

Global Health in Graduate Medical Education



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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



1. Powell AC, et al. *J. Am. Coll. Surg.* Feb 2009;208(2):304-312.
2. Ramsey AH, et al. *Fam. Med.* Jun 2004;36(6):412-416.

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*

1. Howard CR, et al. *Acad Med.* Apr 2011;86(4):521-528.

2. Drain PK, et al. *Acad Med.* Mar 2007;82(3):226-230.

Why is global health important?

- Disparities abound¹
 - 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 ¹
- U.S.
 - Immigration
 - 1.16 million people into U.S. annually²
 - 25% of US population growth annually²
 - Travel
 - 60 million people travel into and out of U.S annually²

1. UN. UNWTO: Tourism Highlights 2007. http://www.unwto.org/facts/eng/pdf/highlights/highlights_07_eng_lr.pdf. Accessed 9/14/11.

2. US Department of Commerce International Trade Administration. <http://www.tinet.ita.doc.gov/>. Accessed 9/14/11.

Why is global health important for UCHSC ?



- Denver County¹
 - 17% foreign-born citizens
 - Colorado average = 12%
 - National average = 9.6%
 - 29% language other than English spoken at home
 - National average = 20%
- Denver Health²
 - >50% identify as Hispanic or foreign born
 - Majority of patients utilize state/federal aid programs

1. Bureau USC. State and County Quick Facts: Denver County. <http://quickfacts.census.gov/qfd/states/08000.html>. Accessed 9/13/11.
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 ¹
- But...literature documents the lack of competence in physical diagnosis among internal medicine residents¹

1. Mangione S, et al. *J Gen Intern Med.* Aug 1996;11(8):490-493.

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 skills¹⁻³
 - > 90% GH participants reported positive effect on physical exam skills²
 - Open-ended question: 33% of 96 GH participants stated improvement of and greater reliance on physical exam skills³

1. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.

2. Duncan K et al. *Journal of Graduate Medical Education:* September 2011, Vol. 3, No. 3, pp. 421-424.

3. Miller WC. et al. *Am J Med.* Sep 1995;99(3):291-297.

Educational importance



Clinical Care

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

Clinical Care

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

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

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.

7 Misses important components of the physical exam at times; May perform components of the physical examination incorrectly. (comments required)

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

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.

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

Use of diagnostic tests

“It makes me more aware of health disparities and encourages me to use resources more carefully and judiciously.”¹

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, CACP²

1. Emanuel EJ, et al. *JAMA*. Jun 18 2008;299(23):2789-2791.
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

1. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.

2. Duncan K Hau, et al. *Journal of Graduate Medical Education:* September 2011, Vol. 3, No. 3, pp. 421-424.

3. Miller WC, et al. *Am J Med.* Sep 1995;99(3):291-297.

Educational importance



- No resident evaluation criteria for appropriate utilization of health resources



Cultural Competency

- Institute of Medicine (IOM) 2002 report recommendations for education¹
 - “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 system²

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

2. Garcia Popa-Lisseanu MG, et al. *J. Rheumatol.* May 2005;32(5):913-919.

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)

1. Castillo J, et al. *J Grad Med Educ.* Sep 2010;2(3):449-455.

2. Godkin M, et al. *Fam. Med.* Apr 2003;35(4):273-278

3. Haq C, et al. *Fam. Med.* Sep 2000;32(8):566-572.

4. Ramsey, et al. 2004.

Cultural Competency

Table 4

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

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

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.

Educational importance



Professionalism

Professionalism			
13	Is at times unreliable in completing work or inefficient in carrying out required duties. (comments required)	Is punctual and reliable in day-to-day tasks; Fulfills basic patient care responsibilities required of him/her; Helps with team tasks when requested.	Takes primary responsibility for all patient care needs; Anticipates the needs of the team and actively attempts to meet these needs.
14	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)	Interacts respectfully with ALL members of the health care team, consultants and fellow physician providers.	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.
15	Seems to lack sensitivity, insight, or empathy with certain patients. (comments required)	Is sensitive to patient differences (race, culture, gender, socioeconomic status) and preferences.	Actively seeks to understand the patient's views; Is able to incorporate patient differences and preferences into plan of care.

