

A Novel, Open-Access Family Medicine Residency Global Health Toolkit

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Abstract

Introduction: There are no established family medicine (FM) residency-level global health objectives or curricula for program directors who want to offer ethical and meaningful global health experiences to residents. We sought to develop and evaluate a toolkit of resources that family medicine educators can use to improve residents' knowledge of this important aspect of family practice.

Methods: We reviewed and categorized peer-reviewed and grey literature publications and global health curricula from FM and non-FM residency programs related to clinical topics, standards of global health practice and partnerships, decolonization, and others. The toolkit uses six standard Accreditation Council for Graduate Medical Education (ACGME) competencies to organize learning objectives, content areas, and resources. Resources were further categorized based on complexity, cost, and time. We developed the toolkit with a focus on patient safety and ethical engagement with global partners. We evaluated the toolkit using an online survey of global health educators from inside and outside the United States.

Results: The toolkit was vetted by the Society of Teachers of Family Medicine Board of Directors and published as an open-access resource on the STFM website (<https://stfm.org/teachingresources/curriculum/globalhealthtoolkit/overview/>).

The toolkit had 1,446 unique views in the 18 months after it was published. Most global health educators surveyed found the toolkit to be appropriate for resident-level education and ethically sound. Respondents indicated that they would most likely use the toolkit to improve an existing global health experience or track.

Conclusion: A novel toolkit provides resources curated and presented by topic, complexity, and estimated cost that residency programs can use to create or augment global health offerings. Educators can use resources and associated learning objectives presented using standard ACGME competencies to connect knowledge, skills, and attitudes gained through global health education to their residents' overall learning needs.

Introduction

More than 30% of learners engage in global health work during training.^{1–3} Many family medicine (FM)

residencies offer or want to offer ethical and meaningful global health experiences. These experiences prepare residents for, and are associated with, future practice in underserved areas including in the United States.^{1,3–5}

Global health experiences during training have been shown to improve physical examination skills and residents' awareness of cost-effective medicine and social determinants of health.^{1,4,6} Despite these benefits, there are no universally accepted, residency-level global health objectives or curricula.^{7–9} In addition, it is critical that residencies and trainees are intentional in decolonizing global health partnerships and prioritizing bidirectional benefits.^{10–12} Important work to date covers topics such as travel safety, WEIGHT (Working Group on Ethics Guidelines for Global Health Training) guidelines, SUGARPREP (Simulation Use for Global Away Rotations Preparation), neglected tropical diseases, working with interpreters, partnership building, and guidelines for activities using global health principles applied locally ("g-local" activities) such as working with refugees. However, these resources are scattered.^{10,13–22}

Our goal was to improve the quality and ethical standards of global health experiences by creating a toolkit of objectives and resources aimed toward being:

- Ethical;
- Reasonable (regarding time commitment, knowledge, and skills required);
- Achievable primarily within US residency programs (not requiring specific off-site or low resource time/clinical experience, etc);
- Adaptable based on faculty/residency/resident partnerships, interests, and available resources;
- Mapped to ACGME milestones; and
- Available at no cost to users.

Methods

The toolkit (available at <https://stfm.org/teachingresources/curriculum/globalhealthtoolkit/overview/>) was developed using an iterative process. We selected basic and advanced learning objectives, with corresponding resources, and then reviewed and modified them through several virtual meetings and conference presentations (2019–2021). Based on this early work, the STFM Foundation awarded funds for toolkit development in 2021. We categorized learning objectives and resources into Accreditation Council for Graduate Medical Education (ACGME) standard competencies. One author (C.B.) further categorized resources based on estimated cost and length of time to complete. The objectives and resource choices were refined in meetings with stakeholders. The toolkit was pilot tested by two authors (L.B. and C.B.) in their respective residency programs while creating global health tracks/electives. The final toolkit, including an implementation guide was uploaded to the STFM website in 2023.

Examples of toolkit resources include publications on specific topics (eg, management of malaria),²³ standards of global health practice (eg, ethical short term experiences in global health),²⁴ websites (eg, CareRef),²⁵ curricula from global health programs (eg, SUGARPREP),²⁶ and other practical resources. The implementation guide emphasizes the importance of global health decolonization (a movement aimed at addressing historical and ongoing power imbalances, working toward equity, collaboration, and centering the priorities of marginalized communities globally) and ethical global health practice including the understanding that:

- Visitors/learners divert attention and resources from patient care in all settings that could affect patient safety and health system integrity in resource-limited settings;
- Participation in direct clinical care is only one means by which resident physicians can develop knowledge, skills, and attitudes; and
- Not all competencies may apply to all residency-level global health tracks or elective experiences.

Evaluation of the toolkit was done through an online survey, with invitations sent in a snowball fashion to personal and professional global health educator contacts of authors, stakeholders, and attendees of STFM and American Academy of Family Physicians (AAFP) conference presentations in 2021-2023. Consent was implied by voluntary participation in the survey. The full survey is shown in Appendix A. STFM hosts the toolkit website and provides data on the number of unique views of the toolkit to the authors. This project was determined by University of Wisconsin Health Sciences and Minimal Risk Research IRB to constitute a program evaluation activity and thus exempt from further review.

