

Reflective Practice and Competencies in Global Health Training: Lesson for Serving Diverse Patient Populations

JONATHAN CASTILLO, MD, MPH
LINDA M. GOLDENHAR, PhD
RAYMOND C. BAKER, MD, MEd
ROBERT S. KAHN, MD, MPH
THOMAS G. DEWITT, MD

Abstract

Background Resident interest in global health care training is growing and has been shown to have a positive effect on participants' clinical skills and cultural competency. In addition, it is associated with career choices in primary care, public health, and in the service of underserved populations. The purpose of this study was to explore, through reflective practice, how participation in a formal global health training program influences pediatric residents' perspectives when caring for diverse patient populations.

Methods Thirteen pediatric and combined-program residents enrolled in a year-long Global Health Scholars Program at Cincinnati Children's Hospital Medical Center during the 2007–2008 academic year. Educational interventions included a written curriculum, a lecture series, one-on-one mentoring sessions, an experience abroad, and reflective journaling assignments. The American Society for Tropical Medicine and Hygiene global health competencies were used as an a priori coding framework to qualitatively analyze the reflective journal entries of the residents.

Results Four themes emerged from the coded journal passages from all 13 residents: (1) the burden of global disease, as a heightened awareness of the diseases that affect humans worldwide; (2) immigrant/underserved health, reflected in a desire to apply lessons learned abroad at home to provide more culturally effective care to immigrant patients in the United States; (3) parenting, or observed parental, longing to assure that their children receive health care; and (4) humanitarianism, expressed as the desire to volunteer in future humanitarian health efforts in the United States and abroad.

Conclusions Our findings suggest that participating in a global health training program helped residents begin to acquire competence in the American Society for Tropical Medicine and Hygiene competency domains. Such training also may strengthen residents' acquisition of professional skills, including the Accreditation Council for Graduate Medical Education competencies.

Jonathan Castillo, MD, MPH, is Assistant Professor of Pediatrics, Division of General and Community Pediatrics, at the Cincinnati Children's Hospital Medical Center; **Linda M. Goldenhar, PhD**, is Assistant Dean of Medical Education and Associate Professor of Family Medicine at the University of Cincinnati College of Medicine; **Raymond C. Baker, MD, MEd**, is Education Section Head and Professor of Clinical Pediatrics, Division of General and Community Pediatrics, at the Cincinnati Children's Hospital Medical Center; **Robert S. Kahn, MD, MPH**, is Research Section Director and Associate Professor of Pediatrics, Division of General and Community Pediatrics, at the Cincinnati Children's Hospital Medical Center; and **Thomas G. DeWitt, MD**, is Director, Division of General and Community Pediatrics, The Carl Wehl Professor of Pediatrics, and Associate Chair for Education at the Cincinnati Children's Hospital Medical Center.

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Corresponding author: Jonathan Castillo, MD, MPH, Cincinnati Children's Hospital Medical Center, University of Cincinnati, 3333 Burnet Avenue, ML 7035, Cincinnati, OH 45229-3039, 513.636.4185; jonathan.castillo@cchmc.org

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Background

Global health education is timely.^{1–3} Pressing global issues, such as emerging infectious diseases, physician shortages, and emigration patterns, exemplify the growing interdependence of economic and social forces worldwide. In the United States, the documentation of racial and ethnic disparities is extensive, and it has been hypothesized that physician cultural competence can help lessen such disparities.⁴ Cultural competence is framed as “the ability to identify and appropriately respond to cultural issues that affect the health care of patients and their families.”⁵ In addition, delivery of effective and high-quality patient-centered care increasingly underscores cultural competence as a necessary professional skill.^{6–9} Houpt et al¹⁰ proposed that culturally competent care is required for the effective health care of immigrants and that learners need to have a basic understanding of the medical and social issues involved in the care of diverse patient populations.

