

Design and Implementation of a Global Health and Underserved Care Track in an Otolaryngology Residency

Matthew J. Urban, MD¹ , Ashok A. Jagasia MD, PhD¹,
Pete S. Batra, MD¹, and Phillip LoSavio, MD¹

Abstract

Despite widespread resident interest in global health and underserved care, few otolaryngology residency programs offer a formal global health experience. This article is the first to characterize a formal otolaryngology global health and underserved care track with a focus on how this curriculum integrates with and supplements resident education. Components of the track include longitudinal limited-resource field experiences in domestic and abroad settings, a related quality improvement project, and completion of a formalized global health educational curriculum. In addition to delivering humanitarian aid, residents in this track obtain a unique educational experience in all 6 core competencies of the Accreditation Council for Graduate Medical Education. Early barriers to implementation included identifying mentorship, securing funding, and managing busy resident schedules. In this work, we detail track components, schedule by track year, keys to implementation, and potential educational pitfalls.

Keywords

otolaryngology, internship and residency, global health, curriculum, quality improvement

Received January 18, 2022; accepted January 19, 2022.

Resident education in global and underserved health has been narrowly explored in the otolaryngology literature. From a 2021 survey of otolaryngology residents, Toman et al found that 80% of residents would participate in a global health elective if offered; however, only 37% of otolaryngology residencies offered any global health experience.¹

This article is the first to characterize a global health and underserved care (GHUC) track for otolaryngology residents. We hypothesized that this track would integrate with key otolaryngology training objectives and supplement resident education without disrupting the core curriculum. While early outcomes data are limited, our primary aim in this descriptive commentary is to characterize the track's key components,

perceived benefits, and early barriers to implementation to increase interest and awareness in the specialty.

Track Objectives and Design

The Accreditation Council for Graduate Medical Education (ACGME) highlights 6 core competencies as a conceptual framework for an otolaryngology resident to graduate to autonomous clinical practice: professionalism, patient care and procedural skills, medical knowledge, practice-based learning, interpersonal skills, and systems-based practice.² In addition to delivering humanitarian aid, this track was designed to provide a unique educational experience in all 6 competencies. Based on the partnerships available at our institution and characteristics of successful track programs in other specialties,³⁻⁵ the following 4 objectives were established for the Rush GHUC track:

- Participate in a longitudinal experience in a resource-limited setting abroad
- Lead and coordinate a longitudinal experience in a domestic resource-limited setting
- Implement a quality improvement project related to underserved health suitable for publication
- Complete a written and team-based global health educational curriculum

Current partnerships include a number of local homeless shelters, a regional partnership with a rural health critical access hospital, and a biannual otolaryngology and audiology mission abroad in the rural western Dominican Republic. **Table 1** describes current GHUC track components, implementation, cost to residents, and ACGME competencies. A track map by resident year is presented in **Table 2**.

¹Department of Otorhinolaryngology-Head and Neck Surgery, Rush University Medical Center, Chicago, Illinois, USA

Corresponding Author:

Matthew J. Urban, MD, Department of Otorhinolaryngology-Head and Neck Surgery, Rush University Medical Center, 1611 W Harrison St, Suite 550, Orthopedic Building, Chicago, IL 60612, USA.
Email: matthew_j_urban@rush.edu



Table 1. Component Descriptions for GHUC Educational Track in Otolaryngology Residency.

