Training Toward a Movement: Career Development Insights From the First 7 Years of a Global Health Equity Residency

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ABSTRACT

Background The Doris and Howard Hiatt Residency in Global Health Equity and Internal Medicine at Brigham and Women's Hospital provides global health training during residency, but little is known about its effect on participants' selection of a global health career.

Objective We assessed the perceptions of residency graduates from the first 7 classes to better understand the outcomes of this education program, and the challenges faced by participants.

Methods We interviewed 27 of 31 physicians (87%) who graduated from the program between 2003 and 2013 using a convergent mixed-methods design and a structured interview tool that included both open-ended and forced-choice questions. We independently coded and analyzed qualitative data using a case study design, and then wove together the qualitative and quantitative data at the interpretation phase using a parallel convergent mixed-methods design.

Results Entering a career focused on social justice was cited as the most common motivator for selecting to train in global health. Most respondents (83%, 20 of 24) reported they were able to achieve this goal despite structural barriers, such as lower salaries compared with peers, a lack of mentors in the field, poorly structured and undersupported career pathways at their institutions, and unique work-life challenges.

Conclusions A majority of graduates from 1 dedicated residency program in global health and internal medicine reported they were able to continue to engage in global health activities after graduation and, despite identified challenges, reported that they planned long-term careers in global health.

Introduction

Many graduate medical education programs offer resident physicians the opportunity to focus part of their training on a specific type of practice within their specialty, such as primary care, community/social medicine, or management/leadership. Recognizing the need for a dedicated global health track integrated into a traditional residency program,[1] the Doris and Howard Hiatt Residency in Global Health Equity and Internal Medicine at Brigham and Women's Hospital was established in 2003 to produce leaders who would dedicate their careers to the equity potential of global health, specifically "to address inequalities of access and outcome."[2] By extending the internal medicine training program from 3 to 4 years, the curriculum provides residents intensive immersion in health delivery programs in resource-poor settings, often with the nongovernmental organization Partners In Health, and the option of attaining a Master of Public Health (MPH) degree at the Harvard T. H. Chan School of Public Health. The goal of these experiences is to enable residents to develop competencies in the diagnosis and treatment of major infectious and noncommunicable diseases as well as in the design, implementation, and evaluation of global public health and health delivery programs to address the burden of disease.[3]

To better understand the career trajectories and challenges faced by those pursuing careers in global health, we conducted in-depth interviews with graduates from the first 7 years of this program. While there are many global health tracks, to the best of our knowledge, this is the first systematic analysis of the career outcomes of a dedicated global health residency program.

Methods

Our study employed a convergent parallel design. We used mixed methods to understand the nuances and challenges of graduates' subsequent career paths. We collected qualitative and quantitative data simultaneously to simplify participant interaction to a single

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point in time. We piloted our tool with 2 program graduates on the study team, editing it for clarity. The instrument comprised open-ended questions, forced-choice questions, and fill-in-the-blank tables, using survey methods described in previous studies.[4,5] We addressed the following thematic areas: general demographics, countries of work, family and relationships, student loan status, current career path and salary, and career goals. Data integration took place during the analysis phase.[6]

We approached all program graduates from 2003 to 2013 (3 to 7 graduates per year, with a total of 33). Two authors (D.P. and R.D.) were part of this cohort and piloted the first iterations of the survey tool. To prevent their opinions from skewing the frequency of responses observed, we excluded their opinions from the qualitative analysis, but we did include their summary statistics in TABLE 1. Of 31 participants eligible for interviews, 29 consented to enrollment in the study, and 27 ultimately participated in telephone interviews by a single interviewer (R.C.). Interviews on average lasted 20 to 40 minutes. Participants provided written consent and were allowed to skip questions and/or sections at their discretion, with 19 of 27 participants completing all interview sections (the survey instrument and qualitative interview guide are provided as online supplemental material).

The Partners Human Research Committee at Brigham and Women's Hospital granted Institutional Review Board approval. To maintain confidentiality, 2 authors (K.P.S. and R.C.) separated potentially identifying responses from the main transcript prior to analysis.

We analyzed open-ended and forced-choice question responses in parallel and gave each equal importance. An author (A.K.N.) analyzed quantitative findings using SAS version 9.0 (SAS Institute Inc, Cary, NC) and shared them with the research team as descriptive statistics. We chose an exploratory case study design focusing on a specific phenomenon (a career in global health) within a real-life setting, with an added focus on understanding how participants experienced this phenomenon.[7] Two authors (A.K.N. and K.P.S.) read the interviews and identified codes using open coding techniques, then 3 authors (D.P., R.D., and J.J.R.) reviewed the codes and grouped them into larger themes. One author (K.P.S.) coded the open-ended responses using Dedoose (SocioCultural Research Consultants, Hermosa Beach, CA) and created code summaries outlining prevalent, unusual, and surprising material. Three authors (K.P.S., A.K.N., and D.P.) tied the coded summaries into a coherent narrative highlighting commonalities and contrasting information, and all authors participated in the integration of qualitative and quantitative findings.