Is sensitive to patient differences (race, culture, gender, socioeconomic status) and preferences.

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 knowledge¹
 - Increases tropical medicine knowledge²

1. Miller WC, et al. *Am J Med.* Sep 1995;99(3):291-297.

2. Federico SG, et al. *Arch. Pediatr. Adolesc. Med.* Feb 2006;160(2):191-196.

Medical Knowledge

- Objective measurements
 - Medical students participating in GH elective scored higher on NBME tests in preventative medicine and public health categories¹
 - Case log of UCHSC pediatric residents on GH elective²
 - 18% of cases were diagnoses never seen previously
 - 6% cases were diagnoses never seen in advanced stages
 - Pre-post test of Michigan pediatric residents³
 - 69% post vs. 57% pre ($p < 0.01$)
 - U of Minnesota parasitic survey⁴
 - First study to measure downstream effect of quality of patient care associated with implementation of global health program

1. Waddell et al. *J. Med. Educ.* Jun 1976;51(6):468-472.

2. Federico SG, et al. *Arch. Pediatr. Adolesc. Med.* Feb 2006;160(2):191-196.

3. Oettgen B, et al. *Clin. Pediatr. (Phila)*. Oct 2008;47(8):784-790.

4. Bjorklund AB, et al. *Am J Trop Med Hyg.* Sep 2011;85(3):405-408.

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



Medical Knowledge

Medical Knowledge

5	<u>REPORTER</u>	<u>INTERPRETER/BEGINNING MANAGER</u>	<u>MANAGING EDUCATOR</u>
	Has gaps in medical knowledge necessary to fully understand common illnesses encountered during this rotation. (comments required)	Has understanding of etiology, clinical manifestations and pathophysiology of common illnesses encountered during this rotation; asks appropriate questions to further areas where knowledge is lacking or incomplete	Has outstanding fund of knowledge with regard to both common and uncommon illnesses encountered during this rotation
	<input type="text"/>	<input type="text"/>	<input type="text"/>

Has outstanding fund of knowledge with regard to both common and uncommon illnesses encountered during this rotation

- Denver County
– 17% foreign-born citizens¹

1. Bureau USC. State and County Quick Facts: Denver County. <http://quickfacts.census.gov/qfd/states/08000.html>. Accessed 9/13/11.

- 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

Clinical practice patient demographics by International Health Program

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

* HIV = human immunodeficiency virus.

Practice settings

TABLE 2
Practice settings by International Health Program participation

	Participants		Nonparticipants		<i>P</i> *
	No.	(n = 96) (%)	No.	(n = 96) (%)	
					0.004
Academic medical center	64	(67)	56	(58)	
Private Practice/HMO†	12	(13)	26	(27)	
Public health	10	(10)	2	(2)	
Other	10	(10)	12	(13)	

* *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

<i>Characteristic</i>	<i>IHFP Fellows (%) n=42</i>	<i>US Physicians* (%) n=136,016</i>
Age range, years (median)	30–45 (33)	Under 35
Female	21 (50)	53,550 (39)
Primary specialty		
Family medicine	15 (36)	14,379 (11)
Internal medicine	12 (29)	29,251 (22)
Pediatrics	4 (10)	14,854 (11)
Obstetrics and gynecology	3 (7)	6,623 (5)
Emergency medicine	2 (5)	4,863 (4)
Other	6 (14)	66,046 (49)

