Global Health in Graduate Medical Education

Daniel Hoody, MD
GIM Grand Rounds
January 10th, 2012
“It reminded me why I wanted to become a doctor in the first place.” ¹

“It gave me a perspective I could never have otherwise and...I am a better doctor for what I learned.” ²

Objectives

• Become familiar with educational outcomes associated with global health participation during graduate medical education

• Become familiar with resident and residency participation in global health on a local and national level

• Identify common barriers to global health participation during residency
GH = global health
GIM focus

• Why is GH important to GIM?
  – GIM often front lines of traveler/immigrant health
  – GH educational outcomes in line with GIM competencies

• Out of scope for today
  – Global burden of disease
  – Global workforce shortage
  – Effects of GH on international host institutions
Outline

• Defining global health
• Educational outcomes associated with GH in GME
• U.S. residents/residencies and GH
• UCHSC residents/residencies and GH
• Future directions
Outline

• Defining global health
  • Educational outcomes associated with GH in GME
  • U.S. residents/residencies and GH
  • UCHSC residents/residencies and GH
  • Future directions
What is global health?

• “The health of underserved populations in or from developing countries”¹

• “Understanding and reducing health disparities at home and abroad”²

• “Working collaboratively with other communities and countries to improve community health locally and globally”²

Why is global health important?

• Disparities abound\(^1\)
  – child and adolescent health
  – women’s health
  – care for those with special needs
  – geriatrics
  – infrastructure and social organization in resource-limited settings
  – Communicable diseases
  – Non-communicable diseases

Why is global health important for the United States?

• Global health
  • historically -> international affair
  • more recently -> significant domestic component

• U.S. physicians need basic understanding of health conditions of mobile populations
  • to avoid iatrogenic complications \(^1\)
  • to address health disparities and burden of disease secondary to cultural, genetic, and geographic conditions

Why is global health important for the United States?

• World
  – 840 million people crossed borders in 2006

• U.S.
  – Immigration
    • 1.16 million people into U.S. annually
    • 25% of US population growth annually
  – Travel
    • 60 million people travel into and out of U.S annually

Why is global health important for **UCHSC**?

- **Denver County**\(^1\)
  - 17% foreign-born citizens
    - Colorado average = 12%
    - National average = 9.6%
  - 29% language other than English spoken at home
    - National average = 20%

- **Denver Health**\(^2\)
  - >50% identify as Hispanic or foreign born
  - Majority of patients utilize state/federal aid programs

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2. Denver Health 2010 Summary Results For All Clinics 2011.
Outline

• Defining global health

• **Educational outcomes associated with GH participation in GME**
  • U.S. residents/residencies and GH
  • UCHSC residents/residencies and GH
  • Future directions
• Educational outcomes associated with GH participation in GME
  – Why are outcomes important?
    • Want to know if GH participation is beneficial
    • GH in GME costs $$$ (more later)
• Educational outcomes associated with GH participation in GME
  – Effect on medical education
  – Effect on career choice
• Educational outcomes associated with GH participation in GME
  – Effect on medical education
  – Effect on career choice
• Educational outcomes associated with GH participation in GME
  
  — **Effect on medical education**
    • History & physical exam skills
    • Use of diagnostic tests
    • Cultural competence
    • Medical knowledge
  
  — Effect on career choice
History & Physical Exam

- Physicians rate history taking and physical examination as their most valuable skills
- But...literature documents the lack of competence in physical diagnosis among internal medicine residents

History & Physical exam

• Several retrospective single-center surveys of both GH and non-GH participants in IM residency
  – More GH than non-GH participants believe that physical exam is underutilized\(^1,2\)
  – GH participants reported greater confidence in physical exam skills\(^1-3\)
  – > 90% GH participants reported positive effect on physical exam skills\(^2\)
  – Open-ended question: 33% of 96 GH participants stated improvement of and greater reliance on physical exam skills\(^3\)

### Clinical Care

#### Demonstrates consistent, complete, and adequate data collection during history taking.

- Demonstrates inconsistent, incomplete, or inadequate data collection at times. (comments required)

#### Performs all components of the physical examination correctly; Obtains accurate information.

- Performs a focused or comprehensive medical history, as indicated by presenting issue, in an organized and highly efficient manner; Is capable of teaching data gathering to others.

- Performs either a focused or comprehensive physical, as indicated by presenting issue in an efficient, correct, and sensitive manner; Is capable of teaching these skills to others.