What was known and gap
Despite growing interest in global health training, little is known about how graduates leverage training in their subsequent careers.

What is new
Interviews with graduates of 1 global health residency program assessed motivation, current career and work in global health, and barriers to a career in global health.

Limitations
Findings from a single elite program may not generalize.

Bottom line
The majority of graduates were active in global health to some extent, and despite challenges, they reported that they planned long-term careers in this field.

Results

TABLE 1 shows respondent demographics. Notably, 83% (20 of 24) of respondents reported they had achieved a career in global health. The majority reported combining 3 or more different types of work in this effort (11 of 19 responses). Within global health activities, 52% (11 of 21) reported they engaged in clinical care, 43% (9 of 21) were active in medical education, 43% (9 of 21) participated in research, and a few reported working in policy or consulting (2 of 21 responses). The majority spent less than half of their full-time equivalent (FTE) on global health–related aspects of their work (13 of 23 responses), and 3 respondents reported working nearly full time in global health. For their non–global health-related activities, more than half of the respondents reported being a hospitalist in a US institution (58%, 15 of 26).

The average education debt for respondents was $95,205, and more than half had between $100,000 and $200,000 in loans after residency (56%, 9 of 16). The average total salary among those who included global health activities in their careers was $135,182, with a range of $62,000 to $230,000.

TABLE 2 lists the most common themes articulated in the interviews, with representative comments. Themes identified as central to the study objective are discussed below. Due to a small sample size, we describe how often each topic was discussed in interviews by reporting the frequency of each theme as *few* (0%–30%), *around half* (31%–60%), *most* (61%–99%), and *all* (100%).

Motivations for Careers in Global Health Typically Are Social Justice Driven

The desire to advance health equity was a commonly cited reason for pursuing a career in global health. Most respondents described providing health care to

the poor or vulnerable, or improving health outcomes of marginalized groups.

Approximately half of respondents identified a desire to work at the level of the health system or in program administration as opposed to, or in addition to, directly providing clinical care.

Global Health Career Pathways Pose Unique Challenges

The lack of clearly defined career pathways was the most often cited challenge. Participants reported difficulty mapping out their careers after residency, with few models to emulate, and few institutions willing to support them.

Respondents frequently found it difficult to find an academic institution to support their work abroad, and they often felt constrained by domestic clinical, research, or familial responsibilities. In addition, respondents reported difficulty in obtaining funding. The often-lower salaries of global health careers were seen as a hindrance in paying loans and meeting personal financial goals.

Most participants found it challenging to find long-term mentorship. Respondents expressed gratitude for the mentorship they received during the residency program. The theme of a lack of mentors outside the program was pervasive.

Opinions were split on whether the global health hospitalist model was a feasible career development strategy. In this model, graduates work part-time as hospitalists in the United States and part-time in global health, either pro bono or with funding provided by another source, such as a nongovernmental organization. A few respondents thought this was a worthwhile career choice, and others considered it personally unsustainable. Most agreed that even these types of arrangements were difficult to find.

Personal and Family Considerations Are Important Ingredients of Career Satisfaction

Most respondents agree that a global health career places a strain on personal relationships and family. The travel required for their envisioned careers proved challenging and was often reduced to allow for more time with family. A few respondents reported that excessive time abroad led to significant marital discord.

Most respondents mentioned a supportive partner as key to a successful career in global health. Of married respondents, all reported having a supportive spouse who cared about their passions and career priorities. A handful noted having a spouse who also worked in global health.

Transitioning to Domestic Work in Health Disparities Can Be an Important Career Focus

Most participants cited growing families and related changes in responsibilities as factors for reevaluating their career in global health. This often meant shifting focus to health system issues in the United States (ie, to serve underserved populations, to address health inequity, etc) or supporting global health from within the United States to minimize travel. Roughly half of the participants noted an increased focus on domestic work concerning health inequities, often because of an underlying interest in domestic health care, or a change in priorities brought on by family life and financial needs.

While most respondents agreed that global health practitioners are most effective and have the greatest impact when they are full time in the field, few reported they desired to relocate abroad full time.

Care of children and global health was an important theme. Nearly all respondents who had children reported reducing or eliminating their time abroad, and some thought the time commitment children require was a key limitation to a global health career. Others thought they would limit travel once they had children, particularly while the children were young. The few respondents who reported that children had not demonstrably changed their career paths indicated they traveled with family members or arranged travel to minimize disrupting family dynamics. A few respondents noted the positive influences of international travel on young children beginning to develop their own worldviews.

