H:

Case example: Mr. H is a 45-year-old Chinese man who has previously been diagnosed with hypothyroidism. Mr. H has a different understanding of hypothyroidism, and thinks that his condition and symptoms may be related to some of the properties of the foods he's been eating. As a result, he hasn't been taking his medication and his symptoms of lethargy have persisted.

Another student would play the role of the physician, and both participants would interact and then reflect and discuss the experience. A faculty-facilitated discussion occurs concurrently, and the various perspectives would be explored. Faculty may be able to assess, and address, students' attitudes regarding the critical issues involved in the above case example. This case is particularly interesting because although all patients may have their own beliefs about the causes of their ailments, patients from multicultural, immigrant, or less-aculturated minority groups may be more likely to have beliefs that diverge from the Western biomedical model.⁷ Therefore, the importance of exploring these patients' health beliefs takes on added importance, extending the reach of standard, patient-centered care. In summary, "reflection" exercises such as this one may be effective as teaching tools and evaluation strategies, and may provide some insight to the faculty member relative to individual students' attitudes towards engaging in such an endeavor. In cases where students are presenting clinical cases to preceptors (orally or via case writeups), one might also be able to assess students' attitudes towards the issues presented in their cases. To more closely approximate the medical encounter and actual clinical behavior, assessments of students' attitudes can actually be made as part of certain stations within objective structured clinical examinations (OSCEs). In this case, the simulated patient may be able to comment on the student's attitudes and manner of interacting around cross-cultural issues. Finally, the "gold standard" to evaluate attitudes would be a videotaped/audiotaped clinical encounter between a student and a patient. This would be optimal because the student would have to carry out what he or she had learned in a living laboratory, face to face with a patient. In these instances, a faculty member could provide feedback to the student based on the tapes and also could debrief the patient about the student's degree of openness and his or her attitudes towards cross-cultural issues.

Knowledge

Unlike attitudes and skills, knowledge is perhaps the easiest component to assess, given that the bulk of curricula in medical schools evaluate this aspect of the educational

process (especially in the pre-clinical years, but also in the clinical years as part of the written exams of the required rotations). Standard evaluation tools such as pretest-posttests (multiple-choice, true-false, etc), unknown clinical cases (responding to either paper cases, vignettes, or video cases), presentation of clinical cases (orally or via case writeups), and OSCEs all determine whether a student has learned the content of a specific course.^{35,38,39} This is really no different for cross-cultural education. However, the major question to be addressed when conducting knowledge evaluation is *What knowledge are we testing?* As has been discussed, cross-cultural education has previously focused on a "multicultural" or "categorical approach," providing knowledge about the attitudes, values, beliefs, and behaviors of certain cultural groups.³⁴ If evaluation focuses specifically on this type of knowledge, the message sent to students may be that culture is static, and that one can "master" the key characteristics of different racial, ethnic, and cultural groups to achieve some type of competency. These efforts can lead to stereotyping, and oversimplification of culture, which in the short and long run can be more detrimental than beneficial.²⁴ On the other hand, one might be able to assess students' knowledge of the social and historic contexts of certain populations, their predominate socioeconomic status, patterns of immigration, nutritional habits, occupations, patterns of housing, folk illnesses, healing practices, and disease incidences and prevalences, among other issues. Furthermore, evaluating students' knowledge of more evidence-based issues (Tuskegee, etc.), in addition to knowledge on frameworks to get at more patient-centered information, may be much more effective, feasible, and successful than using the standard knowledge-based evaluation strategies.

Skills

Cross-cultural skills, which include those focused on medical interviewing, communication, and the ability to recognize, elicit, and negotiate different core-cultural issues (styles of communication, mistrust, autonomy versus family decision making, traditions, customs, spirituality, and sexual and gender issues, etc.), explanatory models, and social factors, can be assessed in several ways. These include assessment through presentation of clinical cases (either orally or via case writeups), through OSCEs, and through videotaped/audiotaped clinical encounters.^{18,40,41} As with evaluating attitudes, evaluating skills is limited by our inability to consistently assess clinical encounters in real time to assure that the behavior exhibited truly reflects the skills demonstrated in a controlled setting.

In summary, a variety of evaluation strategies can be utilized to evaluate cross-cultural education. As delineated

here, certain strategies can be implemented to assess the attitudes, knowledge, and skills necessary for students to be able to provide high-quality care to diverse patient populations. Unlike other standard curricula, however, these modalities have to be applied strategically if the evaluation process is in any way going to reflect how students might behave in the clinical encounter.

