

## Pediatric Emergency Medicine - Global Health Track



*Our mission is to ethically and sustainably improve the health of children and communities globally, by striving to decrease disparities in health through education, advocacy, service, and research.*

The Baylor College of Medicine Pediatric Emergency Medicine Fellowship - Global Health (PEM-GH) Track was established in 2005 in response to growing interest in global health and international emergency medicine among applicants applying to our pediatric emergency medicine (PEM) fellowship program. Our program is the first of its kind in the United States.<sup>1-2</sup> PEM-GH fellows complete the standard PEM fellowship curriculum and receive supplementary global health training and experience interspersed throughout the PEM fellowship time. This training is intended for those who are seeking an academic career in pediatric emergency medicine with a focus on global (domestic and international) health disparities. Individuals completing this program will acquire skills in the development, integration, and evaluation of healthcare programs on a local, national, and global scale. Our program is committed to staying flexible with regards to individual training needs and future career paths of our fellows.

The following document describes the goals, objectives, curriculum requirements, fellowship timeline and funding mechanism for the Baylor College of Medicine PEM-GH track.

### Goals and Objectives

The PEM-GH track is part of the global health program within the section of Pediatric Emergency Medicine (PEM) at Baylor College of Medicine (BCM). The goals and objectives for the PEM-GH track are described below and in Table 1. These goals and objectives were adapted from those described for successful general international emergency medicine fellowships<sup>1,3-5</sup> and incorporate the core competencies required of PEM fellowship training programs by the Accreditation Council of Graduate Medical Education (ACGME). To find the goals and objectives for the general PEM fellowship, please refer to the PEM Fellowship web pages.

- **Goals**

Goals for fellows completing the PEM-GH track include the acquisition of skills in order to:

- **Assess** global health systems to identify pertinent pediatric and/or emergency health issues and gaps in delivering high quality care
- **Design** sustainable, effective, culturally acceptable pediatric and/or emergency health programs that address collaboratively identified needs

- **Implement** pediatric and/or emergency medicine global health programs abroad and integrate them into existing health systems
- **Evaluate** the quality and defining structural, process and outcomes metrics for the global health programs implemented

- **Objectives**

Objectives for the PEM-GH track include:

- Participate actively in international field projects that incorporate the Accreditation Council of Graduate Medical Education (ACGME) core competencies (patient care, medical knowledge, practice based learning and improvement, systems based practice, interpersonal and communication skills, and professionalism)
  - A range of international experiences during fellowship is recommended and supported
  - Fellows will have the opportunity to provide patient care in resource-limited settings
  - Training may include travel medicine, disaster response, refugee medicine, public health, human rights, PEM program development (including both curriculum and systems development), quality improvement, and emergency medical provider training in both developed and underdeveloped countries
- Develop fundamental knowledge in global public health and/or tropical medicine (ACGME core competencies: medical knowledge, practice-based learning and improvement, systems-based practice)
- Conduct research and/or scholarly activity in pediatric emergency medicine (ACGME core competencies: practice-based learning and improvement, professionalism, systems-based practice)
  - Fellows may join ongoing faculty research projects or develop and implement individual projects in their areas of interest mentored by both US-based and international on-site healthcare providers.
  - As Baylor College of Medicine trainees, fellows have access to faculty mentors and advisors, research support infrastructures, and training resources throughout the medical school and affiliated institutions.
- Obtain a working knowledge of university, governmental and non-governmental global health organizations (ACGME core competency: systems-based practice)
  - Through field experience working clinically abroad and partnering with local stakeholders, fellows gain experience navigating the complexities associated with working in the global health arena.
- Gain knowledge regarding development, funding, and sustainability of international programs (ACGME core competencies: systems-based practice)

- Identify potential funding sources specific to global health initiatives; writing grant proposals is strongly encouraged and fully supported by the program (ACGME core competency: systems-based practice). An internal funding mechanism for individual small scale projects (including travel, lodging, and program costs) is available for fellows
- Begin networking necessary for a successful career in global health through mentoring and partnership development (ACGME core competencies: interpersonal or communication skills, professionalism)

## **Curriculum Requirements**

The Pediatric Emergency Medicine Fellowship - Global Health (PEM-GH) Track and its curriculum incorporate the core competencies required by the ACGME for PEM fellowship training programs, as well as those curricular competencies recommended for training in IEM and pediatric GH fellowships,<sup>5-7</sup> and have been tailored to learners in pediatric emergency medicine (PEM). All PEM fellows fulfill set criteria to complete PEM fellowship training. For fellows in the PEM-GH track the timeline for their PEM training is modified to accommodate the GH portion of their training such that their GH work is integrated throughout their time in fellowship.

Key GH activities include a combination of formal and informal coursework, international fieldwork, and academic research. Required training components for the PEM-GH track have been revised and restructured based on feedback from fellows since 2005. Currently, fellows may choose one of three curriculum pathways, depending on individual career goals (Figure 1).