Proportion of Clinical Effort Decreases Over Time

Nearly all respondents wanted to focus less on clinical work as they progress, spending more time on nonclinical work such as teaching, research, policy, or nongovernmental organization leadership, while still retaining a limited clinical presence in order to maintain skills.

When speaking of 5- and 10-year plans, approximately half of respondents noted a desire to teach, and identified academic institutions as their desired setting, whether full time in residence or as a means of supporting research and time abroad. While this was a popular response, most respondents noted the difficulty of gaining institutional support for such a career.

Passion and Perseverance for Long-Term Goals Are Seen as Paramount

A few respondents indicated that the external challenges faced in career development could be

TABLE 1
Demographic Information of Global Health Equity Residency Graduates

Category (No. of Respondents If Not 27)	n (%)
Sex (n = 26)	
Male	13 (50)
Female	13 (50)
Age (n = 24)	
31–40 y	21 (88)
> 41 y	3 (13)
Self-identified as having a career in global health (n = 24)	20 (83)
Relationship status (n = 22)	
Single	1 (5)
Married	19 (86)
Divorced	2 (9)
Children (n = 22)	
0	8 (36)
1	6 (27)
≥ 2	8 (36)
Debt in loans upon graduation from medical school (n = 21)	
None	5 (24)
≤ $99,000	5 (24)
$100,000–$200,000	9 (43)
> $200,000	2 (10)
Average, mean (SD)	$95,205 ($80,852)
Did fellowship after residency (n = 33, from public records)	13 (39)[a]
Did MPH during global health residency at Harvard T. H. Chan School of Public Health (n = 26)	14 (54)
Obtained master's degree (or higher) prior to global health residency (n = 26)	9 (35)
Type of clinical work performed when in the United States (n = 26)	
Hospitalist	15 (58)
Primary care	3 (12)
Nonclinical work	3 only research (12) 1 consulting (4)
No current domestic work	4 (15)
Posttraining total salary in last fiscal year (among those who included global health activities in their careers; n = 11)	
< $100,000	4 (36)
$100,000–$200,000	5 (45)
$201,000–$300,000	2 (18)
> $301,000	0
Average global health career salary (range), n = 11	$135,182 ($62,000–$230,000)
Not included as still in training (salary range)	9 ($53,000–$70,000)
Not included as careers volunteered as not in global health (sample salaries)	3 ($45,000, $140,000, $250,000)
Posttraining (residency and/or fellowship) percentage of FTE spent on global health activities (n = 23)	
≤ 20%	12 (50)
21%–50%	1 (4)
51%–80%	7 (29)
> 81%	3 (13)

TABLE 1
Demographic Information of Global Health Equity Residency Graduates (continued)

Category (No. of Respondents If Not 27)	n (%)
Unprompted reported types of global health activities (n = 21, respondents could combine more than 1 option)	
Clinical care	11 (52)
Policy work	1 (5)
Medical education	9 (43)
Research	9 (43)
Consulting	1 (5)
Percentage combining different types of work (from the preceding list; n = 19)	
Work in 1 only	4 (21)
Work in 2	4 (21)
Work in 3	10 (53)
Work in 4	1 (5)

Abbreviations: MPH, Master of Public Health; FTE, full-time equivalent.
[a] 7 infectious diseases, 1 gastroenterology, 2 pulmonary and critical care, 2 oncology, and 1 cardiology.

overcome with a persistent internal drive. Others noted the importance of clarifying personal priorities to help put these challenges into perspective.

Discussion

Our findings support previously documented barriers to career development in global health[8–10] and offer new insights that speak to potential solutions.

Our global health training program is unique in 2 ways: (1) it is hosted at a highly selective, elite institution and accepts a few residents each year, and (2) it was launched to not only respond to growing trainee interest in global health[11] but also to train leaders and "change agents"[12] in global health, with an emphasis on equity. That more than 80% of graduates report achieving what they consider to be a career in global health is a promising indicator of the value and effectiveness of dedicated training programs. But if the experienced graduates of this exclusive program are confronting considerable barriers to developing such careers, then the challenges faced by others might be worse. Addressing these barriers may help accelerate the potential impact of these programs.

In practice, most graduates assume a variety of better paid but part-time roles to cross-subsidize their global health work. The broad span of salaries (from $62,000 to $230,000) and wide range of FTEs in global health activities (< 20% to > 80%) reveal that such careers follow many different models. Faced with a standard loan burden similar to the national median debt of $180,000,[13] respondents identified the lower earning potential of global health practitioners as a key constraint (with an average total salary of $135,182 for respondents who included global health efforts in their work, versus an average national salary of $278,746 for hospitalists in 2015,[14] $248,452 for general internists, $216,432 for combined internal medicine and pediatric practitioners, and $241,011 for infectious disease specialists).[15]

Other constraints identified by respondents can be grouped into general themes, such as poorly articulated and inadequately supported career pathways, insufficient mentorship, and challenges achieving work-life balance. These themes overlap and compound each other, and the respondents corroborated that challenges can, at times, combine to overwhelm and prematurely end a burgeoning global health career.[16] Both program-level and systemic changes will be needed to find lasting solutions to these challenges. For many graduates, 1 "safety valve" available to them is to pivot to work based in the United States to help reduce the complexity of travel abroad. If the goal of global health training programs is to produce and sustain an active workforce abroad, work-life concerns must be addressed as careers develop.