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**Educational importance**

- University of Colorado Health Sciences Center
- ... the Bridge to the Future
Use of diagnostic tests

“It makes me more aware of health disparities and encourages me to use resources more carefully and judiciously.”

Use of diagnostic tests

• U.S. health care costs per capita 2.4 times that of other developed countries ($6400 vs $2800)$^{1}$
  – Significant portion of this cost driven by overutilization of tests, procedures, etc.

• Denver Health
  – > 70% 2010 patients on Medicare, Medicaid, CICP$^{2}$

2. 2010 Summary Results for all clinics – Denver Health
Use of diagnostic tests

- Retrospective single-center surveys of both GH and non-GH participants in IM residency
  - GH participants consistently rated use of routine laboratory tests in U.S. as more overused than did nonparticipants (p < 0.08)$^{1-3}$
  - 62% of GH participants reported a reduced use of laboratory and/or radiologic tests in subsequent practice $^2$

Educational importance

- No resident evaluation criteria for appropriate utilization of health resources
I think I may have to change your status from a flesh wound.
Cultural Competency

• Institute of Medicine (IOM) 2002 report recommendations for education\(^1\)
  – “cultural and communication barriers be identified and addressed”
  – “cross-cultural education be integrated into training of future health care professionals”

• Medical adherence of many ethnically diverse, low socioeconomic status patients is based upon their interaction and perception of the health care system\(^2\)

1. Institute of Medicine NAoS. Unequal treatment: confronting racial and ethnic health disparities in health care. 2002.
Cultural Competency

• Qualitative analysis
  – Reflective journaling of med/peds GH participants¹
    • “I will be more aware of the cultural aspects of medicine, and will make an effort to ask more about health beliefs, especially for the immigrant families I see.”
  – Participation in GH increases cultural competency²
  – Medical students in global health track³
    • “It was embarrassing to observe the condescending attitude of visiting US medical personnel to local health care workers.”
    • “Reinforced my belief that you must open yourself up and respect the patients’ culture to provide the best care for patients.”
  – Same medical students 6 years later⁴
    • 55% said most significant influence of GH participation was greater cultural understanding.

• Quantitative analysis
  – None (although measures do exist)

Cultural Competency

Table 4

Areas in Which the International Health Fellowship Program Improved Student Skills*

<table>
<thead>
<tr>
<th>Area</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consideration of cultural factors in patient care</td>
<td>1.20</td>
</tr>
<tr>
<td>Awareness of socioeconomic factors in health care</td>
<td>1.25</td>
</tr>
<tr>
<td>Communication with patients from a variety of backgrounds</td>
<td>1.27</td>
</tr>
<tr>
<td>Involvement in work with the underserved</td>
<td>1.43</td>
</tr>
<tr>
<td>Community health involvement in the care of patients</td>
<td>1.60</td>
</tr>
<tr>
<td>Use of a second language in patient care</td>
<td>1.67</td>
</tr>
<tr>
<td>Participation in community activities to improve health</td>
<td>2.09</td>
</tr>
<tr>
<td>Cost-effective laboratory and diagnostic investigation</td>
<td>2.27</td>
</tr>
<tr>
<td>Physical exam skills</td>
<td>2.52</td>
</tr>
<tr>
<td>History-taking skills</td>
<td>2.66</td>
</tr>
</tbody>
</table>

Self-assessment scale: 1=markedly improved clinical skills, 3=no influence, 5=markedly worsened clinical skills

* All means are significantly greater than the central no-impact value of 3.0 by one-sample t test, using $P<.001$. There are no gender differences in the responses.

Haq, et al. 2000
### Educational importance

#### Professionalism

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>13</td>
<td>Is at times unreliable in completing work or inefficient in carrying out required duties. (comments required)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Can be disrespectful or defensive to one or more members of the team including but not limited to nurses, pharmacists, social workers, medical students, housestaff, and other teams. (comments required)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Seems to lack sensitivity, insight, or empathy with certain patients. (comments required)</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Is punctual and reliable in day-to-day tasks; Fulfills basic patient care responsibilities required of him/her; Helps with team tasks when requested.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interacts respectfully with ALL members of the health care team, consultants and fellow physician providers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is sensitive to patient differences (race, culture, gender, socioeconomic status) and preferences.</td>
<td></td>
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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Takes primary responsibility for all patient care needs; Anticipates the needs of the team and actively attempts to meet these needs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actively integrates all members of the inter-professional team into the care of patients such that each is able to maximize their skills in the care of the patient; Fosters a sense of team among all with whom they interact.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actively seeks to understand the patient’s views; Is able to incorporate patient differences and preferences into plan of care.</td>
<td></td>
</tr>
</tbody>
</table>
Medical Knowledge