### **Coursework**

Advanced coursework is required in order to develop fundamental knowledge in global public health and/or tropical medicine. The following advanced GH training begins in conjunction with BCM's standard PEM fellowship training and extends an additional 12 months beyond traditional PEM fellowship training. Fellows may complete coursework in a combination of the following:

- Master of Public Health (MPH) diploma program or Public Health Certificate
  - We generally recommend a Master of Public Health (MPH) diploma program or a Public Health Certificate, but another advanced degree such as an MEd or MHA may be approved in lieu of an MPH if the fellow identifies advanced coursework that will enhance skills beneficial to his/her proposed career path.
  - Approval for any advanced degree must be obtained from both PEM Fellowship GH track program directors.
  - Degrees can be completed at University of Texas or University of Houston.
- Diploma in Tropical Medicine and Hygiene
  - Degree can be completed at the National School of Tropical Medicine at BCM or Gorgas Course in Peru.

- Health Emergencies in Large Populations (HELP) Course
  - A required 2-week public health module in humanitarian response co-sponsored by the WHO and International Committee of the Red Cross (ICRC). Additional or alternate disaster medicine training can be considered.
  - Course can be completed in Baltimore, MD, or Geneva, Switzerland.

Formal coursework is supplemented with lectures and journal clubs that are available throughout the GH community at BCM/Texas Children’s Hospital (TCH). In addition to the opportunities listed below, PEM-GH fellows also have the opportunity to attend and deliver topic lectures on GH throughout the BCM and TCH institutions.

- Foundations In Global Health: Based on feedback from fellows requesting the need for a structured didactic GH curriculum, we developed a collaborative monthly seminar called Global Health Roundtable for professionals at BCM/TCH who are actively involved in GH work. The 18-month cycling curriculum is small-group, discussion-based and provides both a didactic curriculum to expand contextual knowledge on major GH challenges and constructive feedback for research-oriented projects. All fellows in the PEM-GH track are expected to attend these lectures (new venue within the Fellow’s College starting July 2013) unless outside rotations preclude their attendance.
- Global Health Journal Club: All fellows in the PEM-GH track are expected to attend this quarterly seminar for BCM Department of Pediatrics faculty, fellows and residents conducting GH work, unless PEM fellowship duties or outside rotations preclude their attendance. These journal clubs are organized by Mark Kline, MD, Chair, BCM Department of Pediatrics (DOP) and are a fantastic opportunity for networking and increasing mentorship within the field of GH.

## **Fieldwork**

The program recommends and supports a range of international experiences during fellowship. As described below, fellows in the PEM-GH track spend approximately 4 to 6 months abroad, divided into blocks distributed throughout the PEM fellowship. Through field experience conducting clinical work abroad and partnering with local stakeholders, fellows gain experience navigating the complexities associated with working in the GH setting. We offer training opportunities in travel medicine, disaster response, refugee medicine, public health, human rights, PEM program development (including both curriculum and systems development), quality improvement, and EM provider training in both developed and developing countries.

Our approach to identifying opportunities abroad for fellows is anchored by our commitment to develop meaningful, bi-directional relationships with local partners that produce measurable improvements in health care in their communities and ours.<sup>8</sup> Faculty within our section and the BCM Department of Pediatrics have mature partnerships with collaborators in Africa and Latin America that have provided field opportunities for some of our fellows. Others had established similar relationships of their own prior to entering the fellowship program and have continued to work at those sites. During their time abroad, fellows receive on-site supervision from local experts and have regular contact with their US-based faculty advisor(s). In order to document

cumulative field experience more precisely, we developed a template that fellows complete at the end of each trip abroad. By the end of the fellowship, each one has a portfolio that describes her/his fieldwork.

- International Fieldwork Rotation: 6 week rotation in a clinical setting abroad that occurs first year of fellowship (scheduling per PEM fellowship program directors). The rotation is customizable to meet the fellow's needs and interests. Key components of these rotations can include participating in delivery of care to patients in resource-limited settings, teaching local health care providers, collaborating with local partners, and identifying health needs specific to the chosen international site. This fieldwork traditionally serves as a foundation for the fellows' needs-based projects and ultimately shapes the research components in which they are engaged, and for which they are encouraged.
  - This rotation may be shortened to 4 weeks if the fellow has completed extensive clinical work abroad prior to starting fellowship.

## Research

Fellows develop skills and experience in designing and conducting research in the field of global PEM. Projects are needs-based and conducted through partnerships between BCM and local institutions. Fellows may develop and implement individual projects in their areas of interest or join ongoing faculty research projects, and are mentored by both US-based and international on-site healthcare providers. As BCM trainees, fellows have access to faculty mentors and advisors, research support, and training resources throughout the medical school and affiliated institutions. Research support includes a structured quarterly meeting with research-track faculty advisors who offer methodological design, guidance, analysis and statistical support, and feedback on scholarly products such as abstracts, grants, and manuscripts. Fellows are expected to submit updated written protocols or manuscript documents prior to each quarterly session in preparation for formal discussion. Fellows' projects in the GH arena must fulfill their PEM fellowship and American Board of Pediatrics (ABP) requirements for scholarly activity.

