Human Resources for Health

The unmet opportunity
Long Term Solutions

- Global Health Workforce

Health workers save lives!

- Maternal survival
- Child survival
- Infant survival

Density of health workers:
- Low
- High
## Shortages of Health Care Workers by WHO Region

### 2006 World Health Report

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Number of Countries</th>
<th>With shortages</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>46</td>
<td>36</td>
<td>78%</td>
</tr>
<tr>
<td>Americas</td>
<td>35</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>11</td>
<td>6</td>
<td>55%</td>
</tr>
<tr>
<td>Europe</td>
<td>52</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>21</td>
<td>7</td>
<td>33%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>27</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>World</td>
<td>192</td>
<td>57</td>
<td>30%</td>
</tr>
</tbody>
</table>
Leadership Gap

Healthcare Leadership Gap

Current

MDs

RNs

CHWs

Planned Expansion

MDs

RNs

CHWs
Leadership Gap

Adult prevalence (%)
- 15.0% – 28.0%
- 5.0% – <15.0%
- 1.0% – <5.0%
- 0.5% – <1.0%
- 0.1% – <0.5%
- <0.1%
- No data available
### Leading Causes of Mortality (2004)

<table>
<thead>
<tr>
<th>Cause</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic Heart Disease</td>
<td>12.2%</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>9.7%</td>
</tr>
<tr>
<td>Lower Respiratory Infections</td>
<td>7.1%</td>
</tr>
<tr>
<td>COPD</td>
<td>3.7%</td>
</tr>
<tr>
<td>Diarrheal Disease</td>
<td>3.5%</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>3.5%</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>2.3%</td>
</tr>
<tr>
<td>Trachea, bronchus, lung cancers</td>
<td>2.3%</td>
</tr>
<tr>
<td>Road Traffic Accidents</td>
<td>2.2%</td>
</tr>
<tr>
<td>Prematurity, low birth weight</td>
<td>2.0%</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Cause</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Respiratory Infections</td>
<td>6.2%</td>
</tr>
<tr>
<td>Diarrheal Disease</td>
<td>4.8%</td>
</tr>
<tr>
<td>Depression</td>
<td>4.3%</td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>4.1%</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>3.8%</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>3.1%</td>
</tr>
<tr>
<td>Prematurity, low birth weight</td>
<td>2.9%</td>
</tr>
<tr>
<td>Birth Asphyxia, birth trauma</td>
<td>2.7%</td>
</tr>
<tr>
<td>Road Traffic Accidents</td>
<td>2.7%</td>
</tr>
<tr>
<td>Neonatal Infections and other</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Adapted from WHO, 2008
Global Health Service Partnership

- Public Private Partnership
- Federally-funded
- Private loan repayment
- Partnership with medical education and public sector systems

www.seedglobalhealth.org
Models of Service

- Domestic
  - National Health Service Corps
  - Indian Health Services
  - West Virginia
  - Harvard Medical School
History of GHSP

- 1948: The Marshall Plan
- 1950: JFK Signs Peace Corps Act
- 1960: JFK Speaks at University of Michigan
- 1978: Declaration of Alma-ATA
- 1979: International Health Act
- 1985: Institute of Medicine Report: Healers Abroad
- 2003: President's Emergency Plan for AIDS Relief (PEPFAR)
- 2005: Global Health Corps Act
- 2009: Obama Global Health Initiative
- 2010: Medical Education Partnership Initiative
- 2011: Peace Corps 50th Anniversary
GHSP Model

- Serve as clinical faculty for at least one year
- Partnership with host country institutions
- Enhance existing clinical training systems
- Volunteers:
  - MDs must have completed training
  - RNs must hold BSN plus additional degree
  - Teaching experience
• Cardiologist
• Married, *serving with spouse*
• Retired clinical faculty
• Experienced global health practitioner
• Committed to collaboration
Benefits

- Peace Corps
  - Living allowance
  - Travel
  - Benefits and malpractice
  - Housing
- Seed Global Health
  - Clinical and academic support
  - Loan repayment stipends
Public Private Partnership

- Loan Repayment for service
  - Up to $30,000 for each year served
- Educational and other debt

