Are Global Health Initiatives an Imperative for Medical School Education Programs?

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UM Medical School Global REACH

Research Education And Collaboration for Health

http://globalreach.med.umich.edu/
Academic Health Systems

RESEARCH

EDUCATION

CLINICAL CARE
Value Proposition

• Why focus on global health/global initiatives?
• Is this proper ‘space’ for academic medical centers?
The Academic Medical Center
What is Global Health?

Global Health is improving the economic, social and environmental conditions people live in, and eliminating avoidable disease, disability and death.
If the World Were a Village of 100 People

The village would have:
   61 Asians, 13 Africans, 9 Latin Americans,
   12 Europeans, 5 from the USA and Canada
   75 would be non-white; 25 white

76 have access to electricity (mainly for light at night)
   8 people would have access to the internet

1 would have a college education; 16 would be unable to read or write

50 would be malnourished and 1 dying of starvation

   48 would live on less than US$ 2 a day
   20 would live on less than US$ 1 a day

http://www.familycare.org/special-interest/if-the-world-were-a-village-of-100-people/
Disparities are associated with
• a financial drag on the economy
• political instability; armed conflicts
• disease reservoirs and epidemics

Is equity simply a moral issue???
Funding for Global Health

http://www.humanosphere.org/science/2015/06/visualizing-stagnation-funding-stalled-for-global-health/
International Initiatives – select U.S. Academic Medical Centers

Advising hospital
Managing hospital
Affiliated medical school

Source: Press releases; McKinsey analysis
Innovation in health care delivery is taking place around the world.
THE WHITE MAN’S BURDEN
WHY THE WEST’S EFFORTS TO AID THE REST HAVE DONE SO MUCH ILL AND SO LITTLE GOOD
WILLIAM EASTERLY

THE GREAT ESCAPE
health, wealth, and the origins of inequality
ANGUS DEATON

DEAD AID
WHY AID IS NOT WORKING AND HOW THERE IS A BETTER WAY FOR AFRICA
DAMBISA MOYO
FOREWORD BY NIALL FERGUSON
$130 million dollar initiative from the U.S. Government to strengthen health science schools in sub-saharan africa
MEPI Schools

Columbia University
University of KwaZulu-Natal
University of Washington
University of Nebraska
University of Zambia
University of Nairobi
University of North Carolina Chapel Hill
Emory University
Addis Ababa University
University of California, San Diego
University of Wisconsin
Universidade Eduardo Mondlane
University of Malawi
Johns Hopkins University
Makerere University
Stellenbosch University
Kwame Nkrumah University of Science and Technology
University of Michigan
University of Pennsylvania
Harvard University
Northwestern University
University of Botswana
University of Ibadan
University of Colorado - Denver
University of Zimbabwe
Stanford University
Kilimanjaro Christian Medical College
Duke University

Created with NodeXL (http://nodexl.codeplex.com)
MEPI Schools

Within country collaborations
MEPI peer PI site visits
South-to-South MEPI collaborations
226 authors
- 66% Africans
- 66% articles with an African First author
- 39% of articles with African authors from more than one institution
Most Active UM Medical School Collaborations (MOU’s)

**Brazil**
University of São Paulo
Universidade Federal Da Bahia

**China**
Peking University Health Science Center
Peking Union Medical College Hospital
Shanghai Jiao Tong University
Xiangya School of Medicine

**Ecuador**
Pontificia Universidad Católica del Ecuador

**Ethiopia**
St. Paul’s Hospital & Millennium Medical College

**Ghana**
Kwame Nkrumah University of Science and Technology
University of Cape Coast
University for Development Studies
University of Ghana

**India**
All India Institute of Medical Sciences

**Israel**
Technion – Israel Institute of Technology

**Japan**
University of Tokyo Graduate School of Medicine
Okayama University Graduate School of Medicine

**Macedonia**
Ss. Cyril & Methodius Faculty of Medicine

**Panama**
Jose Domingo de Obaldia Hospital for Women and Children
University of Panama

**Peru**
Universidad Peruana Cayetano Heredia

**Taiwan**
National Taiwan University
Platforms

- Ghana
- China
- Brazil
- India
- Ethiopia
- Israel

- multidimensional
- cross departments, schools
- attract others who are interested in synergistic partnerships
Ghana Platform: Focus on Human Resources for Health

- 20+ year history that began with Dr. Tim Johnson and the Post-Graduate Training Program in OB-GYN (Carnegie)

