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ORIGINAL RESEARCH

A Needs and Resource Assessment of Continuing Medical Education in Haiti

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Abstract

BACKGROUND Haiti has a chronic physician shortage, and the country has been facing an increased disease burden since the 2010 earthquake and the subsequent introduction of cholera. In such resource-challenged settings, access to postgraduate medical education often is limited due to inadequate financial, structural, and academic resources. A crucial component to improved health in Haiti is the expansion of continuing medical education (CME). To our knowledge there have been no previous studies investigating the continuing professional development needs of Haitian physicians working in this context.

OBJECTIVE The objectives of this study are to describe the educational resources available to Haitian physicians and to understand their continuing professional development needs.

METHODS We performed a needs and resource assessment of CME available to Haitian physicians using surveys and focus groups. We surveyed 62 physicians and led 3 focus groups. Questions gathered data on physicians' access to educational resources. Descriptive statistics were calculated from surveys, and focus group transcripts were manually reviewed for themes.

FINDINGS In all, 82 conference attendees were invited to participate. Of these, 62 physicians completed the needs and resource assessment survey. Of the participants, 16% had a medical library at work and 31% had access to a computer at work. Educational conferences were available at work for 27% of participants, and 50% attended conferences outside of work. Less than half (45%) identified a clinical mentor. Focus group participants described inadequate tangible and reference resources, lack of colleague support, and lack of avenues for specialty training and employment.

CONCLUSIONS In this needs assessment, Haitian physicians identified lack of support for clinical decision making, poor access to CME activities, limited professional development, and absence of employment opportunities as key areas of need in support of their clinical and professional work.

KEY WORDS continuing medical education, Haiti, needs assessment, continuing professional development, brain drain, resource assessment

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INTRODUCTION

The development of health systems requires a multifaceted approach targeting material deficits and the training and retention of sufficient personnel to meet clinical need.[1,2] There is a chronic physician shortage in Haiti, with a physician density calculated at 0.25 per 1000 people in 1998, as compared with 2.6 per 1000 people in the United States in 2004, the most recent years for which data are available.[3] This shortage is in part due to emigration, as Haiti has one of the top four rates of physician loss to the American workforce globally.[4] In addition to the workforce shortage, there is chronic underfinancing of the health sector: Before the 2010 earthquake, the country spent 9.5% of total government expenditure on health. This under-resourced health system has been further strained with the loss of material and human resources in the earthquake, coupled with an overburdening from excess morbidity and mortality incurred from the earthquake and the introduction of cholera. Yet the additional stress in the aftermath of the earthquake and cholera extend beyond the health sector, and despite the increasing need, government expenditure on health dropped to 5.5% in 2012.[5,6] Studies have suggested that, since the earthquake, Haitian health care workers have experienced a decreased quality of life, with concern about future jobs, poor working conditions, and lack of education or training ranking among the concerns.[7] Evaluation of clinicians from low-resource settings globally indicates that job satisfaction, as it relates to patient management and access to practical and educational resources to facilitate ongoing clinical care, plays a large role in retention of trained health care professionals.[8] This suggests that increased access to educational opportunities may play a role in health care worker satisfaction and retention.

Continuing medical education (CME) has existed informally and formally in the United States for more than a century.[9] CME is defined as any activity that serves to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession.[10] A more encompassing term, *continuing professional development*, includes the methodologies of continuing education while also focusing on concepts of self-directed learning, personal development, and organizational and systemic factors involved in adult learning.[11] Physicians working in low-resource settings often face logistical barriers, making access to medical resources or education challenging, and existing educational tools are often ill-suited for the spectrum of diseases and paucity of resources.[12] In a recent systematic review of motivation and retention of health care workers in low-income settings, lack of access to continuing education, including classes and seminars, was shown as an important factor, especially among younger health professionals, leading to decreased health worker retention.[13]

There is limited data on the resources actually available for the professional and academic needs of clinicians working in low-resource settings. Muula et al. conducted a cross-sectional descriptive study of nurses, clinical officers, and technicians in Malawi to evaluate access to professional development interventions.[14] They found that 94.7% of the 54 participants had been involved in some form of seminar or workshop in the previous year. However, only 35.1% had read any journal article in the past 6 months and 3.5% worked at facilities where libraries were available. All reported interest in learning research methods, yet only 31.6% had received any training and only 5.3% had ever written a journal or health-related article.[14] A cross-sectional study of physicians and medical students from the Philippines in 2013 demonstrated that at work, 82% had access to a mobile phone device and 46% had Internet access.[15] The primary source of information for medication-related questions was a formulary and for diagnostic dilemmas was a colleague. Authors of this study concluded that use of health information through mobile devices may be increasing and that access to devices and the Internet must be considered when planning resources for health care providers in resource-poor settings.[15] Such studies are important in the thin body of knowledge on the subject of continuing professional development needs in low-resource settings; however, contexts within such countries vary widely, and the applicability of the existing data to our Haitian context is limited.