LINKING CURRICULA TO HEALTH OUTCOMES MEASURES

Evaluating students who have completed a course is just one piece of the puzzle. The true question that remains to be answered is “Does this course improve the quality of care delivered to patients?” Hypothetically, and from a logical standpoint, the answer for many of the courses taught in undergraduate medical education would be an unequivocal “Yes.” That being said, there is no literature or evidence to directly support this statement—or make a clear link between some of the curricula we teach and improved quality of care (such as biochemistry courses and the quality of care we deliver to diabetics, for example). As we work to build this link, there are three key questions that must be asked and assessed regarding the impact of educational interventions. These questions are presented here in the context of linking cross-cultural education to health outcomes (see Table 2):

Table 2

Linking Cross-cultural Curricula to Health Outcomes	
Key Question	Evaluation Strategy Examples
Do students learn what is taught?	Pre, post tests Unknown clinical cases Objective structured clinical exam
Do students use what is taught?	Qualitative physician and patient interviews Medical chart review Audio or videotape of multiple, random medical encounters
Does what is taught have an impact on care?	Patient and provider satisfaction Medical chart review Processes of care (i.e., completion of health promotion/disease prevention interventions)

1. Do the trainees learn what is taught?

If we are ever to link cross-cultural education to health outcomes, we must first ensure that students have become proficient in the predefined core competencies. If students are not learning the key cross-cultural attitudes, knowledge, and skills that we surmise will improve care, we cannot expect any evaluation to demonstrate improvement in health outcomes as a result of cross-cultural education. As has been detailed above, there are many ways to determine whether students are acquiring these attitudes, knowledge, and skills (pre- and posttests, surveying, structured interviewing, OSCEs, presentation of clinical cases, videotaped/audiotaped clinical encounters, etc). Before we can make any link to outcomes, we must rest assured that this first building block—the acquisition of knowledge and skills—is achieved.

2. Do the trainees use what is taught?

Once it has been determined that the students have learned what has been taught, the second building block toward linking the impact of cross-cultural curricula to health outcomes is to assess whether they are using the skills *consistently* in the clinical encounter. This evaluation can be accomplished by:

- a. Qualitative physician and patient interviews. This strategy can be used to determine whether both physicians and patients agree that cross-cultural skills are being utilized in the clinical encounter. Whereas quantitative surveying can be helpful, qualitative interviewing can be done more strategically, and can be corroborated from the perspective of the patient.
- b. Medical record review. As trainees are taught cross-cultural skills, they can be encouraged to document in the medical record (and in the case write-ups and write-ups of histories and physicals they present to faculty preceptors) whether they have used any cross-cultural skills in the specific encounter. The advent of electronic medical records makes this evaluation even more useful, as one may put “sociocultural assessment and intervention,” for example, on initial and progress note templates (such a note can be placed on paper medical record note templates as well, except that electronic medical records may be easier to review). Students can then note when they have used cross-cultural tools, and how the information they have gained from this process has helped them in managing the patient.
- c. Videotaped/audiotaped clinical encounter. A video or audiorecorder can be set up to randomly capture a certain set of clinical encounters (e.g., ten per year) to assess whether the trainee is in fact using key cross-cultural skills.

3. Does the cross-cultural curriculum have an impact on health outcomes and quality of care?

Once we have determined that the trainees have acquired the cross-cultural skills, and are using them consistently, we can then begin to determine the impact on health outcomes and quality of care. It should be noted, however, that this type of evaluation must be well thought out, and be structured so as to control for all possible confounders. There are several strategies for this type of evaluation:

- a. Measurement of patient and provider satisfaction. Given that physician-patient communication and patient satisfaction have been directly linked to clinical outcomes such as adherence and blood pressure control,¹⁴ it is worthwhile as a process measure to assess both patient and provider satisfaction with the clinical encounter *vis-à-vis* specific cross-cultural components. A positive evaluation would be characterized by an increase in the satisfaction of both the provider and the patient as a result of a cross-cultural curriculum. One could hypothesize an improvement in clinical outcomes based on the relationship previously described between satisfaction and quality improvement.
- b. Medical record review. Following up on our reasoning above, if it can be determined through medical record review that physicians were using cross-cultural skills in the clinical encounter, one can take the next step to evaluate the impact of the intervention on health outcomes and quality of care. For example:

Case example: Mrs. B is a 56-year-old Dominican woman with poorly controlled hypertension. She has been seen by multiple physicians, and had multiple medications prescribed and altered, and is now on a multi-med daily regimen. Upon presentation to a new physician a “sociocultural assessment and intervention” is performed in which Mrs. B’s explanatory model is determined (she’d never been asked this before). It is discovered that Mrs. B thinks her hypertension is due to anxiety and nervousness, in particular when her son visits a few days a week. As a result, she’s been taking her anti-hypertensives “almost every day, but mostly when her son visits,” but at different times of the day. Her explanatory model is negotiated, with incorporation of the biomedical model, and she is made to understand that her blood pressure is always high, but perhaps, as she states, higher when she’s anxious. As a result, she is encouraged, and agrees, to take her anti-hypertensive every day at the same time. On the subsequent three visits, her blood pressure is much better controlled, and her regimen simplified.