Partners

- University of Ghana College of Health Sciences
- Kwame Nkrumah University of Science and Technology
- Komfo Anokye Teaching Hospital
- Ghana College of Physicians and Surgeons
- Ministry of Health / Ghana Health Service
- University of Michigan
NIH Medical Education Partnership Initiative (MEPI) Grant
Ghana: EDUCATION

• Residency programs
  – OB/GYN
  – Emergency Med

• Departmental Collaborations: IM, FM, Peds, Urol, Surg, ENT, etc

• Cross-School Collaborations: Public Health, Nursing, Dentistry, Engineering, etc

• Open Educational Resources

• Student Exchanges
  – Since 2007:
    • 37 4th year UMMS students to Ghana;
    • 87 Ghana medical students to UM
CHINA
Platforms in China, Brazil, India, Ghana, Israel and Ethiopia lead to important discoveries that impact human health.
## Clinical Activity: UM vs. Top Four Chinese Medical Schools

<table>
<thead>
<tr>
<th></th>
<th>UMHS</th>
<th>FUDAN</th>
<th>SJTU</th>
<th>PUMC</th>
<th>PKU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affiliated Hospitals/Centers</strong></td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Beds</strong></td>
<td>930</td>
<td>7,000</td>
<td>12,000</td>
<td>4,713</td>
<td>6,688</td>
</tr>
<tr>
<td><strong>Daily:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient Visits:</td>
<td>~6,411</td>
<td>32,000</td>
<td>45,390</td>
<td>12,984</td>
<td>32,431</td>
</tr>
<tr>
<td>Emergency Room Visits:</td>
<td>~ 319</td>
<td>1,620</td>
<td>N/A</td>
<td>N/A</td>
<td>1,810</td>
</tr>
<tr>
<td>Discharges</td>
<td>~ 171</td>
<td>730</td>
<td>1,112</td>
<td>489</td>
<td>762</td>
</tr>
<tr>
<td>Operations</td>
<td>~ 177</td>
<td>380</td>
<td>556</td>
<td>222</td>
<td>389</td>
</tr>
</tbody>
</table>
$7 million investment from Peking University Health Science Center and $7 million investment from University of Michigan Medical School to form a Joint Institute

**Goal:** By 2015....

- A research trajectory resulting in high impact, transformative, collaborative studies, on prevalent diseases
- ‘self sufficient’ funding from:
  - Chinese Government
  - U.S. extramural sources
  - Industry, Foundations, Philanthropy
Tissue transcriptome-driven identification of epidermal growth factor as a chronic kidney disease biomarker

Wenjun Ju1,2,*,†, Viji Nair1-1, Shahaan Smith1-4, Li Zhu3, Kerby Shedden2,4, Peter X. K. Song5, Laura H. Mariani1,6, Felix H. Eichinger1, Celine C. Berthier1, Ann Randolph1, Jennifer Yi-Chun Lai1, Yan Zhou5,6, Jennifer J. Hawkins1, Markus Bitzer1, Matthew G. Sampson7, Martina Thier8, Corinne Solier8, Gonzalo C. Duran-Pacheco8, Guillemette Duchateau-Nguyen9, Laurent Essious2, Brigitte Schott9, Ivan Formentini8, Maria C. Magnone8,9, Maria Bobadilla8, Clemens D. Cohen10, Serena M. Bagnasco10, Laura Barisoni11, Jicheng Lv1, Hong Zhang2, Hai-Yan Wang3,*,‡, Frank C. Brosius1,12, Crystal A. Gadegbeku13, Matthias Kretzler1,2,*, for the ERCB, C-PROBE, NEPTUNE, and PKU-IgAN Consortium

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‡‡‡ Present address: Department for Kidney Disease and Hypertension and Clinical Immunology, Harlaching Hospital, Munich
Sinait Fisseha, M.D., J.D.
- inspired by Tim Johnson, M.D. and work in Ghana
- worked with health ministry, development of a growing number of programs, particularly around women’s health
- new medical schools (flagship = St. Paul’s Millennium)
UM Medical School
Extramural Funding related to Global Activities

2012-13
2013-14
2014-15

$ in Millions
0
20
40
60
80
100
120
140
160

3/29/16
Value proposition to global initiatives?

- Grants
- Publication
- Engagement

- 131 Global REACH Faculty Associates representing 30 different UMMS units conducting research in 74 countries

- Recruitment advantage for students and house officers
Educational Tourism

“But I’m going to help!!!
What’s wrong with that?”