* Age less than 35 years, 1999 data¹²

IHFP—International Health Fellowship Program

Change in career choice

TABLE 4
Changes in career plans by International Health Program

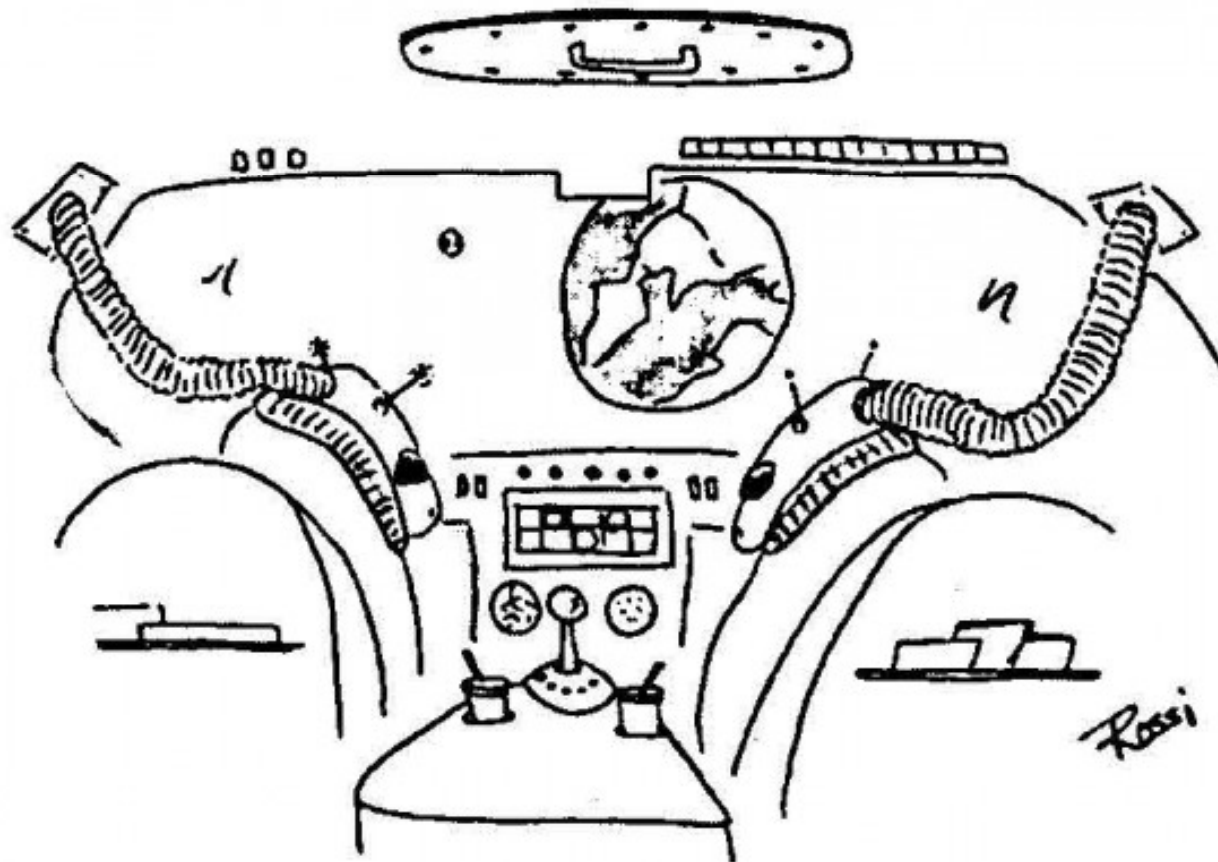
	Participants		Nonparticipants		<i>P</i>
	No.	(n = 39) (%)	No.	(n = 45) (%)	
General medicine	22	(56)	14	(31)	0.020
Different subspecialty	17	(44)	31	(69)	

Change in career choice

- 62% (of 39) Yale GH participants who changed career plans stated that change was a result of GH participation¹
- 75% (of 16) Duke GH participants who changed career plans stated that GH experience was significant factor²
- Duke GH participant change -> academics, disadvantaged populations²
- Duke non-participant change -> change specialty, enter private practice²

1. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.

