Pediatric Global Health Education: Correlation of Website Information and Curriculum

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Objective Web sites describing residency programs are initial sources of information for applicants. The correlation of global health content on pediatric residency program Web sites with reported curricula is unknown. To determine the accuracy of global health education, information on program Web sites was compared with queried program content responses.

Study design The Fellowship and Residency Electronic Interactive Database was used to assess pediatric residency programs' Web sites for global health education, applying American Academy of Pediatrics consensus guidelines. The authors developed a questionnaire using these consensus guidelines and contacted each program to assess Web site findings, and χ^2 tests were used to compare data from these 2 sources.

Results Of 194 programs, 177 had operational Web sites, of which 98 participated in the questionnaire (55%). Ninety-three of 177 programs (53%) reported global health education on Web sites, whereas 80 of 98 programs (82%) reported global health education through direct questioning ($P < .001$). Results include provision of resident salaries during global health elective (Web site 5% vs questionnaire 98%, $P < .001$), mandatory training before global health elective (8% vs 20%, $P = .02$), presence of global health elective curriculum (24% vs 75%, $P < .001$), postexperience debriefing (16% vs 29%, $P = .05$), and bidirectional resident exchange (2% vs 13%, $P = .01$).

Conclusions Results indicate continued expansion of pediatric global health education, but significant differences exist between information on Web sites and data obtained through direct questioning. Accurate representation of global health opportunities would allow for more informed decision-making among prospective applicants. Findings also suggest substantial variability in global health curricula that needs to be addressed through improved planning and cooperation among training programs. *(J Pediatr 2013;163:1764-8)*.

Pediatric resident interest in global health training has risen in the past several decades with approximately one-half of pediatric residency programs offering a wide variety of global health opportunities in 2006.[1] Pediatric residency applicants increasingly place importance on global health training opportunities when selecting a residency program.[2] As early as 1989, Duncan et al[3] noted an increasing number of inquiries about global health educational opportunities from pediatric residency applicants. In a 2011 survey, nearly one-quarter of respondents described global health training as an essential or very important factor in selecting a residency program.[2]

The American Academy of Pediatrics (AAP) has developed Consensus Guidelines for International Child Health Electives (CGICE).[4] Similarly, the Federation of Pediatric Organizations has prioritized global health education,[5] as have the Association of Pediatric Program Directors and the Institute of Medicine.[6] Despite this emphasis on global health education, the current climate of pediatric global health training opportunities remains understudied, as the last systematic evaluation was conducted in 2006.[1]

Several publications have described techniques for implementing global health curricula.[7-13] Recommendations have focused on integrated didactic global health education at the home institution paired with a global health elective with an emphasis on establishing clear expectations and fostering reciprocal relationships through culturally sensitive patient care.[1,4,5] Additionally, there may be other practical factors that affect the implementation of global health experiences, including provision of salary and malpractice insurance that could impede resident participation.

In the current technological age, program Web sites have become the major repositories of information for pediatric residency applicants.[14] In 2003, almost 80% of respondent applicants to 1 internal medicine residency program used program Web sites in deciding where to apply, and over two-thirds used them to decide where to interview[14]; and this proportion has likely only increased over

AAP	American Academy of Pediatrics
CGICE	Consensus Guidelines for International Child Health Electives
FREIDA	Fellowship and Residency Electronic Interactive Database

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the past decade. Similarly, program Web sites are of particular importance in the application and interview process for prospective residents of other specialties as well.[15,16] Descriptions of global health opportunities on pediatric residency program Web sites has steadily increased over recent years.[17] However, the completeness of program information on Web sites is variable.[16] A gap exists in understanding how the representation of pediatric global health information on program Web sites compares with actual curricula reported by programs. The purpose of this study was to evaluate the global health educational opportunities described on program Web sites and to compare this information with data obtained directly from programs.

Methods

Data for this study were collected between April 2011 and March 2012; the study received approval from the University of Wisconsin Institutional Review Board.

The study took place in 2 phases. The first phase was Web site evaluation; the Fellowship and Residency Electronic Interactive Database (FREIDA) was used to assess all pediatric residency programs in the US. In a second phase, pediatric residency programs identified through FREIDA were contacted to respond to a questionnaire. Inclusion criteria for pediatric residency programs included location in the US and listing within the FREIDA database.

Web Site Evaluation

FREIDA was used to access Web sites and assess all pediatric residency programs in the US for global health education. Each Web site was evaluated a single time by 1 of 2 coders who were trained to extract variables of interest. Training included evaluation of a pilot set of Web sites and feedback from the primary investigator. The primary author (J.Y.) double-coded a subsample of sites by randomly selecting and comprehensively reviewing Web sites of 40 programs (23% of total) to assess interrater reliability. Of 14 evaluated characteristics, 3 errors were identified, yielding an error rate of 0.6%.

Because program curricular content is found in different locations for various program Web sites, a systematic approach was used. If the "Search" capability was available, this function was used by typing the words "global," "international," and "world." Next, information was evaluated under the headings "Quick Facts," "Brochure," and "Frequently Asked Questions." Global health content was next sought under the sections "Education" and "Curriculum." All remaining headings, including "Our Residents," "Electives," Community Health," and "Goals and Objectives," were then investigated and reviewed. Any information relating to a global health educational opportunity was noted, and the program was recorded as offering global health education.

Questionnaire Evaluation

Each program was then contacted by phone and e-mail during a 4-week period in August and September 2011. Publicly available contact information from FREIDA, including e-mail addresses and phone numbers of program coordinators, was used. One week prior to the study, each contact e-mail address received a notice with the questionnaire to introduce the study.

All participants provided informed consent, and a phone script was used to evaluate the same characteristics as the Web site phase. If program coordinators were uncomfortable or unfamiliar with this information, study members asked for referral to personnel engaged in administration of these activities, such as chief residents, program directors, or other faculty members. If there was no answer to the phone call, a follow-up e-mail was sent to the program coordinator. This process was repeated at least 3 times for nonresponders over the following 3 weeks. Approximate percentages of participating respondents are as follows: 52% were chief residents, 31% were global health faculty, 13% were program coordinators, and 4% were program directors.

Variables Considered

The variables of interest were developed after performing a thorough literature review with the assistance of a medical librarian as well as consideration of the AAP CGICE. Additional variables emerged after reviewing the guidelines with a group of residents with global health experience. After examining these variables, 2 domains were identified: curricular and practical components. These variables were then applied to both the Web site and questionnaire study phases (Table I).

Characteristics of each program were recorded for each study phase so that Web site and questionnaire data could be directly compared. Geographic categorization was based on information from the US Census Bureau Regions and Divisions.[18]

Statistical Analyses

Data analysis was conducted using STATA software version 10 (STATA, Cary, North Carolina). All P values were 2-sided, and $P < .05$ was used to indicate statistical significance. Descriptive characteristics were calculated for both the information from Web sites and data obtained through direct questioning. The χ^2 test for proportions was used to compare data regarding displayed information presented on Web sites with those obtained from questionnaires, as well as to compare the geographic distribution of programs.

Results

At the time of the study, 194 pediatric residency programs were listed on FREIDA, all of which were assumed to have been in active status; of these, 177 had operational Web sites available for evaluation. The distribution of these 177 programs was 27% from the Northeast, 25% from the Midwest, 34% from the South, and 14% from the West. Ninety-three of the 177 programs (53%) mentioned a global health opportunity on its Web site (Table II). There was no statistical