Results

The toolkit was reviewed and endorsed by the STFM Advisory Board and executive director/chief executive officer. The toolkit and implementation guide were published on the STFM website where it is freely available. The toolkit had 1,446 unique views from January 1, 2023 – July 28, 2024. Fifteen global health educators from both inside and outside the United States responded to the online survey that was distributed widely to global health educators and conference participants. Responses were tabulated without statistical analysis. We did not have sufficient qualitative data to perform a formal qualitative analysis.

Most global health educators surveyed found the toolkit objectives and topics to be both appropriate for resident-level education and ethically sound. Respondents indicated that they would most likely use the toolkit to improve or create a global health experience or track. Other anticipated uses were to update pretravel preparation activities, and/or evaluation process or skills training (Table 1). Table 2 summarizes the free text survey responses, including comments about the objectives, recommendations for additional content and resources, and general feedback on the toolkit.

The two pilot tests showed that the toolkit was easy to use and greatly reduced the time and effort otherwise needed to create a new global health track/elective in their residency programs. The toolkit provided a streamlined approach to allow for educational and logistical planning. Furthermore, the testers indicated the mapping of toolkit objectives to core ACGME Milestones was helpful to show relevance to their program directors and support global health track implementation.

Limitations

The survey had a small number of responses and this may limit the generalizability of the results. We further emphasize that the survey results represent expert opinion rather than broad user data. Improvements could be made by embedding a real-time feedback tool into the toolkit's website to allow broader data collection. Additionally, the toolkit would benefit from further evaluation and comments, especially from global partners of US residency programs to ensure that the topics and approaches are respectful, ethical, accurate, and necessary to support ongoing partnerships. Additional testing of the toolkit in multiple residency programs would provide valuable information on its strengths and weaknesses.

Conclusions

This novel toolkit provides resources curated and presented by topic, complexity, and estimated cost that residency programs can use to create, augment, or expand their global health offerings. Educators can use the resources and associated learning objectives presented using the standard ACGME competencies to easily connect the knowledge, skills, and attitudes gained through global health education to their residents' overall learning needs.

While the formal evaluation of the toolkit was limited in scope and results may not be generalizable, most respondents found the toolkit to be appropriate for resident-level education and ethically sound. The toolkit has

been accessed over 1,400 times since launch in early 2023, demonstrating the large interest in this topic and applicability of the toolkit. Next steps include embedding a virtual survey into the STFM Toolkit website to gather broader evaluation from users and establishing the process for annual content review to maintain relevance, ethical standards, and applicability.

Tables and Figures

Table 1: Survey of Toolkit Reviewers: Examples of Anticipated Toolkit Application (N=9)

Survey question: Give examples of how you would use the toolkit	Number of responses
Update pretravel preparation activities	5
Update an evaluation process (ie, site, resident, faculty, host, program)	4
Add/subtract or update a skills training	4
Add/subtract topics covered in the track	3
Update the references that we recommend for self-study	2
Update a lecture	2
Encourage conversation with international partner about their goals/needs	2
Change the structure of didactic/training for track residents (eg, start a quarterly educational afternoon, journal club, etc)	1
Change career advising for residents	1
Reflect/act on principles of ethical engagement in current or planned program partnerships	1
Change structure of goals and objectives	1

Table 2: Survey of Toolkit Reviewers: Summary of Free Text Responses (N=9)

Survey question	Free text response
Are the objectives appropriate?	Simplify, focus on clarity Make goals attainable in multiple residency settings
Are the objectives ethically sound?	Focus on language on partnership and bidirectionality*
Are there objectives to add? Please list.	<ul style="list-style-type: none"> • Best practices for increasing local buy-in and sustainability* • Bidirectional feedback* • Hepatitis* • History/effects of colonialism* • Interprofessional communication* • Perinatal information* • Guidance on self-reflection* • Partnership building* • Self-care, preventing burnout, balancing expectations of self and others* • Systems-based practice*
What favorite resources have we missed? Please list.	<p>Books <i>"Mountains Beyond Mountains"</i> by Tracy Kidder * <i>"The Spirit Catches You and You Fall Down"</i> by Anne Fadiman * <i>"When Healthcare Hurts"</i> by Greg Seager * <i>"Where There is No Doctor"</i> by David Werner*</p> <p>Smartphone applications Pharmacology app with offline access* Doctors Without Borders app</p> <p>Websites CDC Yellow Book: https://wwwnc.cdc.gov/travel/yellowbook/2020/table-of-contents * CDC Destination Specific Travel Health Recommendations: https://wwwnc.cdc.gov/travel/destinations/list * CDC Immigrant and Refugee Health: https://www.cdc.gov/immigrantrefugeehealth/ * CDC Travel Medicine Resources: https://wwwnc.cdc.gov/travel/page/clinician-information-center * Minnesota Department of Health Refugee and International Health: https://www.health.state.mn.us/communities/rih/index.html *</p> <p>Other Cultural orientation specific to the site</p>
Other comments	"I believe this is an excellent idea to have a tool. I commend those who thought about it and participating in the production."

*This item is now included in the toolkit or implementation guide.

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Disclaimers: Dr Gossa reports that the opinions and assertions expressed herein are those of the author(s) and do not necessarily reflect the official policy or position of the Uniformed Services University or the Department of Defense

Dr Ballard declares that the opinions and assertions expressed herein are those of the author(s) and do not necessarily reflect the official policy or position of Eglin Air Force Base, United States Air Force, or the Department of Defense.

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