Mapping Residency Global Health Experiences to the ACGME Family Medicine Milestones

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BACKGROUND AND OBJECTIVES: Global health (GH) experiences are a unique part of family medicine (FM) training that offer an opportunity for residents to demonstrate development across a multitude of the milestones recently implemented by the Accreditation Council for Graduate Medical Education (ACGME). The GH experience presents an opportunity for resident development, and including a component of written reflection can provide tangible evidence of development in areas that can be difficult to assess.

METHODS: A mixed methods approach was used to integrate quantitative (frequency) data with qualitative content from the written reflections of 12 of our FM residents who participated in GH experiences.

RESULTS: Written reflections touched on each of the 22 milestones, although some milestones were noted more frequently than others. The most commonly identified milestones fell within the competency areas of system-based practice, professionalism, and practice-based learning and improvement. Our qualitative approach allowed us to gain an appreciation of the unique experiences that demonstrated growth across the various milestones.

CONCLUSIONS: We conclude that any program that offers GH experiences should incorporate some form of written reflection to maximize resident growth and offer evaluative faculty a window into that development.

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Global health (GH) experiences are a unique part of family medicine (FM) training that are on the rise, with 75% to 85% of residency programs offering some form of GH experience. GH experiences offer opportunities consistent with the FM core value of working with underserved populations while simultaneously meeting the needs of residents and programs with regard to the six competencies (Patient Care, Medical Knowledge, System-Based Practice, Practice-Based Learning and Improvement, Professionalism and Communication) put forth by the Accreditation Council for Graduate Medical Education (ACGME). In 2015, the six ACGME competencies were further delineated as 22 milestones specific to FM training. This transition necessitated a more fine-grained measurement of resident skills.

Our goal in designing a GH experience for FM residents was to provide the opportunity for development in multiple competency areas. However, providing tangible evidence of such an experience was a challenge. There is mounting evidence that reflective writing can be an effective tool to foster empathy, confidence in handling difficult patient situations, and the development of professional identity. Our family medicine residency program (FMRP) decided to use writing assignments to provide evidence of resident development across FM specific milestones.

Methods

A total of eight 2-week trips to either Haiti or the Dominican Republic were taken from 2014 through 2016 with 17 residents participating. The current paper retrospectively examined the writings of 12 (seven males and five females) of these 17 residents (five were omitted due to residents having skipped essay questions). Two forms of written reflection during GH trips were employed: reflective essays (n=5) and real-time blogs (n=7). In both cases, residents were aware that others might read their writings but in neither case were they aware of any specific focus on the milestones. The study protocol was approved by the Northwell Health Institutional Review Board.

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The essays require residents to keep a journal during the trip. Within 2 weeks of returning from a GH experience, residents complete a series of essays intended to promote reflection about issues including: (1) how their culture may have influenced patients’ perceptions of them and how they perceived patients; (2) things they observed that would be useful in building a better health care delivery system in the United States; (3) how the experience may have changed their career plans or view of the role of a physician.

Upon their return, residents who participate in GH trips discuss their experiences with their fellow residents but often find it difficult to fully convey all they have learned. To address this issue, we adopted a real-time blog, in which the resident chose what to write about throughout their trip using a smartphone application. Consistent with the medium of blogging, the residents coupled their writings with pictures taken during their trip, although this was not a requirement. This second form of writing insured that residents were recording their reflections on a regular basis during their trips while also allowing members of the FMRP and the greater community (eg clinic and hospital staff and even friends and family) to view their activities.

A mixed-methods design, integrating qualitative and quantitative data analysis was employed in this study. Three of the authors, MG (psychologist), TIM (family physician), and RP (epidemiologist) conducted a directed content analysis using the milestones as the predetermined thematic categories. Each essay/blog was independently read and coded by each of the three authors, identifying relevant milestones for each individual thought expressed in the reflections. The raters reconvened on several occasions, discussed their independent ratings and determined final consensus ratings. The discussion proved particularly helpful early in the process in clarifying the meaning and manifestation of individual milestones. For example, System-Based Practice Item 3: Advocates for individual and community health refers to the social determinants of health, whereas Problem-Based Learning Item 3: Improves systems in which the physician provides care refers more to the delivery of healthcare per se. Narratives in Table 1 provide examples of this distinction.

Individual milestone frequencies were calculated for the 12 total writings and for the five essays and seven blogs separately to compare the two writing methods and provide an overall assessment of the degree to which the writings related to individual milestones.

### Results

When taken as a whole, every FM milestone was addressed in at least one resident written reflection. Figure 1 shows ample frequency variation among milestones.

#### Analysis of individual milestones

Several milestones were noted by the majority of residents. Figure 1 demonstrates the most frequently cited milestones: System-Based Practice-3: Advocates for individual and community health (37 times), Professionalism-3: Demonstrates humanism and cultural proficiency (35 times) and Practice-Based Learning and Improvement-3: Improves systems in which the physician provides care (29 times). Rarely noted milestones included Practice-Based Learning and Improvement-1: Locates, appraises, and assimilates evidence from scientific studies related to the patients’ health problems (1 time) and Professionalism-2: Demonstrates professional conduct and accountability (3 times).

#### A comparison of blogs and essays

Table 2 lists the total frequencies for essays and blogs separately and combined. The difference between the mean number of milestones addressed by blogs (M=23.43, SD=10.05) and by essays (M=27.00, SD=9.14) was not significant t(10)=0.63, P=0.54. Although the essays were more focused in nature (eg, residents responded to questions that caused them to think about culture) many of the same themes emerged in the blogs in which residents chose their own topics.