• Lack of appropriate medical knowledge places immigrants and refugees at risk of iatrogenic morbidity

• Subjective measurements: retrospective surveys
  – Positive impact on general medical knowledge
  – Increases tropical medicine knowledge

Medical Knowledge

• Objective measurements
  – Medical students participating in GH elective scored higher on NBME tests in preventative medicine and public health categories\(^1\)
  – Case log of UCHSC pediatric residents on GH elective\(^2\)
    • 18% of cases were diagnoses never seen previously
    • 6% cases were diagnoses never seen in advanced stages
  – Pre-post test of Michigan pediatric residents\(^3\)
    • 69% post vs. 57% pre (\(p < 0.01\))
  – U of Minnesota parasitic survey\(^4\)
    • First study to measure downstream effect of quality of patient care associated with implementation of global health program

U of Minnesota GH Pathway Survey

• *Strongyloides stercoralis*
  
  – 100 million people infected worldwide
  
  – Common amongst U.S. refugees/immigrants
    
    • 40% prevalence overall in some populations
    
    • 24% prevalence after 12 years in U.S.
  
  – Iatrogenic complications (including death) possible from steroid administration during hyperinfection

• Survey administered including case scenario of patient at risk of *Strongyloides* infection

U of Minnesota GH Pathway Survey

• 2004: Survey administered to IM residents
• 2005: Implementation of U of MN Global Health Pathway (GHP)
  – Mentorship
  – Formal didactics
  – Seminars
  – Refugee/immigrant continuity clinic
  – International/domestic underserved electives
• 2009: Identical survey re-administered

U of Minnesota GH Pathway Survey

• Primary outcome: identification of need for parasitic work up

• Results (UMN residents who recommended parasitic work up):
  
  • 2004 (pre-GHP)
    – Overall: 11.1%
  
  • 2009 (5 years with GHP)
    – Overall: 39%
    – GHP members: 59% (p = 0.008)
    – ASTM-certified GHP members: 77% (p < 0.001)

Educational importance

- Denver County
  - 17% foreign-born citizens\(^1\)

• Educational outcomes associated with GH participation in GME
  – Effect on medical education
    • History & physical exam skills
    • Use of diagnostic tests
    • Cultural competence
    • Medical knowledge
  – Effect on career choice
• Educational outcomes associated with GH participation in GME
  – Effect on medical education
  – **Effect on career choice**
    • Choice of practice specialty and setting
    • Change in career choice
Effect on career choice

• Retrospective surveys of GH participants and non-GH participants during and/or after completion of residency

• Yale
  – 1996 survey of 96 GH participants and 96 non-participants from 1982-1996 graduating classes
  – 61% response rate

• Duke
  – 1993 survey of 57 GH participants and 123 non-participants from 1988-1996 graduating classes
  – 93% response rate
## Practice demographics

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Participants (n = 96)</th>
<th>Nonparticipants (n = 96)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>(%)</td>
<td></td>
</tr>
<tr>
<td>Patients on public assistance</td>
<td>77 (80.2)</td>
<td>49 (51.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Immigrant patients</td>
<td>41 (42.7)</td>
<td>23 (24.0)</td>
<td>0.006</td>
</tr>
<tr>
<td>Patients who are substance</td>
<td>42 (43.8)</td>
<td>21 (21.9)</td>
<td>0.001</td>
</tr>
<tr>
<td>abusers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients infected with HIV*</td>
<td>30 (31.3)</td>
<td>13 (13.5)</td>
<td>0.003</td>
</tr>
</tbody>
</table>

*HIV = human immunodeficiency virus.

## Practice settings

<table>
<thead>
<tr>
<th>Practice setting</th>
<th>Participants (n = 96)</th>
<th>Nonparticipants (n = 96)</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic medical center</td>
<td>64 (67)</td>
<td>56 (58)</td>
<td>0.004</td>
</tr>
<tr>
<td>Private Practice/HMO†</td>
<td>12 (13)</td>
<td>26 (27)</td>
<td></td>
</tr>
<tr>
<td>Public health</td>
<td>10 (10)</td>
<td>2 (2)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>10 (10)</td>
<td>12 (13)</td>
<td></td>
</tr>
</tbody>
</table>

* P value reflects chi-square analysis of first 3-settings only (excludes other).
† HMO = Health Maintenance Organization.