In this example of Mrs. B, one could determine, through review of the medical record, that as a result of the physician’s ascertaining her explanatory model and nego-

tiating—two key cross-cultural skills—her blood pressure is now better controlled. This would be evidence of the impact of a cross-cultural intervention on health outcomes.

c. Processes of care and intermediate and conclusive health outcomes. As with the case example presented above, through the use of medical chart review, one can determine whether, as a result of cross-cultural curricula, patients are now being asked their explanatory model more frequently (process measure), and as a result, getting more health promotion and disease prevention interventions such as mammography, Pap tests, Hemocult tests, and cholesterol screening (intermediate health outcomes). Similarly, when controlling for multiple clinical and social confounders, one might determine whether patients of physicians who have taken cross-cultural courses have better adherence to medications and better blood pressure and diabetes control, etc. (conclusive health outcomes). Overall, this type of evaluation would account for whether physicians are better exploring and documenting why patients “refuse” diagnostic and therapeutic procedures, or why patients are “noncompliant.” A basic tenet of cross-cultural care would be to no longer accept these positions, or labels, at face value, but to instead explore them and treat these issues with a differential diagnosis, as is done with medical conditions.

One final point should be made about cross-cultural curriculum evaluation. It is important that we not hold cross-cultural curricula to unfair evaluation standards; detractors have asked for a direct link between curricula and the improvement of hard clinical outcomes. Any assessment that is carried should match the educational objectives and occur in a careful, stepwise fashion, controlling for all possible confounders, and focusing first on process measures (such as patient and provider satisfaction). Randomizing a certain amount of students or physicians to an “intervention” group that receives cross-cultural education and a “control” group that doesn’t is not a simple or fair way of determining the impact of these interventions if the clinical and social confounders aren’t controlled for. For example:

Case example: Mrs. M is a 38 year-old African-American woman with severe asthma. She has had multiple emergency department visits, and a history of being “noncompliant” as documented in her chart. Her new physician, who has just taken a cross-cultural course, performs a thorough sociocultural assessment and intervention and determines she’s been taking her inhalers sporadically, as she believes they are too strong. After a careful negotiation and adjustment of her medications, she now agrees to take the inhalers as specified. The encounter is scored well *vis-à-vis* the cross-cultural intervention.

Over the next few weeks, while at home in her housing project where construction, painting, and pest-control planning are under way, she is admitted to the hospital three times. A link between the physician and cross-cultural intervention and outcomes shows no change in clinical outcomes.

It becomes clear here that despite the physician's clearly doing an excellent job with the application of cross-cultural skills, clinical outcomes—determined at the outset of a study to assess a cross-cultural intervention as being a decrease in the amount of emergency room and hospital admissions for experimental and control group physicians—remain unchanged, and perhaps worsen. This is not a function of the medical encounter, but is instead due to uncontrolled, significant social factors. Evaluations of this type hinge too much on the medical encounter, and assume the physician's expertise to do what is clinically appropriate, the patient's linguistic and literacy capability to understand the physician, and the absence of social factors such as the patient's ability to afford the inhaled medications (access barriers) and to live in a setting free of environmental exacerbating factors (social determinants). This case should illustrate the complexity of linking cross-cultural curricula to health outcomes in a simplistic way, without taking all of these factors into account. The challenge of this type of evaluation cannot be overstated.

IMPORTANCE OF DEVELOPING APPROPRIATE EVALUATION STRATEGIES

Cross-cultural medical education has made great strides, yet we must address evaluation, an integral component necessary for the development of the field. Appropriate evaluation strategies should be devised that directly assess the attitudes, knowledge, and skills that cross-cultural education attempts to impart. Careful attention to the complexities of evaluation and measurement in these types of curricula should be given, with a strategic, stepwise, mixed-method, process-driven approach as a starting point for future research.

THE ULTIMATE GOAL

As stated earlier, since research has highlighted the importance of the effects of sociocultural factors on clinical decision making and outcomes, incorporating cross-cultural curricula within medical education should be emphasized. Culture is neither "exotic" nor does it belong only to "others," thus it should not be marginalized as a factor in education and care. Students must locate both themselves

and their patients within a cultural context and utilize a framework to explore and subsequently negotiate critical issues. It is important to understand that cross-cultural attitudes, knowledge, and skills are essential to medical professionalism, and that *all* patients clearly stand to benefit.

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