2. Miller WC, et al. *Am J Med.* Sep 1995;99(3):291-297.



**“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
- **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**
 - 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 inadequate¹

1. https://www.aamc.org/download/140716/data/2010_gq_all_schools.pdf

GH participation rates of graduating medical students

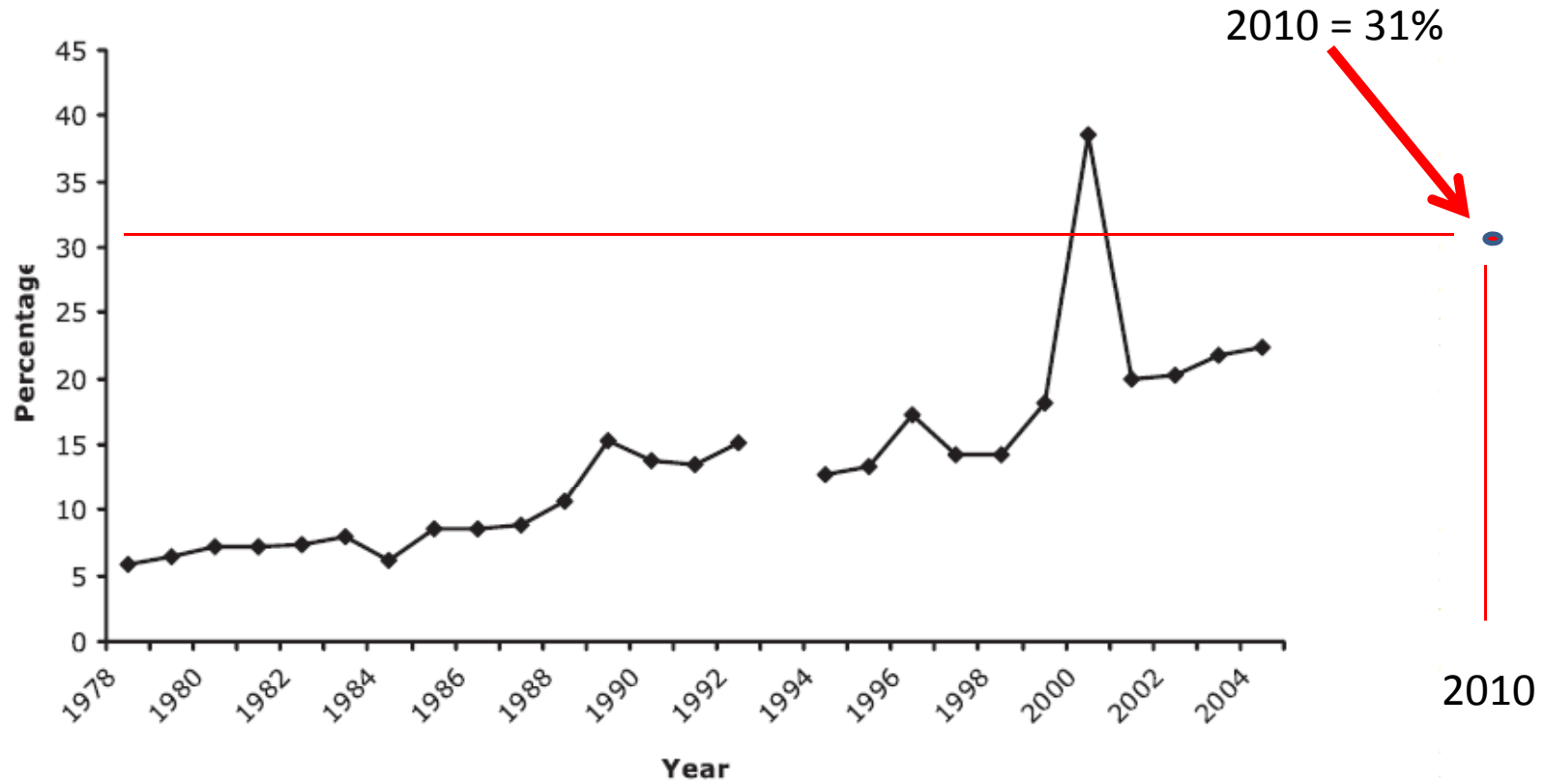


Figure 1 Percentage of medical school graduates who participated in an elective international health experiences during medical school.
Source: Association of American Medical Colleges' Medical School Graduation Questionnaire All Schools Report, 1978 to 2004. Data for 1993 were not accessible.

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 residents¹
 - Former residents who did NOT participate in GH elective
 - 32% would definitely participate in GH elective
 - 63% would probably participate in GH elective

1. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.

Residency selection

- Recruitment
 - Residency selection significantly based upon availability of global health electives