To begin addressing these needs, a call has gone out to medical educators to train physicians in culturally effective care, emerging infectious diseases, and a broad range of global health issues.^{10–12} Concurrently, the proportion of US medical students who completed a global health elective

grew from 2.6% in 1985 to 29.9% in 2009.¹³ This new generation of learners seeks residency training programs that offer global health education¹¹; availability of these programs often is a determining factor when selecting a residency, and programs use them as a recruitment tool.^{14,15}

Research has shown that participating in global health education has a positive effect on participants' clinical and communication skills^{16,17} and is associated with career choices in primary care, public health, and serving underserved populations.^{15,18,19} Such training promises to improve the knowledge, attitudes, and skills of health professionals, but there is a pressing need to establish which training methods should be used and how these curricula most effectively improve health care services for diverse populations.

The purpose of this study was to begin to examine, through reflective practice, how participation in a formal global health training program may influence residents' perspectives when caring for diverse patient populations. Using qualitative methods, we sought to describe resident perspectives while participating in a global health program.

Methods

Participants

In 2007, Cincinnati Children's Hospital Medical Center (CCHMC) implemented the Global Health Scholars Program (GHSP). The CCHMC is an academic teaching hospital with 475 registered beds, nearly 24 000 admissions per year, and approximately 150 pediatrics residents. Pediatric and combined-pediatric residents at CCHMC were recruited to participate in the GHSP between July 1, 2007, and June 30, 2008. Residents were eligible if they were scheduled to participate in a 2- to 4-week elective abroad to provide clinical services at a foreign destination. Residents scheduled to participate primarily in research activities at their foreign host institution were excluded. Potential participants were identified by reviewing the year-long resident schedule.

Fifteen residents met the eligibility criteria and were invited to participate in the structured program and study by the principal investigator via an e-mail message. There was no financial incentive. Eligible residents could choose not to enroll in the new program or study and still participate in an elective abroad following the previous format with no formal curriculum, mentoring, or instruction. Political unrest in one African nation prevented 2 residents from completing the program, resulting in a final study sample of 13. All 13 eligible residents agreed to participate in the program and study and provided written informed consent. The study was approved by the CCHMC institutional review board.

Global Health Scholars Program

The goals of the GHSP are to prepare pediatric residents for a global health experience and expose them to different cultures, languages, medical conditions, and care protocols in a context and health care system different from their domestic practice. The activities designed to help the program meet these goals included the following components.

Didactic Curriculum and Lectures The scholars received a written curriculum that explained the learning aims and guided residents through how to complete a service project while at their host institution. Participants attended didactic lectures presented by program faculty members. These lectures were available to all residents, and topics were chosen based on review of the global health literature and faculty field observations (BOX). Scholars also attended evening meetings at which presentations were made on global health issues and discussed with faculty involved in global health work. Nine formal didactic lectures were given and there was approximately 1 evening meeting or journal club per month during the study period.

Mentoring Mentoring has an important influence on trainees' personal and professional development. It has long been recognized that structured mentoring is an essential component of successful global health training.^{20,21} The GHSP provided the participants a global health adviser with international health experience. Prior to departure, the goals of mentoring were to serve as a sounding board for travel preparation, to offer insight into cross-cultural communication, and to counsel on safety and international legal requirements. The objective of mentoring also was to provide an opportunity for debriefing and accountability when the residents returned from their away electives.

Reflective Journaling Reflective journaling is an integral tool in adult education and is increasingly used in graduate medical education.^{22,23} Active reflection on the meaning of events encountered during training helps trainees become critical thinkers.^{24,25} Each scholar was asked to submit 6 journal entries using a semistructured guide to help them focus on their experiences abroad (TABLE 1).

Analysis

The American Society for Tropical Medicine and Hygiene (ASTMH) Committee on Medical Education published 3 competency domains for global health education in medical training: (1) burden of global disease, (2) immigrant health, and (3) traveler's medicine.¹⁰ The burden of global disease domain encompasses knowledge of the diseases that contribute to the greatest morbidity and mortality worldwide (eg, perinatal mortality, human immunodeficiency virus/AIDS) and how health system factors can hinder (or facilitate) access to care. The second

BOX GLOBAL HEALTH PROGRAM LECTURE TOPICS^a

Burden of global disease
 Tuberculosis
 Vector-borne diseases
 HIV/AIDS in developing countries
 Parasitic diseases
 Malnutrition/undernutrition/micronutrient deficiencies
 Neonatal and maternal health
 Child survival
 Pneumonia
 Injury and trauma
 Chronic disease/disability and special needs/malignancies
 Altered mental status
 Neglected tropical disease
 Emerging disease
 Tropical dermatology
 Environment health and exposures
 Preparation and medical service abroad/site selection
 Health systems and sociopolitical issues/population-based interventions
 Epidemiology and vaccine-preventable diseases
 Immigrant/underserved health
 Cultural competency/how to work with an interpreter
 Refugee and immigrant medicine/cross-cultural communication
 Traveler's medicine
 Traveler's medicine I: prevention, safety
 Traveler's medicine II: vaccinations, prophylaxes

Abbreviation: HIV, human immunodeficiency virus.