#### Variability across residents

Whereas one of the resident essays involved 42 instances relevant to milestones, another touched on milestones only 16 times. Regardless of the exact number, results suggest that written reflection on the GH experience provides an opportunity to assess numerous milestones.

#### Conclusions

The GH experience is one whose presence is increasing in FMRPs nationwide. Written reflection can assist in demonstrating milestone-based growth, particularly for some of the less commonly observed milestones related to culture, community, humanism, and the health care system. Because the GH experience exposes residents to a foreign culture, an underserved population and a different system of health care, it makes intuitive sense that some of the most frequently cited milestones related to social determinants of health and differences in the provision of health care. Consistent with previous research relating reflective writing to increased empathy and development of professional identity, growth in the area of humanism and cultural competence was also observed. However, the fact that some milestones were rarely noted should not necessarily be interpreted as a lack of growth in these areas, but simply that these experiences may have been less salient for resident authors in the context of their GH experience.

Although this study was based on a small sample of residents, rich data was obtained from each resident. Further study is warranted to support the notion that specific milestones are more strongly influenced by the GH experience than others. Additionally, sample size limits the
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<th>Milestone Demonstrated</th>
<th>Reflective Passage</th>
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<td><strong>Patient Care–2</strong></td>
<td>Cares for patients with chronic conditions. Level 1: Recognizes that chronic conditions have a social impact on individual patients.</td>
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<td>We are performing direct observed therapy for a tuberculosis patient... this is her third episode of tuberculosis and we are sure that it is of the resistant type... We wished her to get better. In the meantime, we want to find out how many active cases of TB there are in Los Cocos.</td>
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<td><strong>Medical Knowledge–2</strong></td>
<td>Applies critical thinking skills in patient care. Level 1: Recognizes that an in-depth knowledge of the patient and a broad knowledge of sciences are essential to the work of family physicians. Level 3: Recognizes the effect of an individual's condition on families and populations.</td>
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<td>Kids for whom we examined various stool samples under the microscope earlier this morning... I was introduced to our friend Strongiloides stercoralis, our not-so-elusive intestinal nematode. Its freely living rhabditiform larva appeared as a thick snake-like creature moving across the high power field. This beast, once leaving the host, can remain alive in the soil for many weeks and invade through the skin. The most effective treatment is Ivermectin but Mebendazole is mostly used here. Either way, I told the kids to wash often and wear some slippers.</td>
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<td><strong>System-Based Practice–3</strong></td>
<td>Advocates for individual and community health. Level 3: Identifies specific community characteristics that impact specific patients' health.</td>
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<td>It was later explained to us that compliance and continuity were difficult to attain at the Batey clinics. It was uncertain whether patients would return if their symptoms worsened and whether they would be able to afford the expense of taking off from work and paying for the transport to get to the clinic for follow up. Therefore, the local physicians assess that the benefits of antibiotics and prevention of pneumonia outweighed the risks of antibiotic usage. While the methods of addressing upper respiratory tract infections differed from my prior experiences, there was respect for their methods of addressing the socioeconomic situation that patients were in.</td>
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<td><strong>Problem Based Learning and Improvement–3</strong></td>
<td>Improves systems in which the physician provides care. Level 1: Recognizes inefficiencies, inequities, variation, and quality gaps in health care delivery.</td>
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<td>Patients with chronic conditions are given a “medical passport.” It lists their medical conditions, their medications, their allergies and their demographics. This document was helpful for patients with low medical literacy to convey their past medical history and their current treatment regimen... while the future system in our country to have an electronic health system with these similar features, it seemed that this simplistic approach got the job done without worrying if one electronic medical record will conflict with another.</td>
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<td><strong>Professionalism–3</strong></td>
<td>Demonstrates humanism and cultural proficiency. Level 2: Identifies own cultural framework that may impact patient interactions and decision-making.</td>
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<td>At first...I was appalled by my surroundings... I was concerned about her [patient] living conditions; dirt floors and as many as eight people sleeping in one room. I sat quietly and simply observed....and began to realize my concern was unfounded. Yes it was hot. Yes, they slept on a dirt floor and she in a plastic lawn chair, however she was surrounded by family. She had 24/7 care. No one appeared hungry, instead they were happy. They knew all of her medications and presented them with an administration schedule...My personal conflict resolved almost immediately when I realized that they were not wrong in living this way, and that I had no right to think that they needed “fixing” or help...</td>
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<td><strong>Communication–2</strong></td>
<td>Communicates effectively with patients, families, and the public. Level 2: Matches modality of communication to patient needs, health literacy, and context Level 4: Educates and counsels patients and families in disease management and health promotion skills</td>
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<td>Even with an interpreter, there were times where a patient appeared confused by some of our questions or was not able to elaborate, in detail, the timeline of their ailments... It seemed that this stemmed not from our inability to translate effectively, but actually from a low medical education on the part of the patient... [we began] using teach-back methods to ensure patients understood what the plan was and how to take care of themselves.</td>
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ability to draw a solid conclusion regarding the efficacy of blogs versus essays in demonstrating growth across the milestones. However, one strength of the blogs is in their communicative nature relative to essays. The benefits of blogs were not only for the individual resident author, but also for their fellow residents at home who kept up with the online blogs. The blogs also created connections between residents and non-residency personnel and provided a view into this world for those who might not otherwise come in contact with it.

Whether blog or essay, written reflection represents a tangible way to assess resident development during the GH experience, connect this development to the milestones, and gain insight into the thought process of residents. For these reasons, we recommend that all FMRPs offering GH training include some form of written reflection for participating residents.

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References


