Residency Program Involvement in A Humanitarian Crisis:

How a Pediatric Global Health Track Became Involved in an Ebola epidemic

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Objectives

• Background
  • Liberia – Health workforce depletion
  • Formation of a US Academic Collaboration to support Med Ed
  • Goals and Objectives of Collaboration

• 2014 Ebola Epidemic
  • Impact on our Liberian Partners
  • Early Relief Efforts

• Academic Medical Support to Ebola Relief Efforts
  • Faculty recruitment
  • IPC training at government hospital

• Lessons learned/ Future directions
The Republic of Liberia

- Population: 3.9 million
- Civil war 1989-2003
  - 250,000 killed
  - 350,000 displaced
  - Drastically depleted physician workforce
- Medical infrastructure destroyed

Map: WWW.AFDP.org

# Civil War and Physician Work Force

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<thead>
<tr>
<th></th>
<th>2003</th>
<th>2012</th>
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<tbody>
<tr>
<td>Total Physicians</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Practicing Physicians</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>pediatricians*</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>General Surgeons</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Anesthesiologists</td>
<td>0</td>
<td>0</td>
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*44% population 0-14 years of age

MOHSW, Liberia
UMass Dept. of Pediatrics in Liberia
2008

• One month elective
• 2 residents travel with one supervising faculty member
• Objective: teaching clinical pediatrics to Liberian medical students and interns
JFK Medical Center: National Referral and Teaching Hospital
ACSMEL Objectives:

1. To provide direct service, pediatric clinical education and modeling of care to Liberian medical trainees

2. To support Liberia’s implementation of sustainable pediatric graduate medical education (GME)

3. To provide a high quality global health rotations for US pediatric residents
US Resident Rotations:
## ACSMEL Participants (US)

<table>
<thead>
<tr>
<th>Table 1: Numbers and Types of Pediatric Rotators at JFKMC</th>
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<tbody>
<tr>
<td><strong>Resident</strong></td>
</tr>
<tr>
<td>2008</td>
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<tr>
<td>4</td>
</tr>
<tr>
<td><strong>Fellow</strong></td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td><strong>Faculty</strong></td>
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<td>3</td>
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March, 2014: Ebola Strikes Liberia

**Ebola deaths:**
(Figures up to March 2016)

28,639 cases — probable, confirmed, suspected

11,316 Deaths:

- 4,809 Liberia
- 3,956 Sierra Leone
- 2,538 Guinea
- 8 Nigeria
- 6 Mali
- 1 US

*Source: WHO*
Second Wave of cases: Monrovia

June 12th 2014
• Cases reported in Monrovia

West Point
• Geographically isolated
• 100,000 people in a 2 sq mile area
• Frequent outbreaks of measles, cholera
August-Sept. 2014 Hospital Closings:

Catholic Hospital

JFK Medical Center
Effect on Healthcare Workers

389 Healthcare Worker Infections
- 192 Healthcare Worker Deaths
ACSMEL Response to Ebola
Challenging questions raised by the Ebola Epidemic:

• What is the role of Academic Medical Centers and Faculty during a humanitarian crisis?

• What should be the role of resident trainees? Global Health Fellows? Disaster Medicine Fellows? Faculty?
Academic Medical Center Support to the Ebola Epidemic in Liberia

Funded by the Paul G. Allen Family Foundation
• University Academic Partnership with 7 years experience in Liberia
• Partnered with the A. M. Dogliotti Medical School, Liberia College of Physicians and Surgeons
• Added new partners: MIT Humanitarian Response Lab, Avenir analytics (Logistics), Addis Ababa University
Objective #1: Recruitment of clinical and preclinical faculty from our Academic Collaboration

- Staff ETUs
- Staff key teaching hospitals to restart clinical training programs
- Provide basic science faculty to reopen Liberia’s only medical school
- Provide mentoring to trainees
Objective #2: Provide IPC training and supplies to all 21 government hospitals in Liberia

4 Training Teams of Liberian
- MDs
- Nurses
- Midwives
- Psychosocial Workers
- Water and Sanitation
- Experts
Delivery of 80 tons of PPE
Objective # 3: Provide Ebola Diagnostic capacity in key hospitals
Key Outcomes:

• 21 MOH hospitals trained and supplied in infection prevention and control by March, 2015

• 40 clinical faculty sent to provide clinical service and help restart clinical training programs at 4 key teaching hospitals in Liberia from March-December 2015

• 15 basic science faculty sent to teach and reopen the AM Dogliotti Medical School in Sept, 2015

• 2 key hospitals equipped with Ebola diagnostic capability and Liberian lab personnel trained to perform Ebola diagnostics
Future Directions

• Both IPC and lab work has been funded by the CDC to continue for an additional 2 years

• ACSMEL faculty will participate in a Health Workforce Program that is currently being designed by the Liberian Post Graduate program

• Global Health Fellows will participate as faculty members. Future of US resident rotations? Uncertain

• Hosting Liberian residents at UMass and other consortium institutions: Making this a true bidirectional partnership
Lessons Learned:

• Academic Collaboration is an excellent way to increase capacity at partner sites and accomplish a tremendous amount.

• Synergy and continuity that comes from residents from different institutions working together is another positive feature of this model.

• It is important to be flexible and change as the needs of your partnership change:
Reunion