In a country that ranks 168th out of 187 countries in the Human Development Index in 2014, a crucial step toward improving health in Haiti is the expansion of the quality and capacity of medical education. However, there are no existing data describing the clinical experiences of and need for CME in Haiti.[16] Because there is considerable financial investment in the initial training of a physician, and because physicians are fundamental to the continued provision of health care, it is important to understand their experience and needs in terms of ongoing training and education.[17] In addition to Haitian physicians who

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train at institutions in Haiti, the Escuela Latinoamericana de Medicina in Cuba has provided medical school training for Haitian citizens since 1999. In all, 550 Haitian physicians have completed their training as of 2010, with 567 still in training. The agreement was that these physicians would then return and take the place of Cuban doctors already working in Haiti.[18] With an estimated 2422 physicians total in Haiti, a significant proportion has received training in Cuba.[19] Here we describe the first published needs and resource assessment of CME for Haitian physicians.

METHODS

A multimodal needs and resource assessment of CME for Haitian physicians was conducted in Port-au-Prince (PAP), Haiti, in December 2011. Approval was obtained from the institutional review board of Partners Healthcare. This study was conducted through the Boston-based nongovernmental organization EqualHealth. It incorporated 2 data collection methodologies: surveys and focus groups.

An anonymous survey was conducted at the inaugural annual medical education conference sponsored by EqualHealth in PAP. The purpose of the conference was to provide a continuing education opportunity to EqualHealth's partners interested in medical education and to create a forum for networking of Haitian physicians. The survey was created in English, translated into French, and back translated to confirm accuracy. The survey was conducted in French. Convenience sampling was used because the conference presented the opportunity to poll a large number of physicians in an in-person manner, without relying on survey return by mail or Internet, both of which are unreliable in Haiti. All 82 physicians in attendance were invited to participate. The survey contained 54 multiple-choice and 9 short-answer questions and was completed on paper. Questions were designed to gather data on physicians' access to current medical literature, clinical resources, professional development opportunities, and avenues for further training. Participants were asked to provide answers reflective of their primary place of employment in the past 12 months.

A subset of conference attendees was a group of Haitian junior physicians, recently graduated from the Escuela Latinoamericana de Medicina. They were invited to send physicians for participation in focus groups on the topic of CME; sampling was based on convenience and feasibility. Three focus groups were held concurrently. Each group with 5 participants had identical prompting questions covering the same topics as the previously described survey. The groups were mixed in terms of age and sex. The focus group participants were homogenous in their level of training, all having graduated within the previous year from medical school. The group discussion was led by members of EqualHealth in Haitian Creole, lasted 1 hour, and was recorded with the participants' verbal permission. Recordings of each group were transcribed and then translated into English.

All quantitative data was entered into an Excel (Microsoft, Redmond, WA, USA) database and analyzed manually for rates. Only descriptive statistics were calculated; no comparisons were performed. When questions were left blank, they were included in the denominator of the response rates. When double answers were encountered, both answers were included in the numerator of response rates, leading to total percentages greater than 100%. Qualitative data was transcribed in the original language and translated into English. Two reviewers then manually evaluated the data by analyzing the transcripts, coding ideas and descriptors, and identifying the themes that emerged.

Table 1. Characteristics of Study Population (N = 62)

Characteristics	Study Population (%)
Age (y)	31.5 (21-71)*
Sex	
Male	56.5
Female	42.0
Secondary education	
Private	71.0
Public	40.3
Work setting	
Hospital	37.1
Clinic	45.2

* Mean (range).

RESULTS

All 82 conference participants at the medical education conference were invited to participate in the survey, and 62 returned the survey (76% response rate). The previously mentioned group of recent graduates from Cuba was invited to send up to 24 physicians to participate in the focus groups; 15 physicians participated and 3 focus groups of 5

Table 2. Access to Educational Resources

	Yes (%)	No (%)	Not Sure (%)	Blank (%)
Presence of medical library with reference books at work site?	16.1	66.1	3.2	14.5
Library open and available for use?	19.1	23.8	23.8	33.3
Books relevant and up to date?	14.3	14.3	33.3	38.1
Adequate variety of books?	9.5	38.1	14.3	38.1
Computer at work site *that you could use*?	30.7	51.6	1.6	16.1
Computer has medical reference information on it?	26.7	30.0	6.7	36.7
Computer has Internet access?	56.7	6.7	6.7	30.0
Internet use more than once weekly to answer clinical questions?	51.6	41.9	1.6	21.0
A place within walking distance of home with Internet access?	56.5	21.0	1.6	21.0
Mobile phone with Internet capability?	54.8	29.0	1.6	14.5
Do you have a data plan?	47.7	25.0	4.6	22.7