Our study has limitations. It is from 1 department from 1 institution, and the findings may not generalize to other settings or specialties. The survey design and participation choices could have led to social desirability or nonresponse bias. Also, respondents did not answer all questions, which further limits the accuracy and generalizability of the findings. Some participants were interviewed recently after graduation, so results will likely evolve over time, and the gap between data collection and publication makes it possible that these results are dated.

Research that will help find the best ways forward includes: exploring strategies that forge mutually beneficial mentor-protégé relationships in global health[17,18]; clarifying specific career pathways that

TABLE 2
Themes Expressed by Global Health Equity Residency Graduates

Themes	Thematic Areas
Motivations for careers in global health are typically social justice driven	▪ Advancing equity, career satisfaction ▪ Impact on a macro/systems level
	Characteristic quote: "I just think that I don't believe in the white savior industrial complex. I don't believe that there is a need for white men like myself or necessarily other northerners or westerners to provide that direct service delivery."
Global health career pathways pose unique challenges	▪ Lack of clearly defined career path ▪ Lack of institutional support ▪ Mentorship and modeling on careers development is critical but scarce ▪ Split between global health and hospitalist work is challenging ▪ Funding is difficult to secure ▪ Subspecialty clinical training can open, or close, opportunities depending on the subspecialty ▪ Balancing a lower salary with paying loans and meeting financial goals is difficult
	Characteristic quote: "...from my standpoint, the primary weaknesses of global health as a career choice is that there are not well-defined career pathways, which means that you have to go your own way, which is fraught with risk, financial and professional risk. And related to that, I feel like...it is very hard to find strong mentors who can give good advice for navigating the uncertainties of that pathway . . ."
Personal and family considerations are important ingredients of career satisfaction	▪ Investing in a personal and family life is challenging ▪ Having a personal and family life helps to sustain global health careers ▪ Like-minded spouses make a difference ▪ Illness or caregiving responsibilities can be important ▪ Challenges exist in dealing with different cultural norms around sexuality and its expression
	Characteristic quote: "My husband also has a career in global health, so he is very supportive in the sense that we both have similar goals. We've also committed that we don't spend any more than 2 weeks maximum apart. We're convinced in making a global health career so that both of us can work meaningfully in the same location."
Transitioning to domestic work in health disparities can be an important career development focus, especially as families grow	▪ Families pull people home to work based in the United States ▪ Abroad/domestic split is a difficult balance ▪ Travel with children is a challenge, sometimes too much so ▪ Children are a major consideration ▪ Refocusing domestically
	Characteristic quote: "I honestly think that the most authentic way is to be 100% in the field. And that's being a little bit hypocritical because right now I am about a quarter to 33% of the time in the field, because there's life circumstances that change."
Proportion of clinical effort decreases over time	▪ Scaling back clinical work ▪ Desire to teach and stay in academia
	Characteristic quote: "I think that I want my base to be clinical work although I could see that scaling back a little bit over time."
Passion and perseverance for long-term goals are seen as paramount	▪ Internal drive can overcome external challenges ▪ Setting priorities can put challenges into perspective
	Characteristic quote: "I think it's all about setting priorities...it's really about...determining the most important thing to you...if the most important thing is being a clinician in a low resource setting, you'll find a way there to work in global health . . . I'm not sure that I totally agree with that common criticism [that career pathways in global health are inherently difficult]...oftentimes that's the sacrifice. So, it's just about setting priorities and knowing what's most important to you as a person . . ."

include information on potential employers and skills required, academic ladders, and funding sources[19]; and exploring the most effective investments necessary for helping young global health leaders to achieve the work-life balance necessary for long-term retention.[20] As long as US academic clinician involvement in global health remains defined by unpredictable budgets and uncertain career pathways, graduate medical educators will need to adapt their selection, education, and support processes to ensure the most qualified candidates are recruited, appropriately trained, and adequately supported to navigate these challenges.

Conclusion

The majority of graduates from 1 global health training program reported they were able to develop a career in global health despite challenges that include shortcomings in mentoring, insufficient clarity on and support for career pathways, and work-life imbalance made worse by the demands of international travel. We identified specific domains that can become the focus of future efforts to improve the effectiveness and impact of similar training programs.

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