 - U.S. surgery residents nationwide¹
 - Yale internal medicine residents²
 - Duke internal medicine residents (40%)³
 - UCHSC pediatric residents⁴
 - U.S. emergency medicine residents nationwide⁵
 - Including those who previously had no GH participation
 - University of Cincinnati family medicine residents⁶
 - 46% IM and 43% general surgery program directors think GH electives enhance recruitment⁷⁻⁸

1. Powell AC, et al. *J. Am. Coll. Surg.* Jul 2007;205(1):162-168.
2. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.
3. Miller WC, et al. *Am J Med.* Sep 1995;99(3):291-297.
4. Federico SG, et al. *Arch. Pediatr. Adolesc. Med.* Feb 2006;160(2):191-196.
5. Dey CC, et al. *Acad. Emerg. Med.* Jul 2002;9(7):679-683.
6. Bazemore AW, et al. *Fam. Med.* Apr 2007;39(4):255-260.
7. Kolars JC, et al. *Am J Med.* Sep 2011;124(9):881-885.
8. Jayaraman SP, et al. *J. Am. Coll. Surg.* Mar 2009;208(3):426-433.

U.S. Residencies with GH opportunities

Residency Type	% of U.S. residencies with GH opportunities (%)
Internal Medicine	20
Pediatrics	33
Family Medicine	21
Emergency Medicine	41
General Surgery	9
Ob/Gyn	17