physicians each were held. The characteristics of the surveyed participants are described in Table 1. Of survey respondents, 46% reported receiving their medical training in Cuba. The average age of respondents was 31 years. The majority (71%) received private secondary education. A clinic setting was the most common context of current employment (45%). Investigation about access to educational resources (Table 2) revealed 16% of participants had a medical library at work and 31% had access to a computer at work, with 56% of those computers having Internet access. Educational conferences were available at work for 27% of participants, and 50% attended conferences outside of work (Table 3). Probing access to professional development, 45% identified a mentor. Of those who had not yet had the opportunity for residency training, 36% believed it was likely that they would be able to enroll in a residency program (Table 4).

In response to a short-answer survey question investigating sources of medical information used to answer clinical questions, replies included books, the Internet, UpToDate, Medscape, colleagues, specialists, protocols, and presentations.

Survey respondents indicated that poor working conditions and lack of educational and professional development opportunities were drivers for seeking employment outside of Haiti. In particular, physicians cited the presence of poor economic conditions, lack of employment opportunities, and political insecurity as reasons to consider emigration. They also noted a lack of supervisory and personal support and a lack of opportunity for continued training and specialization.

Focus groups identified 4 themes surrounding continuing education for Haitian physicians. These themes were superimposed on a background of severe material and resource challenges encountered in the provision of health care in Haiti, including a lack of consistent electricity and running water, extreme poverty of patients, lack of materials and medications, and lack of human resources.

Theme 1: Lack of Support for Clinical Decision Making. With broad opening questions about how physicians approach challenging cases, the physicians described a setting in which patients had significant medical needs, resources were limited, and they were often missing essential treatments. This is the context in which they tackled difficult clinical questions. They described a lack of textbooks and Internet access for point-of-care use, many of them having access outside the medical setting but rarely within. Calling classmates and colleagues for support was repeatedly mentioned as a problem-solving strategy. Physicians working in remote parts of the country described isolation and lack of colleagues or specialists available for consultation.

Table 3. Access to Continuing Education

	Yes (%)	No (%)	Not Sure (%)	Blank (%)
Educational conferences for clinicians at your work site?	27.4	54.8	3.2	14.5
Did you always or often attend these conferences?	42.9	21.4	0.0	35.7
Did you attend educational conferences outside your work site?	50.0	24.2	0.0	25.8
Do you know of professional organizations that provide mentorship or conferences?	29.0	45.2	0.0	25.8
Would you participate in an online medical education course if it were available?	54.8	29.0	1.6	14.5

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Table 4. Access to Professional Development

	Yes (%)	No (%)	Not Sure (%)	Blank (%)
Is there a physician you identify as your mentor?	45.2	30.7	0.0	24.2
Have you completed residency?	46.8	25.8	0.0	27.4
If not, is it likely that you will be able to enroll in a residency?	36.4	21.2	0.0	42.4

"I was always alone. I treated the symptoms. I would call my elder colleagues to guide me. I consulted my books, CDs, and the Internet." (FG1)

"I am stressed when I have doubts about a diagnosis. I call the Cubans or other colleagues to have help." (FG3)

"Sometimes in some places there is no electricity and we cannot even use the phone and the Internet." (FG3)

Theme 2: Poor Access to Continuing Education Activities. The physicians strongly endorsed the educational seminars and conferences they had attended as helpful to their practice. Topics of attended conferences included infectious disease, women's health, and public health. Physicians identified a lack of opportunity to consistently attend such conferences, particularly those from more remote hospitals. They also reported difficulty attending conferences because of clinical obligations and a lack of physicians with whom to share the clinical burden.

"Personally, [*sic*] no chance to participate in … conferences. My hospital is far away, and there is a lot of work. There were continuing education activities; the pediatrician gave a conference every Thursday, but it was difficult to participate because there were only 2 of us." (FG2)

Theme 3: Limited Professional Development Opportunities. There was a recurrent theme of lack of clinical and professional mentorship. Of survey respondents, 19% reported working at clinical sites with no senior physician present. The physicians in the focus groups also highlighted barriers to seeking further specialization in medicine due to the small number of residency training programs in the country and increased difficulty of procuring these positions due to their foreign (Cuban) medical training.

"There is no guide here. I ask advice from many people, generally friends, experienced colleagues, but we don't have a special mentor." (FG1)

Theme 4: Absence of Employment Opportunities. The participating physicians were recent graduates and emphasized the difficulties of finding employment after training. Recurrent subthemes included a requirement of work experience for available jobs, lack of government coordination for placing newly graduated physicians into employment, and lack of political support for Haitian physicians trained abroad.