^a The lectures are scheduled over a 22-month cycle.

domain covers health care issues relating to the growing immigrant population in the United States and the spectrum of diseases that such a demographic shift likely signifies (eg, tuberculosis). Traveler's medicine pertains to the knowledge needed to provide proper prophylaxes, diagnoses, or treatment for diseases that may concern international travelers (eg, malaria). These core ASTMH competency domains have gained acceptance and have been introduced as a starting point in global health education in a number of institutions around the globe.^{26–28}

In our study, the ASTMH competency domains were used as an initial coding framework to qualitatively analyze residents' reflective journal entries. We collected and combined into 1 transcript the entries from all residents. Two coders (J.C., L.M.G.) independently reviewed the complete transcript and coded pertinent sentences, phrases, and paragraphs using the ASTMH domains as the a priori code book. This is known as a confirmatory (vs exploratory) analysis method.²⁹ In addition to this analysis method, the investigators observed and later developed codes for themes that emerged from the manuscript that were unrelated to the ASTMH competencies. Lastly, the 2 coders reviewed and compared their independently coded transcript, discussing coding convergences and resolving discrepancies. No passage was coded or counted in more than 1 theme category.

Results

Characteristics of Participants

There were 53% male and 47% female participants; this was similar to the comparable residency population's demographic of 42.8% and 57.2% respectively. There were 77% non-Hispanic white, approximating the 81.5% in the comparable resident population. Participants chose a spectrum of international experiences based on individual interest and available knowledge and contacts (TABLE 2).

Reflections and Emerging Themes

We collected 28 journal entries and identified and coded 133 distinct passages. Of the 3 ASTMH competency domains, only passages with themes associated with burden of global disease and immigrant/underserved health emerged in the journal data. Ten residents (77%) reflected on the domain termed *burden of global disease* and all 13 reflected on the domain termed *immigrant/underserved health*. No residents mentioned traveler's medicine in any of their reflections. Two other themes relating to parenting and volunteering in humanitarian efforts emerged. A saturation point³⁰ was reached and neither coder believed that the 2 additional themes were captured using the ASTMH domains, so they were coded and grouped separately. Representative quotations of the ASTMH domains and of the 2 additional themes are presented in the following section.

Burden of Global Disease Residents expressed how their experience overseas led to a heightened awareness of the reality and limitations of health care systems in developing countries. In addition, they expressed greater appreciation for the US health care system itself. Residents' observations included the following:

I was treating infectious diseases like leptospirosis, dengue fever, and malaria. Here in the US these are rarely seen.... You do not have the same antibiotics, the same ventilators, so you must adjust. ECMO [extracorporeal membrane oxygenation] or Nitric Oxide in developing nations are dreams....

I saw that despite the frequency of losing a baby or child in Haiti, it is never easy; because of course everyone everywhere loves their children.

[This experience] helped me slow down and appreciate my blessings.... Also, it made me grateful that Americans have access to health care—even though some only on an emergency basis.... It makes me more aware of health disparities and encourages me to use resources more carefully and judiciously.

Immigrant/Underserved Health Many of the journal entries expressed a newfound desire to apply the lessons learned abroad to both the personal and professional lives of the writer when caring for immigrant and underserved

TABLE 1 SEMISTRUCTURED REFLECTIVE PRACTICE COMPONENT	
	Journaling Questions
At the initial experience at the site	1. Reflect on any expectations you have about the upcoming international health experience. 2. In what ways do you think this experience might affect you as an individual and as a practicing physician? 3. Describe the project you hope to accomplish alongside the patient care you are providing.
After some experiences at the site	4. Reflect on 2 or 3 ways in which the lives of these patients or their families are similar to yours.
Nearing the return to the home institution	5. Reflect on how this experience affected you as an individual and as a practicing physician. 6. In what ways might this experience influence how you do things once you return home?

populations in his/her native health care system. The lessons learned included the need to become a better listener, to have more patience with others, and a desire to build deeper relationships with patients and families. Residents’ reflections included the following:

I was changed as a person because I had so much time to reflect on my life, and decide what my priorities are, and what they should be. It was very tough for me to be away from my loved ones for that amount of time. This emphasized the importance of making patients and families feel comfortable. Especially those who have traveled from out of the country and may be far away from their loved ones.