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

Barriers to participation: Residency

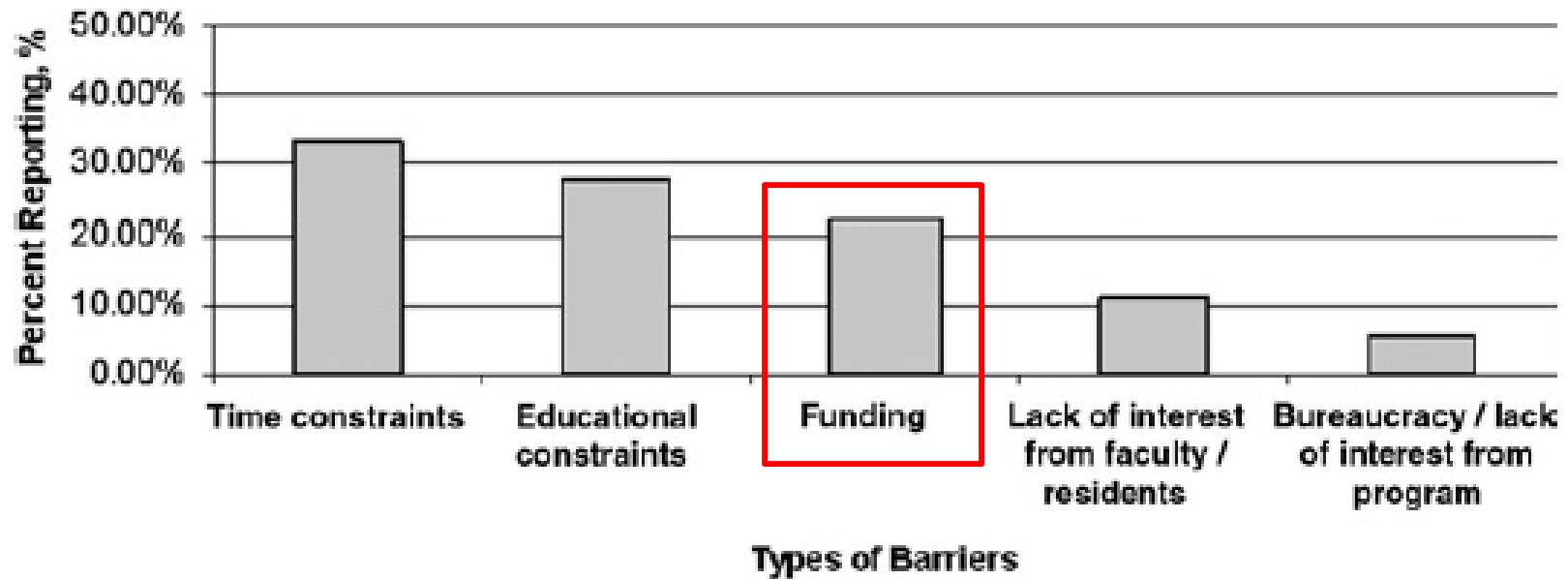


Figure 2. Greatest barriers facing US programs in developing and supporting global health activities (n = 18).

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

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 IM²
 - Stanford IM
- Departmental funds
 - Standard
 - Duke IM¹
 - Cincinnati FM
 - Minnesota IM
 - Specific
 - Yale IM (International Travelers Clinic)²

1. Miller WC, et al. *Am J Med.* Sep 1995;99(3):291-297.

2. Gupta AR, et al. *Am J Trop Med Hyg.* Dec 1999;61(6):1019-1023.

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

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UCHSC GH opportunities

Residency Type	% of U.S. with GH opportunities (%)	UCHSC
Internal Medicine	20	yes
Pediatrics	33	yes
Family Medicine	21	yes
Emergency Medicine	41	yes
General Surgery	9	yes/no
Ob/Gyn	17	no

Dermatology ?

UCHSC GH Longitudinal Tracks

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

UCHSC Residency	Longitudinal GH track
Pediatrics	yes
Internal Medicine	no
Family Medicine	no
Emergency Medicine	no
General Surgery	no
Ob/Gyn	no

UCHSC participation rates

UCHSC residency	% GH participation annually (% range 2008-2011)
Internal Medicine	8-22
Pediatrics	20-30
Family Medicine	unknown
Emergency Medicine	0-15
General Surgery	12.5
Ob/Gyn	0

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

UCHSC IM: Overcoming barriers

Table 2

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

Stakeholder	Barriers	Proposed solutions
Accreditation organizations and review committees	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