Table 1

Age, Gender, and Medical Specialties of IHFP Participants Compared With US Physicians Less Than 35 Years

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>IHFP Fellows (%)</th>
<th>US Physicians* (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age range, years (median)</td>
<td>30–45 (33)</td>
<td>Under 35</td>
</tr>
<tr>
<td>Female</td>
<td>21 (50)</td>
<td>53,550 (39)</td>
</tr>
<tr>
<td>Primary specialty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family medicine</td>
<td>15 (36)</td>
<td>14,379 (11)</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>12 (29)</td>
<td>29,251 (22)</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>4 (10)</td>
<td>14,854 (11)</td>
</tr>
<tr>
<td>Obstetrics and gynecology</td>
<td>3 (7)</td>
<td>6,623 (5)</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>2 (5)</td>
<td>4,863 (4)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (14)</td>
<td>66,046 (49)</td>
</tr>
</tbody>
</table>

* Age less than 35 years, 1999 data

IHFP—International Health Fellowship Program

Ramsey, et al. 2004
Change in career choice


<table>
<thead>
<tr>
<th></th>
<th>Participants</th>
<th>Nonparticipants</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 39)</td>
<td>(n = 45)</td>
<td></td>
</tr>
<tr>
<td>No. (%)</td>
<td>No. (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General medicine</td>
<td>22 (56)</td>
<td>14 (31)</td>
<td>0.020</td>
</tr>
<tr>
<td>Different subspecialty</td>
<td>17 (44)</td>
<td>31 (69)</td>
<td></td>
</tr>
</tbody>
</table>
Change in career choice

• 62% (of 39) Yale GH participants who changed career plans stated that change was a result of GH participation\(^1\)

• 75% (of 16) Duke GH participants who changed career plans stated that GH experience was significant factor\(^2\)

• Duke GH participant change -> academics, disadvantaged populations\(^2\)

• Duke non-participant change -> change specialty, enter private practice\(^2\)

UCHSC importance

Medical provider shortage
A study released Monday said Colorado’s need for medical providers under health reform isn’t as bad as first thought.

Health care providers needed for new insured by 2016
- Less than 1
- 1 to 5
- 5.01 to 10
- More than 10

Colorado Health Institute
“Maybe there will be some primary care doctors available on this planet!”
Outcomes review

• Mostly subjective outcomes
  – self-administered questionnaires measure knowledge, skills, attitudes, influence on career specialty, or practice setting

• Some objective outcomes
  – Case scenario test
  – NBME scores
  – Career plans/career change

• Varied or unpublished response rates

• Many evaluated were actually medical students

• Majority of evaluated residents were IM residents¹

Criticisms

• Many outcomes subjective rather than objective
  – Hard to quantify the subjective nature of many GH benefits
• Selection bias
  – Not ethical to blind to international pathway
• Low response rates of voluntary surveys and disproportionate response rates of GH participants vs. non-participants
Outcomes summary

• GH participation during residency has favorable but unquantifiable effect on
  – H&P skills/attitudes
  – Utilization of resources
  – Cultural competency
  – Medical knowledge

• GH participation has at least a re-inforcing effect on career choices.

• Among residents who changed career plans, GH participation encouraged participants to pursue careers in general medicine rather than subspecialize.
Outline

• Defining global health
• Educational outcomes associated with GH in GME
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• UCHSC residents/residencies and GH
• Future directions
Outline

• Defining global health
• Educational outcomes associated with GH in GME

• U.S. residents/residencies and GH
  – interest
  – participation/availability
  – barriers

• UCHSC residents/residencies and GH

• Future directions
Graduating medical student interest

- 40% of graduating medical students in 2010 stated instruction on global health issues was inadequate\(^1\)

GH participation rates of graduating medical students

Figure 1: Percentage of medical school graduates who participated in an elective international health experiences during medical school.

Source: Association of American Medical Colleges’ Medical School Graduation Questionnaire All Schools Report, 1978 to 2004. Data for 1993 were not accessible.

