RESIDENT VOICE

The pursuit of global health during residency: Essential lessons in scholarly inquiry, quality improvement, and health equity

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Global health is in the zeitgeist of undergraduate and postgraduate medical education. Medical students and residents from high-income countries (HICs) are more likely to have global health experience and be interested in integrating global health into their current training and future careers.[1,2] Although trainees' motivations to pursue global health differ, they commonly include some combination of an interest in health equity, service, or novel research and clinical experiences.

However, there is seemingly a gap between trainee enthusiasm and training program offerings, particularly in radiation and medical oncology. Program directors, department chairs, and other key leadership in HICs are rightly grappling with how to rigorously and sustainably integrate global health education and research efforts into residency education across specialties.[3] Several challenges exist, including arranging time away from education and service requirements in the primary program, assuring necessary mentorship and supervision, and adequate funding.

The Association of Residents in Radiation Oncology's Global Health Subcommittee (ARRO GHSC) has provided a supportive platform to enhance the pursuit of global health research and clinical innovation during residency for many residents, myself included. ARRO GHSC has monthly calls with committee members to discuss individual and joint projects. Efforts have included global health surveys of residents and program directors, scholarship funding for resident rotations, and a mutual mentorship program that pairs ARRO residents with peer residents abroad to discuss clinical cases and residency experiences.[4]

I am fortunate to be the first resident pursing global health research in the American Board of Radiology's (ABR) B. Leonard Holman Research Pathway. The Holman Pathway is a national track for United States radiology and radiation oncology residents that allows additional research time during training for those with a demonstrated interest in and aptitude for a primarily research-focused career.[5] My work has focused on building a breast cancer research collaboration with the University of Zimbabwe, the Parirenyatwa Hospital, and the Harare Central Hospital to study women with breast cancer and their clinical and quality of life outcomes after mastectomy, with a focus on the role of radiation in this setting. Without the support of my residency program, the ABR, and ARRO GHSC, this would not have been possible.

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While my experience has been unique, the lessons I have learned may be instructive to other residents who hope to pursue global health and to programs hoping to foster an environment that recognizes the potential benefits of global health experiences for their trainees, namely:

1. **Scholarly Inquiry –** Residents can personally learn a great deal from engaging in global health research, while also strengthening ongoing efforts. In many low- and low middle-income country (LLMIC) settings, talented cancer clinicians with research interests are hoping to develop more experience. Yet, there is only a nascent research infrastructure around oncology. This is the case in Zimbabwe. In collaboration with the institutions in Harare, we have been able to design and implement the foundations of a breast cancer research program, building on the efforts of a young clinical oncologist, Dr. Melinda Mushonga, among others. This has included securing funding, setting up technical infrastructure (eg, WiFi), training a research team, and developing electronic data collection protocols. We can now begin asking questions that will matter very directly in the lives of patients. While every resident will not want to pursue long-term research collaborations in LLMICs, many may benefit from supporting existing efforts in more targeted ways.

2. **Quality Improvement –** In LLMIC settings, the needs often outweigh the human or financial resources to fill them. While solutions from any setting cannot be "dropped" into another without careful consideration, collaboration, and adaptation, there is room for humble, enthusiastic residents to support quality improvement (QI) projects in global settings. LLMIC departments could pose QI issues that need novel solutions that then could be supported by HIC resident/faculty pair partners. These experiences would ideally be longitudinal but could be done remotely in large part with punctuated travel of residents/faculty from both programs. In Zimbabwe, we are developing an electronic data capture system to improve multidisciplinary team care in breast cancer and applying for funding for a full pilot. Initiatives like this may provide residents an additional opportunity to engage in QI projects that fulfill the Accreditation Council for Graduate Medical Education (ACGME) requirement.

3. **Health Equity -** This is the cornerstone of my motivation for global health, and I know the same is true for many others. We have tremendous privilege as residents from HICs. This includes our access to the latest treatment innovations, to well-funded library systems featuring the most recent literature, and to faculty with deep expertise in specialized areas. I have been able to share all of this with my collaborators in Zimbabwe. And they have shared with me a rich clinical expertise and a palpable commitment to patients that is borne from having to serve as general oncologists within a context of resource scarcity. I am thankful to have been embedded in the daily practice of health equity: striving for the best health outcomes for even the poorest, most marginalized patients.

There is a great need to expand radiation oncology capacity in LLMICs.[6] As ARRO GHSC has shown, residents are poised to lead our field in global health scholarship, systems strengthening, and equity. I am hopeful that more medical students and residents in the years to come will find that the field of radiation oncology will support their global aspirations, as it has wholeheartedly supported mine.

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