Strength in Partnership
Launch 2013

- 2013: 31 physician and nursing volunteers
- 2014: 42 volunteers

Uganda: 12 MD/100k
131 RNs/100k

Tanzania: 1 MD/100k
24 RNs/100k

Malawi: 2 MDs/100k
28 RNs/100k
# Site Requests - Specialties

<table>
<thead>
<tr>
<th>Specialty</th>
<th>MD</th>
<th>Non MD Specialty</th>
<th>RN</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesia</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Clinical Pharmacology</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Community Health</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Comprehensive Nurse</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Med/Surg</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Medicine - family</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Medicine - internal</td>
<td>5</td>
<td>1</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Microbiology</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Midwifery / OBGYN nurse</td>
<td></td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Molecular biology</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>OBGYN</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Pathology</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Pharmacotherapeutics</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>RN leadership/management</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>2</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>28</td>
<td>3</td>
<td>19</td>
<td>50</td>
</tr>
</tbody>
</table>
Applicant Profile: Year 1

Specialty categories: MDs N=70
- Anesthesiology 2%
- Psychiatry 4%
- Emergency Medicine 6%
- Family Medicine 14%
- OB/GYN 18%
- Pediatrics 20%
- Internal Medicine 28%
- Surgery

Degree categories: RNs N=100
- BSN 35%
- PhD 5%
- Midwife 9%
- Advanced Degree: APRN, CNS, MSN, NP 44%
- unspecified or lower degree 7%
Academic Partnership

- MGH Center for Global Health
  - Coordinating center
  - Education and training expertise
- Additional academic partners
  - George Washington University
  - Targeted courses
  - Site development
  - Sabbatical
Successes

- 31 volunteers were placed at 13 sites affiliated with 11 institutions.

- Taught 85 skills workshops and courses to over 2,800 faculty, medical officers, residents, medical and nursing students.

- **New educational initiatives:** post-admission conferences, case-based instruction, morning reports, problem-based learning, bedside ultrasound training, and skills labs.
Successes

- Sites noted more consistent and high-quality clinical supervision
- Volunteers offset faculty workloads
- Introduction of new teaching methods
The challenges cited most by volunteers included:

- unfamiliarity with clinical decision-making in resource-poor settings
- difficulty framing lectures
- language barriers
Monitoring and Evaluating

- Human Resource for Health Outcomes are seen over time
  - Numbers trained
  - Patient outcomes
  - Retention

- Operational and strategic metrics:
  - Retention and performance of volunteers
  - Efficacy of field support
  - Long term assessment
    - impact of program on practice of returning volunteers
The inaugural PCVs will be from Internal Medicine, General Surgery, Pediatrics, Obstetrics and Gynecology, Psychiatry and Family Medicine to begin. Global Health Service Corps anticipates their specialty base will expand with subsequent years and differing needs by country.

- Process assessments and improvement
- Providing in-country support
- Program growth
- Partnerships

<table>
<thead>
<tr>
<th>GHSP Five year Growth Plan</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>GHSP aims to impact metrics of health improvement, in cooperation with numerous other in-country global health innovators and initiatives</td>
</tr>
</tbody>
</table>
| 5                          | -Increased ratios of health providers to population  
|                            | -Increased Births attended by skilled health personnel  
|                            | -Decreased infant mortality rate  
|                            | -Decreased under five mortality rate  
|                            | -Decreased maternal mortality rate  
|                            | -Decreased cause specific mortality from HIV/AIDS, malaria and tuberculosis |

[1] The inaugural PCVs will be from Internal Medicine, General Surgery, Pediatrics, Obstetrics and Gynecology, Psychiatry and Family Medicine to begin. Global Health Service Corps anticipates their specialty base will expand with subsequent years and differing needs by country.
Acknowledgements

- Peace Corps
- PEPFAR
- Seed Global Health team
- Massachusetts General Hospital Center for Global Health
- George Washington University
- Our partner sites in Uganda, Tanzania, and Malawi
- Harvard Medical School
Key References

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- Mullan et al. Lancet 2011; 377: 1113-1121
- Kerry et al. Plos Med 2011; 8: e1001118
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