I think I will be more aware of the cultural aspects of medicine, and will make an effort to ask more about health beliefs, especially for the immigrant families I see.

[This experience abroad] will force me to slow down and build relationships with people.... Families need to know that they are cared for. Whether that is by God or by other people, it is important to feel loved. I believe that we provided more help simply by listening to people’s stories and getting to know them than by any medical intervention.

Additional Themes The first additional theme was related to the residents’ observations of the extreme measures parents take to assure their children receive health care. Six (46%) residents reflected on this parenting domain, with 3 of them noting the following:

Parental sacrifice: More than I have been ever asked to do, I have seen parents forego food and physical comfort for their children—hours travel on foot to bring in the ill child for the medical care they know is here—sending children to

TABLE 2 DEMOGRAPHICS AND CHARACTERISTICS OF THE 13 PARTICIPANTS IN THE GLOBAL HEALTH SCHOLARS PROGRAM		
Characteristics	No. (%)	Countries Visited
Gender		
Male	7 (53)	
Female	6 (47)	
Race/ethnicity		
Non-Hispanic White	10 (77)	
African American	1 (8)	
Latino	2 (15)	
PGY		
2	4 (31)	Cambodia, Japan, Kenya, South Africa
3	5 (38)	Cambodia, Dominican Republic, Haiti, Kenya
4 ^a	4 (31)	Honduras, South Africa, Swaziland, Tanzania

^a Postgraduate year (PGY)-4 are residents in medicine-pediatrics and/or other combined programs.

school instead of having their help with farming or ranching...the suffering of the parent who had tried to stay home as long as possible because of expense weighed against the severity of their child's illness.

Looking into the eyes of a concerned parent seems to be the same in any country. Despite a lack of resources, a different language, vastly different opportunities and levels of education, everyone desires health, for themselves and for their children....

...I was amazed to see the great lengths that many of the Swazi parents went to bring their children to the Baylor AIDS Clinic to be started on anti-retroviral drugs, sometimes traveling across the nation, taking days off from work.

The other theme that emerged was how residents' experience abroad led to their desire to volunteer in and advocate for future humanitarian outreach. Six (46%) residents reflected on this humanitarianism domain, with 3 of them noting the following:

No longer can I ignore the human resource shortage related to health in southern Africa. I feel compelled to encourage physicians and those in training in the US to help bridge the gap of health professionals in that region. I suspect that in the long run, this experience will solidify the likelihood that I will work on the front lines in the US caring for the poor, and to work simultaneously to shape health policy as it affects the poor both in the US and overseas.

I am also thinking about volunteering downtown in the mission and hospice. I learned so much from people who had nothing, but found joy in spite of it.

I definitely would like to continue to work with Village Life Outreach Project, even if it is just by helping them spread awareness of their work and mission.

Discussion

Our findings suggest that seeing firsthand and considering the plight of children and their parents during the GHSP field experience may have made an important and positive contribution in the residents' perspective as reflected in their journal entries; they also corresponded to 2 of the 3 ASTMH global health education competency domains.¹⁰ The residents' reflections suggest that global health training enhances their understanding of and compassion for underserved patients both abroad and at home. Our findings are similar to those seen in other studies of experience-based learning programs.³¹ This supports the hypothesis that participation in global health electives develops attributes in trainees that can benefit care of diverse patient populations, including improved cultural competence and growth in idealism and enthusiasm, and

attitudes conducive to serving immigrant patients and families as well as families on public assistance.³²⁻³⁴ Our study used reflective journaling to capture such learning. Use of reflection in medical education is growing, yet still is limited. To our knowledge, pediatric resident journal entries have not been linked with global health and professional competencies in the care of diverse patient populations.