Component	Setting	Description	Keys to implementation	Cost to residents	Oversight and mentorship	ACGME core competencies prioritized
Abroad field experience	- Dominican Republic - Other international sites supported	Previous Rush GHUC track residents have partnered with the department's well-established biannual mission to the Dominican Republic. Residents are exposed to the gamut of pediatric and adult ENT pathology, evaluate roughly 100 patients in clinic, and perform and assist with 40-70 surgical cases. Graduated autonomy and close supervision with home faculty are provided. Residents coordinate care with a busy audiology mission, Rush internal medicine and anesthesia providers, and local physicians. All trips are coordinated with the Department of Global Health to ensure appropriate safety and logistical support. A third-party organization assists with lodging, transportation, meals, and translation services. CDC travel recommendations are strictly followed.	- Partner with community leaders and local providers^a - Establish a recurring experience - Schedule in protected block to save vacation and clinical coverage - Maintain US work hours and oversight - No out-of-pocket cost. Institution subsidy minimizes department costs	None. Institution covers \$850 logistic fee. ENT department covers \$100 logistics plus all travel expenses	Structured predeparture orientation, hands-on preceptorship during abroad experience, and posttrip debrief	- Patient care and procedural skills - Medical knowledge - Interpersonal skills - Systems-based practice
Domestic field experience	- Chicago homeless care clinics - University cancer center - Central Illinois rural critical access hospital	Junior residents are introduced to virtual and in-person limited-resource inner-city clinics. Virtual appointments are blocked for 1 afternoon a month, and in-person free clinics occur biweekly in the evenings. Senior residents help oversee junior residents in patient care, provide important coordination of care, and organize clinic structure and schedule. Senior residents are actively involved in clinic planning and implementation committees. Track residents also participate in annual head and neck cancer community screening events hosted by the university's cancer center. Senior residents have the opportunity to travel with the global health director for a regional limited-resource rural surgical experience. These trips occur quarterly on the weekend.	- Partner with local organizations - Tap into institutional underserved care - Partnerships through other departments - Strive for locally sustained initiatives - Establish a recurring experience	Minimal costs. Department covers resident travel costs for rural trips	All resident clinical care is provided with the same oversight as standard department operations. Global health director mentors the senior rural experience	- Patient care and procedural skills - Medical knowledge - Interpersonal skills - Systems-based practice

(continued)

Table 1. (continued)

Component	Setting	Description	Keys to implementation	Cost to residents	Oversight and mentorship	ACGME core competencies prioritized
Track project	Based on abroad experience	After their PGY2 abroad experience, residents design a quality improvement project for implementation on the PGY4 trip. The resident is expected to prepare a manuscript of the work suitable for publication. Residents are encouraged to participate in health equity-related research throughout the track, and many residents go above and beyond the minimum research requirement.	• Early field experience and collaboration with PI to stimulate early project development • Protected block time for research development • Adherence to SQUIRE guidelines	None	The global health director is an MD/PhD with a focus on health equity research. He oversees track projects as research PI. Other PIs would be supported as appropriate	• Professionalism • Systems-based practice • Practice-based learning
Educational curriculum	• Home institution • Department of Internal Medicine	We partner with the Department of Internal Medicine for its longitudinal health equity core curriculum. This partnership allows otolaryngology residents to leverage the resources of another large department with a rich network in global and community health, and it helps foster institutional relationships. Members from both departments are actively involved in the joint domestic and abroad limited-resource programs detailed above. The curriculum includes Health Equity Journal Club and curricular meetings, which are both held quarterly. Senior residents present at least 1 evening journal club. Curriculum meetings are themed and entail a deeper dive into important health equity issues, such as health advocacy, health equity, global health challenges/solutions, epidemiology, and social determinants of health. They are held in the afternoon and are protected on the track residents' schedule.	• Partner with other departments for a broader and more complete curriculum • Practical curriculum focus: global health challenges and solutions • Mix didactic and team-based learning • Protected afternoon of track time on resident's schedule	None	Quarterly curriculum meetings and Health Equity Journal Club are proctored by Department of Internal Medicine physicians and staff	• Professionalism • Interpersonal skills • Practice-based learning • Systems-based practice

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; CDC, Centers for Disease Control and Prevention; ENT, ear, nose, and throat; GHUC, global health and underserved care; PI, principal investigator.

^aOrganizations such as Community Empowerment¹⁰ partner with local leadership to facilitate essential health care and help to develop locally sustainable programs.

Table 2. Program Map for GHUC Educational Track in Otolaryngology Residency.

Component ^a	PGY1	PGY2	PGY3	PGY4	PGY5
Abroad field experience	Choose abroad partnership	Predeparture orientation, weeklong spring mission, postexperience debrief	Coordinate QI project abroad	Predeparture orientation, weeklong fall mission, postexperience debrief	QI manuscript
Domestic field experience	Volunteer at homeless care clinics	Volunteer at homeless care clinics	Volunteer and coordinate homeless care clinics	Direct homeless care clinics; rural surgical experience	Direct homeless care clinics; rural surgical experience
Track project	—	Conceptualize QI project	Coordinate QI project	Implement QI project	Write manuscript
Educational curriculum	Quarterly curriculum meetings and Health Equity Journal Club	Quarterly curriculum meetings and Health Equity Journal Club	Quarterly curriculum meetings and Health Equity Journal Club	Quarterly curriculum meetings and Health Equity Journal Club (present)	Quarterly curriculum meetings and Health Equity Journal Club (present)

Abbreviations: GHUC, global health and underserved care; PGY, postgraduate year; QI, quality improvement.