Resident interest in GH

• Many voluntary surveys of various residency disciplines show high interest rates in GH
  – But low survey response rates

• Retrospective survey of Yale internal medicine residents\(^1\)
  – Former residents who did NOT participate in GH elective
    • 32% would definitely participate in GH elective
    • 63% would probably participate in GH elective

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Residency selection

• Recruitment
  – Residency selection significantly based upon availability of global health electives
    • U.S. surgery residents nationwide\(^1\)
    • Yale internal medicine residents\(^2\)
    • Duke internal medicine residents (40%)\(^3\)
    • UCHSC pediatric residents\(^4\)
    • U.S. emergency medicine residents nationwide\(^5\)
      – Including those who previously had no GH participation
    • University of Cincinnati family medicine residents\(^6\)
  – 46% IM and 43% general surgery program directors think GH electives enhance recruitment\(^7-8\)

U.S. Residencies with GH opportunities

<table>
<thead>
<tr>
<th>Residency Type</th>
<th>% of U.S. residencies with GH opportunities (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>20</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>33</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>21</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>41</td>
</tr>
<tr>
<td>General Surgery</td>
<td>9</td>
</tr>
<tr>
<td>Ob/Gyn</td>
<td>17</td>
</tr>
</tbody>
</table>

- 4% of U.S. residencies across all specialties have longitudinal GH track

Barriers to participation: Residency

Figure 2. Greatest barriers facing US programs in developing and supporting global health activities (n = 18).

Barriers to participation: Resident

Box 2. Difficulties encountered while arranging international electives, and information and resources residents would like the Committee for International Surgery to make available

<table>
<thead>
<tr>
<th>Difficulties encountered</th>
<th>Desired information and resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowing where to start</td>
<td>1. Conferences and information sessions</td>
</tr>
<tr>
<td>2. Obtaining contact information</td>
<td>2. Lists of locations and contacts</td>
</tr>
<tr>
<td>3. Financial costs</td>
<td>3. Funding</td>
</tr>
<tr>
<td>4. Documentation</td>
<td>4. Information on arranging electives</td>
</tr>
<tr>
<td>5. Disorganization on the receiving end</td>
<td></td>
</tr>
<tr>
<td>6. Bureaucratic difficulties locally</td>
<td></td>
</tr>
</tbody>
</table>

Overcoming Barriers

• Non-financial barriers becoming less inhibitive
  – Resident/faculty interest increasing
  – GH curriculum more widely available
    • Collaboration amongst GH universities
    • Online resources
  – International partnerships take care of logistics

• Financial barriers persist
Funding for Residents

- Medical students are paying to work
- Residents are paid to work

“...the hospital must incur all or substantially all of the costs of the training program in a nonhospital setting...”

-CFR 413.78: Direct GME Payments

- ~ $5,000 per month per resident
- So how are residencies funding this??

Resident salary support examples

- Private/Industry support
  - Yale IM\(^2\)
  - Stanford IM
- Departmental funds
  - Standard
    - Duke IM\(^1\)
    - Cincinnati FM
    - Minnesota IM
  - Specific
    - Yale IM (International Travelers Clinic)\(^2\)

Resident travel/lodging support

- 2009 survey of IMRP directors
- 41% of IM residencies with GH opportunities provide funding beyond salary support
  - 43% private donor, earmarked for GH activities
  - 26% additional clinic revenues
  - 26% general education endowments

Outline

• Defining global health
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• **UCHSC residents/residencies and GH**
• Future directions
# UCHSC GH opportunities

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<th>% of U.S. with GH opportunities (%)</th>
<th>UCHSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>20</td>
<td>yes</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>33</td>
<td>yes</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>21</td>
<td>yes</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>41</td>
<td>yes</td>
</tr>
<tr>
<td>General Surgery</td>
<td>9</td>
<td>yes/no</td>
</tr>
<tr>
<td>Ob/Gyn</td>
<td>17</td>
<td>no</td>
</tr>
</tbody>
</table>

Dermatology ?

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UCHSC GH Longitudinal Tracks

- 4% of U.S. residencies across all specialties have longitudinal GH track

<table>
<thead>
<tr>
<th>UCHSC Residency</th>
<th>Longitudinal GH track</th>
</tr>
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<tbody>
<tr>
<td>Pediatrics</td>
<td>yes</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>no</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>no</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>no</td>
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<tr>
<td>General Surgery</td>
<td>no</td>
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<tr>
<td>Ob/Gyn</td>
<td>no</td>
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</table>

## UCHSC participation rates

<table>
<thead>
<tr>
<th>UCHSC residency</th>
<th>% GH participation annually (% range 2008-2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>8-22</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>20-30</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>unknown</td>
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<tr>
<td>Emergency Medicine</td>
<td>0-15</td>
</tr>
<tr>
<td>General Surgery</td>
<td>12.5</td>
</tr>
<tr>
<td>Ob/Gyn</td>
<td>0</td>
</tr>
</tbody>
</table>
USHSC resident interest