"Unemployment in Haiti is at all levels. It's difficult to know what the barriers are. There are not enough doctors for the population. We could open private practices, but it is too expensive. We don't know why we are unemployed since the hospital needs doctors." (FG1)

"I can say that there is no one in the public health ministry thinking about using the new doctors in different positions. They do know that there will be doctors graduating every year. They should place them. … The lack of coordination is then the main barrier to our finding positions." (FG1)

"We must regroup and become a force to demand what we need." (FG3)

DISCUSSION

This work represents, to our knowledge, the first published needs and resource assessment of CME for Haitian physicians. Our findings demonstrate the clinical and professional challenges of physicians working in low-resource settings, immersed in extreme poverty and ongoing political unrest. This is in the backdrop of a country that is still recovering from the structural, logistical, and emotional consequences of the 2010 earthquake, as well as the additional burden of disease after the introduction of cholera.

The study findings not only identified gaps, but also revealed potential avenues for change.

Regarding hard copy versus electronic resources, more physicians had access to the latter. These data suggest that the lack of availability of appropriate texts and continuing education may be problems amenable to solutions based on increasing access to Internet technology. There is potential to exploit Internet-based modalities for provision of continuing education or consultations, as demonstrated by the RAFT (Réseau en Afrique Francophone pour la Télémédecine) network, which published a summary of 5 years of experience implementing CME and consultations in Africa.[20]

The identified deficiencies in mentorship and specialty training are of great concern, as they further debilitate an already fragile system, failing to keep the workforce engaged, committed, and motivated. There was also repeated reflection on the overwhelming clinical need, contrasted with the lack of opportunities for physician employment. Many suggested that the government had a responsibility to provide more job opportunities. One possible solution would be to support the Haitian government in its attempts to create a centralized system to require CME or interval licensing requirements for Haitian physicians along with opportunities for in-person or electronically based medical education. What does seem clear from our study, however, is that requirements for education alone, even with a workforce that desires ongoing learning and opportunities for advanced training, are unlikely to succeed without addressing workforce shortages and heavy clinical burdens. Given the complex interplay of social, economic, and political forces layered on top of overburdened clinicians, solutions will be more likely to succeed coming from Haitian health care providers who appreciate the nuances of the system, albeit with support from the international community.

Our study has several strengths. It provides novel data, in that it is the first published needs and resource assessment of Haitian physicians. Although Haiti shares features with many low-resource countries, it is unique because it is recovering from an earthquake and the introduction of cholera, and the government often is at a disadvantage compared with nongovernmental organizations in terms of aid receipt and job creation.[21] Additionally, the large subset of physicians who train abroad and then return to practice creates an additional complexity in interpreting needs; this study includes those physicians as part of the analysis. Our findings are made more robust by the mixed methodological approach using surveys and focus groups.

Study limitations include a modest sample size, limiting our ability to perform subgroup analyses that could examine the effects of such variables as the location of training, specialization, or current type of employment. Because of this, we did not attempt to correlate demographic characteristics with survey responses. Our data are necessarily descriptive and subject to recall bias. Not all responses totaled 100% due to double responses, and there were unanswered questions on the survey. Additionally, our responses may not be fully generalizable due to biases from our convenience sampling. First, the physicians invited to participate had self-selected to attend a 1-day conference. This could have skewed our results by suggesting a greater availability of professional resources than available on average due to an unusually proactive group of respondents. Second, our sample population is skewed with regard to training background and years of experience. Our data are strongly reflective of the Cuban-trained Haitian physicians' experience, as 46% of survey respondents reported having their medical training in Cuba, and the focus groups contained these graduates exclusively. Although our study was not large enough to establish differences in needs between the physicians trained in Cuba and those trained in Haiti, one must keep in mind that a significant subset of physicians surveyed were previously exposed to a potentially more diverse and better resourced training environment in Cuba. Additionally, their experience with professional support and employment opportunities may vary from physicians trained exclusively in Haiti. That being said, all first-year physicians in Haiti, regardless of location of medical school training, are required to provide 1 year of social clinical service and are assigned to clinics and hospitals throughout the country. Thus, regardless of site of medical school, their initial clinical experiences are in the same system. Furthermore, the group of Cuban-trained physicians present in our sample population was only 1 year out of medical school, and thus their experiences were likely influenced by being new practitioners.

CONCLUSIONS

Our results indicate that Haitian physicians identify lack of support for clinical decision making, poor access to continuing educational activities, limited professional development, and absence of employment opportunities as critical professional needs. These results call for implementation research to evaluate the most effective way to address these gaps. The factors identified in our study may be used as a basis for the design and implementation of programs to provide support for medical education and professional development opportunities to physicians in Haiti.

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