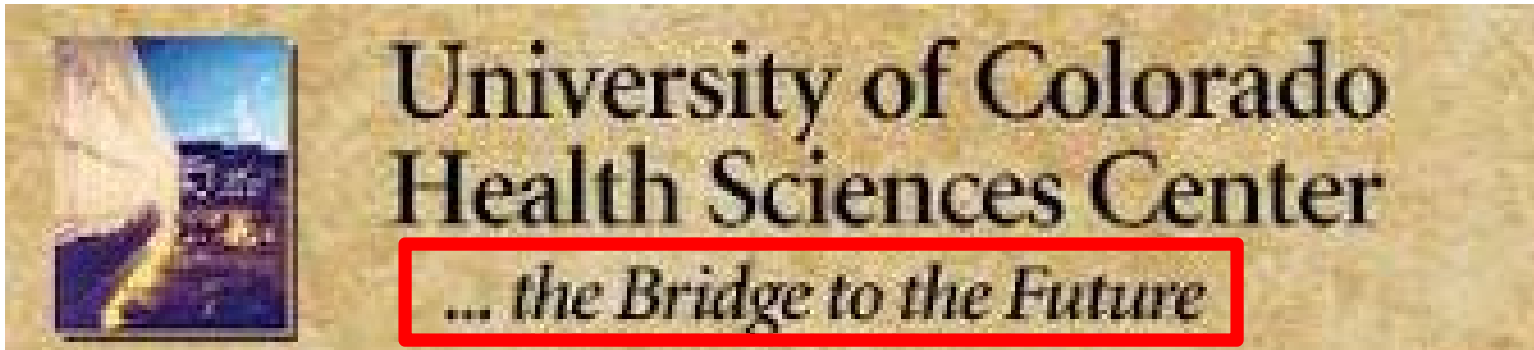
Seek to establish relationships with hospitals/institutions in developing countries to foster bilateral exchange

- 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

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

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- 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



SCHOOL OF MEDICINE

Heartbeat – Internal Medicine Training Program

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

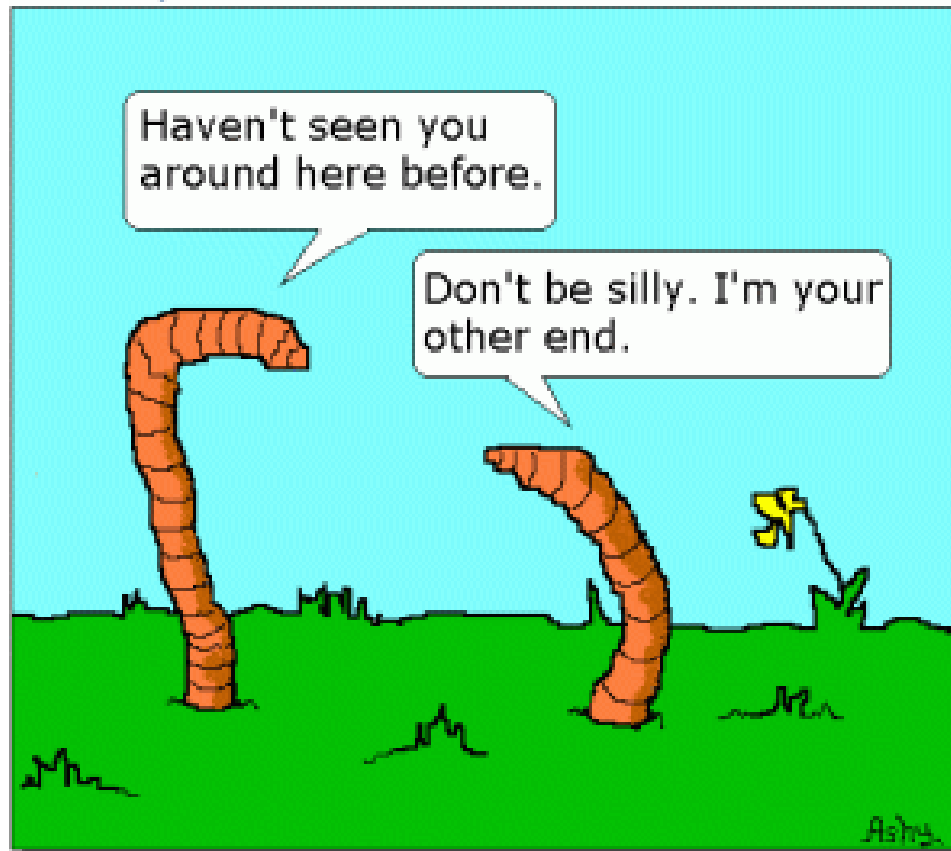
What is needed for UCHSC IM GH track?

- 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



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.”¹

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

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Questions/Comments