- Mismanaged expectations
- Lack of staying power (i.e. trust)
- “voyeurism”
- Importation of western solutions
- Culturally insensitive

- Distracting (burdensome?)
- Dangling things out of reach
- Motivating people to move away
- Creating inadequacy & dependency
240 UMMS Students had an International Experience in 51 countries between 2011 and 2014

- China, 27
- Ecuador, 16
- Ghana, 29
- Peru, 21
- Uganda, 17
- Kenya, 17
- Bolivia, 9
- India, 10
- New Zealand, 7
- South Africa, 6
- Japan, 6
- Other, 75

Other Category Includes (5 or Fewer Students in the last four years):

- Albania
- Argentina
- Australia
- Bangladesh
- Belgium
- Belize
- Brazil
- Chile
- Columbia
- Costa Rica
- Croatia
- Dominican Republic
- Ethiopia
- Germany
- Greece
- Guatemala
- Haiti
- Hong Kong
- Iran
- Israel
- Japan
- Korea
- Mexico
- Mozambique
- Nepal
- Nicaragua
- Nigeria
- Pakistan
- Panama
- Qatar
- Singapore
- South Korea
- Spain
- Swaziland
- Sweden
- Taiwan
- Tanzania
- Thailand
- Togo
- United Kingdom
- Zimbabwe
Core Competencies

- Patient care
- Medical knowledge
- Communication
- Professionalism
- Practice based learning
- Systems based practice
1: Gather a history and perform a physical examination
2: Prioritize a differential diagnosis following a clinical encounter
3: Recommend and interpret common diagnostic and screening tests
4: Enter and discuss orders and prescriptions
5: Document a clinical encounter in the patient record
6: Provide an oral presentation of a clinical encounter

**7: Form clinical questions and retrieve evidence to advance patient care**
8: Give or receive a patient handover to transition care responsibility
9: Collaborate as a member of an interprofessional team
10: Recognize a patient requiring urgent/emergent care and initiate evaluation and management
11: Obtain informed consent for tests and/or procedures
12: Perform general procedures of a physician

**13: Identify system failures and contribute to a culture of safety and improvement**
UMMS selected for one of 11 $1M grants from AMA to overhaul medical education

Register today!

You're invited to attend the American Medical Association Accelerating Change in Medical Education Consortium Meeting, April 6–8. Hosted at the University of Michigan Medical School, this two-day meeting's theme will be competency-based assessment, milestones and entrustable professional activities (EPAs). A draft agenda is available for your information.
AAMC Medical Student Graduation Questionnaire

% of medical students participating in global health experiences

- All Schools
- UMMS

Resized world maps

a) Population

b) Burden of Disease
Resized world maps

a) Population

b) Burden of Disease

Africa = 25%

c) Medical Schools

d) Workforce

Africa = 3%
Sub-saharan African Medical School Study (SAMSS)

Medical Education Partnership Initiative (MEPI)
1. Describe the value global health initiatives bring to learners.
2. Explain how global health initiatives are increasingly becoming an important dimension of the tripartite mission of medical schools.
3. Discuss how health science schools can optimally partner with schools in low-resource settings.
Can we articulate what we do, as a school, with regard to global health initiatives?

# faculty engaged globally
$ global funding
global impact
Enhancement of tripartite mission
If you want to go fast, go alone.
If you want to go far, go together.
The Globalization of Clinical Trials

Sources: Tufts CSDD

![Graph showing the percent of total FDA clinical trial applications for US-Based, Western Europe, and Rest of World from 1997 to 2007P.](image-url)
Traditional Education Model

- Curriculum
- Educational Objectives
- Assessment

Competency Based Education Model

- Community Population Society Health Needs
- Competencies
- Competencies Outcomes
- Curriculum
  - Assessment
Can we articulate what we do, as a school, with regard to global health initiatives?