In our study, many participants voiced a desire to take more time to listen, to build deeper relationships with the families they serve, to further volunteer in humanitarian outreach, and ultimately to become advocates for optimal service and care. In facilitating these future humanitarian and advocacy efforts, faculty may play an additional role through ongoing mentoring. The adviser in the program sought to provide ongoing guidance and an opportunity for debriefing to facilitate re-entry into the home culture. Realizing the educational value of reflection and mentoring, the mentoring methods were continued the following year along with the other didactic components. It must be noted, however, that mentoring a resident can require an intense time commitment, particularly if ongoing mentoring is desired. This underscores the findings in other studies of global health education programs wherein faculty involvement requiring institutional investment proved to be a vital component.^{1,35} Reflective journaling assignments, one-on-one mentoring sessions, a written curriculum, a lecture series, and an experience abroad thus became essential elements of our formal global health training program.

Our findings accentuate the value of the Accreditation Council for Graduate Medical Education competency-based education, as professional skills are essential in the practice of high-quality care. Professionalism encompasses a commitment to carrying out professional responsibilities with sensitivity to racially and ethnically diverse patient populations and to concurrently provide wise and cost-effective management of resources.³⁶ Work with interprofessional teams abroad increases knowledge about current and alternative biomedical practices and gives participants the opportunity to reflect and evaluate personal and professional assumptions that can lead to advocacy and improvements in patient care at home. Exposure to health care delivery systems in various overseas settings affords residents greater awareness of national systems and the larger international framework in which they exist.³⁷ In our study, the experience seemed to make many participants more aware of health disparities in the global context and motivated some to expect more effective and judicious allocation of resources from themselves once back in their native medical system. Many residents reflected on their desire to become better listeners and greater advocates; their insight highlighted the importance of improved communication skills and the value of systems-based practice education.

Finally, our findings immediately added practical value and facilitated the improvement of the learning

environment. For example, none of the residents' reflections echoed competencies in the ASTMH domain of traveler's medicine. This may be because the reflection question guide was not specifically intended to trigger comments on travel prophylaxis, universal precautions, or personal safety, or that none of the questions in the reflection guide specifically addressed this topic. Or it may reflect a weakness in the education on travel preparation. The lecture series for the following academic year included added educational components on this subject.

Our study has several limitations. Given the small sample size, it is important not to overstate the apparent association between participation in the GHSP and global health or professional competencies. In the absence of a direct comparative study, the findings should be considered preliminary, and we cannot exclude the possibility that the observations represented previous experience and/or a natural maturing process in the residents irrespective of their experience with global health. In addition, the reflections were semistructured, which may have influenced the themes in the responses; we cannot comment as to what free-form reflection alone may have generated. We acknowledge that participants self-selected to complete an international rotation. Future studies should repeat this analysis with a larger group of learners and with follow-up. Finally, our findings cannot be generalized to residents who travel primarily to complete a basic science research rotation because subjects in this category were excluded from enrollment in the program.

Conclusions

The findings of this study suggest that the GHSP is a useful educational intervention and may help to enhance resident understanding of the complex clinical, social-behavioral, and economic challenges encountered in global health. The findings also support the notion that resident reflections about their educational experiences in the GHSP correspond to at least 2 of the content areas outlined in the ASTMH competency domains. This study points to the potential value of using a global health training program to support residents' acquisition of professional skills that are fundamental to culturally effective care. In addition, it advances the view that reflective journaling may be a valuable tool for evaluating competency-based medical education interventions.

Health care disparities, rapid changes in US demographics, and new accreditation requirements bring culturally and linguistically effective care issues to the forefront. In addition, today's physicians are expected to have a deeper knowledge of emerging disease and global health, and to provide culturally effective care.^{2,11} Thus, medical educators must bridge the new millennium's health care needs with training goals and competencies aimed at meeting these needs. One way to accomplish this is to develop innovative global health programs that meet the

Accreditation Council for Graduate Medical Education requirements and actively involve participants in the learning process. Global health training may be a pathway to harness trainees' compassion and altruism. It follows that enhancing the global health training within US residency programs might ultimately provide a passageway to improve health services for underserved populations throughout our nation.

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