- Completion of scholarly activity requirement for PEM fellowship on a global health project of choice: anticipate 8-12 weeks on site internationally divided in blocks.
  - Note: Fellow may choose to complete a US-based health disparities project in which case the international component of this requirement will be waived.
  - Interim evaluation of project will occur 18 months into fellowship. At this time, the project plan must be developed and IRB submitted or the fellow will forfeit the ability to complete an international project as part of PEM fellowship requirement; in this instance, a domestic project will be required to ensure successful completion of the fellowship.
  - By the end of 3 years, pediatric residency trained fellows on the PEM-GH track will submit a progress report of their scholarly activity in a draft manuscript. Final manuscript must be submitted for publication within 48 months after start of fellowship, before departure from BCM (12 months after completing PEM Fellowship). This timeline may be altered for emergency medicine residency trained candidates.

**Timeline for PEM – GH Track: 3 years for emergency medicine (EM) residency trained fellows; 4 years for pediatric residency trained fellows**

The PEM-GH Track at BCM, in collaboration with TCH, is a 3- to 4-year program. In addition to completing the GH curriculum, the fellow fulfills all requirements of the PEM fellowship. The timeline for the combined PEM-GH fellowship parallels that of the standard PEM fellowship with regard to clinical and didactic curricula, with the addition of interspersed blocks of time for off-site, international GH training. The PEM-GH fellow spends approximately 4 to 6 months abroad, divided into 2- to 8-week blocks distributed throughout the fellowship. The duration of the total PEM fellowship is 3 years for pediatric residency trained fellows and 2 years for EM residency trained fellows. An additional 12 months is necessary to complete the GH fellowship requirements.

- Complete PEM fellowship in 3 years for pediatric residency trained fellows and 2 years for EM residency trained fellows
  - Time for GH training will be incorporated into traditional PEM timelines and scheduled by PEM fellowship program directors.
  - Traditional PEM Fellowship Track: See PEM fellowship program curriculum for details.
  - PEM – GH Track: Once the fellow has completed all PEM *clinical* requirements (anticipate approximately 30 – 33 months given time for GH activities), fellows have the opportunity to work as attendings through an “Extra Hours Opportunity” Elective per the traditional PEM track.
- Global Health Track requirements/coursework will be completed over an additional 12 months while working as a PEM attending if pediatric residency trained (position guaranteed) or an additional year of PEM fellowship if EM residency trained
  - Pediatric residency trained fellows:
    - A 4<sup>th</sup> year at BCM/TCH in the form of a 12 month faculty contract is mandatory for completion of the PEM-GH track.
    - On completion of the standard PEM Fellowship, fellows are appointed clinical instructors (with salary and benefits) within our section. During this time, their clinical hours are reduced compared to those of faculty appointed as full-time assistant professors to allow the trainee time to complete requirements for the GH portion of their training (i.e., advanced degrees).
      - Position: PEM Clinical Instructor
      - Position is 75% clinical, 25% research
        - 24 clinical hours/week and 16 academic hours/week allocated to complete GH fellowship requirements.
      - Salary: determined yearly by Section
  - EM residency trained fellows:
    - In order to allow the fellow time to complete requirements for the GH portion of their training (i.e., advanced degrees), the fellow is required to complete a 3 year PEM Fellowship.
    - During this year fellows have the opportunity to supplement their income by working as attendings through an “Extra Hours Opportunity” Elective per the traditional PEM track.

- Institutional certificate of combined PEM – GH program training will be presented to fellow upon completion of both PEM and GH requirements.

PEM fellows who are interested in global health but do not wish to make this extra time commitment to participate in the formal PEM-GH fellowship track may still participate in GH activities available within our section. However, the program will not provide extra funding for whatever costs these activities may incur.

## Funding

The BCM Dept of Pediatrics provides funding for all required travel and curricular components, including advanced degrees for the fellow in the PEM-GH track, as long as expenses continue to meet DOP cost constraints. As described above, to fund the necessary fourth year of training, pediatric residency trained fellows are appointed clinical instructors (with salary and benefits) within our section for 12 months upon completion of PEM Fellowship. During this time, their clinical hours are reduced compared to those of faculty appointed as full-time assistant professors. This reduction in clinical hours, accompanied by an equivalent reduction in these instructors' salaries, allows the fellow time to complete requirements for the GH portion of their training (i.e., advanced degrees). The benefit is mutual. The section receives additions to the workforce and revenue from billing, while the fellow, having completed the PEM portion of his or her fellowship, completes GH training at a more competitive salary and with academic, clinical, and financial benefits as BCM faculty. Fellows are encouraged to identify funding sources for GH initiatives and projects, as any funding received decreases the institution's financial burden and contributes to the fellow's track record for successful grant funding. A detailed funding description of curricular components will be provided to all candidates matching in the PEM-GH Track.

## References

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