- No published figures
- Anecdotally present
UCHSC barriers

• Internal Medicine
  – funding

• Surgery
  – funding, RRC

• Pediatrics
  – none

• Ob/Gyn
  – funding, malpractice

• Emergency Medicine
  – funding, elective time
UCHSC IM: a closer look

• No longitudinal GH track
• Available electives
  – London School of Hygiene and Tropical Medicine
  – Himalayan Health Exchange
  – UCHSC Intro to Int’l Health and Tropical Medicine Course
  – Indian Health Service
• Pending opportunities
  – Harare, Zimbabwe (MEPI site)
  – Kigali, Rwanda
• Curriculum: Intro to International Health elective
• 8-22% participation in GH electives from 2008-2011
**Table 2**

**Barriers and Proposed Solutions for Expansion of International Clinical Rotations (ICRs)**

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Barriers</th>
<th>Proposed solutions</th>
</tr>
</thead>
</table>
| **Accreditation organizations and review committees** | • Have not developed core competencies or training guidelines for residents doing ICRs*  
• Do not officially recognize time spent doing clinical training in another country  
• Generally have not helped to foster an exchange between domestic residency programs and foreign | • Discuss the utility of ICRs as part of physician training and establish core competencies and training guidelines  
• Allow at least 1 month of an ICR and the associated procedures to apply toward accreditation requirements  
• Become active in exploring “twinning” arrangements and bilateral exchange programs  
• Allow interested residents to spend at least 1 call-free elective month on ICRs  
• Facilitate in identifying and establishing structured ICRs  
• Provide support, ideally with salary and travel assistance, for residents on ICRs  
• Seek to establish relationships with hospitals/institutions in developing countries to foster bilateral exchange  
• Must have completed first year of residency and be medically licensed  
• Spend at least six weeks at the host hospital  
• Present work/experience to home institution on return  
• Consider overlapping with prior and/or future resident for continuity |

* The American Academy of Pediatrics has developed core competencies and guidelines for international clinical rotations.

Outline

- Defining global health
- Summary of evidence associated with GH in GME
- U.S. residents/residencies and GH
- UCHSC residents/residencies and GH
- **Future directions**
Future: GH in IM Residencies

• U.S.
  – More formal GH tracks
    • 30 programs have existing GH track
    • 12 programs currently developing GH track
    • 35 programs actively considering GH track

• UCHSC
  – More GH opportunities
    • Zimbabwe (MEPI), Rwanda
  – GH track ??

What is needed for IM GH track?

• Literature examples and successful existing programs
  – Mentorship
  – Formal didactics
  – Seminars
  – Refugee/immigrant continuity clinic
  – International/domestic underserved electives
  – Funding
What is needed for UCHSC IM GH track?

• Mentorship
  – Need (Centers for Global Health survey pending)
• Formal didactics
  – Have (Intro to Int’l Health course, online curriculum available)
• Multidisciplinary Seminars
  – Have (CGH Global Health Lecture Series)
• Refugee/immigrant continuity clinic
  – Have
• International/domestic underserved electives
  – Have
• Funding
  – Have/Need
Future of Funding

• Unlikely that more objective evidence of benefits of GH participation on GME will be published en masse

• In the near term, key stakeholder buy-in for funding will probably need to be based upon existing evidence and the fact that it is unlikely that
  – immigrant/refugee population trends are going to decrease
  – resident interest in GH is going to decrease
  – GH disparities will cease to exist
Worms

Haven't seen you around here before.

Don't be silly. I'm your other end.
Conclusions

• Limited, mainly subjective evidence associates GH participation during residency with improvement in many core competencies of general internal medicine.
• GH participation during residency can influence resident decisions, attitudes, and practice.
• Many institutions have utilized existing evidence to justify funding of formal global health tracks.
• UCHSC IMRP has many key components for global health education in place
• “Enhancing the global health training within US residency programs might ultimately provide a passageway to improve health services for underserved populations throughout our nation.”

Bring Back into Scope

- Global burden of disease
- Global workforce shortage
- Effects of GH on international host institutions
“Are all humans human? Or are some more human than others?”

– Roméo Dallaire

“Students are the engines of change.”

– Roger Glass, Associate Director for Global Health Research, NIH/Fogarty
Bibliography

Bibliography

Questions/Comments