`# faculty engaged globally
$ global funding
global impact
how global initiatives have enhanced our mission`
189 UMMS Students had an International Experience in 45 countries between 2011 and 2013

China, 23
Ecuador, 15
Ghana, 24
Kenya, 13
Peru, 19
Uganda, 13
Bolivia, 6
New Zealand, 6
India, 8
South Africa, 6

Other, 56

Other Category Includes (5 or Fewer Students in the last three years):
Albania
Australia
Belgium
Belize
Brazil
Columbia
Costa Rica
Croatia
Dominican Republic
Ethiopia
Germany
Greece
Guatemala
Hong Kong
Iran
Israel
Japan
Malawi
Mexico
Mozambique
Nepal
Nicaragua
Nigeria
Qatar
Singapore
South Korea
Spain
Swaziland
Sweden
Taiwan
Tanzania
Thailand
Togo
United Kingdom
Zimbabwe
Global REACH Visitors in Calendar Year 2014

43 students
25 scholars (e.g. rotations, courses)
85 dignitary visits (e.g. symposia)
30 tour
Total = 183
Brazil Platform
University of Sao Paulo

- Health Equity and Chronic Disease Management (Michele Heisler)
- Adrenal and Other Endocrine Cancers/Disorders (Gary Hammer)
- Reproductive Endocrinology and Technology (Gary Smith)
- Endocrine Genetics Collaboration (Sally Camper)
- Spinal Cord Injury (Denise Tate)
- Immunologic/Pulmonary Disorders (Marc Peters-Golden, Steve Kunkel)
President Coleman Visit to India in November 2013

25 UM Medical School faculty and students to explore partnerships with All India Institute of Medical Sciences

- Internal Medicine, Pediatrics, Surgery, Emergency Med, Rehab, Pathology, Genetics, Neurosurgery, Thoracic Surgery, Oncology,
> $22 Million in Extramural Funding over the past five years for Global Health Partnering Initiatives: UMMS*

- CHARTER-Ghana: $2.9M, Bill and Melinda Gates Foundation “twinning” grant to strengthen medical schools in Ghana
- African Educational Landscaping Grant: $400K Bill and Melinda Gates Foundation
- NIH Medical Education Partnership Initiative (MEPI): $2.5M *Emergency Medicine in Ghana* (+ $300K Supplement)
- NIH Fogarty Partner 1 & 2 (Ghana) $2.25 M
- NIH Fogarty Global Health Fellows: $4M (with 3 other institutions)
- Ethiopian Family Planning Grant: $1.5M, Anonymous Foundation
- NIH Human Heredity and Health in Africa: $5.9 M
- Open Educational Resources – Africa. $1.35M Hewlett Foundation
- China JI: Fogarty, NHLBI ~$ 0.6M

*often in collaboration with other Univ of MI schools*
Global REACH
Research, Education, and Collaboration in Health

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- FAQ

News and Announcements

One-year global health service partnership positions now available within Peace Corps
Peace Corps is now accepting applications from qualified individuals interested in serving as medical or nursing educators in Malawi, Tanzania, and Uganda. As announced at the... more

Shandong University visitors get warm UMMS welcome
High-ranking officials of the Shandong University Qilu Hospital made their first visit to UMMS in late June to tour medical school and health system facilities and to explore... more

Study opportunity in Uganda, January 2013
Deadline for Submission: July 11, 2012
Global REACH, in conjunction with the Sujal Parikh Memorial Fund, will provide up to two scholarships to University of Michigan... more

Upcoming Events

Joint Institute for Translational and Clinical Research Annual Symposium
11/28/2012 8:00 AM to 11/30/2012 6:00 PM

Save the Date: 2013 CUGH meetings
3/14/2013 8:00 AM to 3/16/2013 6:00 PM

More events
Making the university a transforming force in global health

CUGH 5th Annual
2014 Global Health Conference
Universities 2.0: Advancing the Global Health Agenda in the Post-MDG Era
May 10-12, 2014 | Washington, DC

CUGH Member Spotlights

Latest Announcements
Job Opportunities: Duke University - Assistant or Associate Professor of Global Health at Duke Kunshan University (DKU) in Kunshan, China
Duke University

UNC Chapel Hill: Global Public Health Photo and Video Competition
Now Open
University of North Carolina at Chapel Hill

RFP Mid Term Evaluation of MEPI Programs
University of Washington

more announcements »
International Engagement - 2015

- Strategic platforms in China, Brazil, Ghana, India, Ethiopia and Israel
  - multidisciplinary collaborative research and education initiatives

- Global opportunities continue to offer a recruitment advantage to growing subsets of learners and faculty
“Win – Win”

Ethiopia
- Advancing academic mission
- Addressing needs of the Ministries
- Developing capacity & Human Resources

UM
- Advancing academic mission
- Attracting funding
- Preparing learners for global opportunities

Science of collaboration????
Brazil Platform
University of Sao Paulo

- Health Equity and Chronic Disease Management (Michele Heisler)
- Adrenal and Other Endocrine Cancers/Disorders (Gary Hammer)
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