^aBefore matriculation: application to GHUC track, including written statement of interest due to program director in May prior to PGY1.

Discussion

Since its implementation 4 years ago, resident satisfaction with the GHUC track has been extremely high. As the first class has not yet completed the program, formal outcome metrics across the core competencies are not yet available, but formative resident feedback has consistently commended the domestic and international field experiences in particular. Field experiences provide residents procedural growth and exposure to a variety of otolaryngology pathology, including less frequent maladies and conditions, such as massive goiter, cleft lip and palate, microtia, and burns. Residents learn to collaborate with patients and health care providers of diverse cultural backgrounds, understand various health care delivery models, and develop innovative treatment plans in resource-constrained settings. The program has generated unique research and impactful quality improvement initiatives, and literature suggests that residents who participate in international electives are more likely to pursue careers in academic medicine or public service.^{1,6} Importantly, the communities served are overwhelmingly appreciative. Health benefits extend beyond the individual visits as communities become more engaged within the health care system. Overall, in early formative feedback for the GHUC track, residents have attested that program involvement solidifies an underlying purpose in medical education and reduces burnout.

Other groups have described implementation of a global surgical elective with barriers similar to those that we have encountered.^{5,7,8} Mentorship, funding, scheduling, and call/coverage responsibilities can be arduous to navigate. We have implemented a number of strategies to help mitigate additional time spent toward the track objectives. Residents at our institution complete a research and scholarship rotation in 2 protected blocks of 3 months. GHUC track residents utilize a portion of the scholarship blocks toward abroad field experiences so that clinical rotation coverage or vacation time is not required. Notably, there is no out-of-pocket costs for abroad experiences (**Table 1**). Residents also typically receive 1 or 2 protected afternoons each month to pursue educational and

research initiatives. Outside these protected times, remaining track objectives are accomplished outside of work hours, including many of the domestic field experiences and quarterly Health Equity Journal Club. Feedback thus far has maintained that these extracurricular opportunities are enriching rather than cumbersome, but the experiences are monitored closely with continual program evaluation. Cases performed while on international electives are not currently approved to count toward minimums.² The ACGME cites concerns for potential work hour violations, inadequate supervision, inadequate opportunity for perioperative care, and questionable continuity as reasons for limiting international elective credit.⁹ We recognize these possible limitations, although resident experience in our program has been quite contrary. Close partnership with community leaders and local providers has allowed us to establish reliable care continuity for families whom we serve in the Dominican Republic community.¹⁰ Residents coordinate perioperative care abroad with anesthesiologists and internists and are directly supervised by home otolaryngology faculty with the same work hour standards as our home institution.

There is ample opportunity for future work in the global health domain of otolaryngology graduate medical education, including formal program evaluation and outcomes data, but the GHUC track outlined here presents a framework that integrates with ACGME core competencies and is feasible to implement.

Conclusions

There are many potential beneficial global health experiences, but a longitudinal track consisting of an academic curriculum, a field experience in abroad and domestic limited-resource settings, and a research component is feasible to implement and provides a well-rounded and enriching experience to develop future leaders in this domain.

Acknowledgments

We acknowledge Jamie Masliah, MD, Inna Husain, MD, Peter C. Revenaugh, MD, and Tasher Losenegger, MD, for their contributions

to the GHUC track and work leading to the production of this manuscript.

Author Contributions

Matthew J. Urban, conception, design, data acquisition, data analysis, drafting, revising, approval, accountability; **Ashok A. Jagasia**, conception, data acquisition, data analysis, drafting, revising, approval, accountability; **Pete S. Batra**, conception, data acquisition, data analysis, drafting, revising, approval, accountability; **Phillip LoSavio**, conception, design, data acquisition, data analysis, drafting, revising, approval, accountability.

Disclosures

Competing interests: None.

Sponsorships: None.

Funding source: None.

ORCID iD

Matthew J. Urban  <https://orcid.org/0000-0001-5889-5810>

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