Risk, Response, and Recovery
A Community’s Battle with Ebola in Sierra Leone

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BACKGROUND

- In June 2014, faculty and students from Public Health Without Borders (PHWB) and Maryland Sustainability Engineering (MDE) traveled to Calaba Town, Sierra Leone to implement health education and engineering projects with community partners
- Our travel coincided with the beginning of Ebola outbreak in other parts of Sierra Leone
- Four out of every five people in Sierra Leone live in poverty, and over half of the population lacks safe drinking water1
- Calaba Town developed in early 2000s as part of reconstruction efforts due to the 11-year Civil War which ended in 2011
- Residents include individuals who relocated because of the war
- Lacking basic infrastructure, Calaba Town was identified by the Madieu Williams Foundation (MWF) as a community that would benefit from a primary school
- Abigail D. Butcher school completed in 2009, named in honor of Madieu’s mother
- Our collaborative project focused on children at this school and their families

PHWB AND MDE IN SIERRA LEONE

PHWB and MDE teams collaborated and helped each other to meet goals:

- **Engineering Team**
  - Installed UV water sanitation system
  - Laid foundation for a secondary school
- **Public Health team**
  - **Workshops**
    - 9 workshops with children (hand washing and oral hygiene)
    - 3 workshops with adults (oral rehydration therapy)
  - **Evaluations**
    - 79 child workshop evaluations
    - 22 adult workshop evaluations
  - **Health Behavior Interviews**
    - 55 child interviews
    - 50 adult interviews

SPREAD OF EBOLA IN SIERRA LEONE

- Ebola Virus Disease (EVD) is a severe, often fatal illness in humans characterized by a sudden onset of fever, fatigue, muscle pain, headache and sore throat followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases, both internal and external bleeding2
- Timeline of the Ebola epidemic in Sierra Leone:3
  1. 7/31/2014:
     - Health Education and Engineering (MWF) distributed bags of rice to Calaba Town residents
  2. 9/19/2014:
     - Aberdeen caused a spike in cases; 700 additional households
  3. 9/25/2014:
     - Following surge in cases, 3 workshops with adults (oral rehydration therapy)
  4. 11/18/2014:
     - Over one million suffering from symptoms of impaired kidney and liver function
  5. 2/2015:
     - Total of 11,947 cases

IMPACT OF EBOLA

- **Healthcare system**
  - Crippling of health sector, increasing impacts of other diseases and associated mortality
- **Children and Education**
  - More than 12,000 children have been orphaned by Ebola in Sierra Leone
  - Many children, including those at the Abigail D. Butcher school, have not been in school since July 2014
  - Lessons given over the radio
  - Many observe “ABC” (Avoid Body Contact)
- **Economy**
  - Closed work places, restrictions on trading
- **Moral**
  - At time when people need physical comfort, none can be given
  - Implications of quarantine

LESSONS LEARNED FROM COMMUNITY INTERVIEWS: POTENTIAL FACTORS IN EBOLA OUTBREAK

- **Leadership**
  - Community depends on elected leaders, but does not always trust them
  - Access to health services
  - Nearest health facility is a small clinic, 3 miles away at the bottom of the hill
  - Clinic serves a population of 20,000 people
- **Social, Cultural, and Economic Factors**
  - Many Calaba Town residents do not have a steady job
  - Limited opportunities for women and girls
  - Lack of transport in and out of their community
  - Education is cost-prohibitive for many families
  - Ritual practices (e.g., burial, FGM)
  - Knowledge and Information
  - Varieties of health concerns, but in June 2014, Ebola was not among them:
    - Cholera
    - Malaria
    - Stomach aches, vomiting, diarrhea
    - High blood pressure
    - Headaches
    - Clean water
- **Access to health services**
  - Nearest health facility is a small clinic, 3 miles away at the bottom of the hill
  - Clinic serves a population of 20,000-50,000 people
  - Other than pregnant women and young children, all patients pay for services

PHWB and MDE working together on the new secondary school foundation

Hand washing workshops

Students proudly displaying their worksheets

Conducting interviews with students and community members

Article about the lasting effects of Ebola in Calaba Town published in a local newspaper, Awoko, in March 2015

SUPPORTING CALABA TOWN

- Having experienced the warm welcome of this community, we feel compelled to stay involved, especially through this crisis
- After consultation with MWF, we determined that the community would be best supported through basic necessities, since trade and travel bans resulted in a lack of basic food supplies
- PHWB raised money to purchase bags of rice which were distributed to the community in March 2015
- As the Ebola epidemic slows and the country begins to return to some state of normalcy, we will consider other aid options, especially those related to educational needs of the children of this community and to children who have been orphaned

Distribution of bags of rice to Calaba Town community members at the Abigail D. Butcher Primary School in March 2015, capturing some somber expressions after the Ebola outbreak

IMPLICATIONS

1. Acknowledge social, cultural, and economic factors while proposing risk reduction recommendations
2. Consult community and community partners rather than make assumptions about best way to support a community in crisis
3. Future travel to the community may include educational materials and workshops related to Ebola, malaria, and first aid as well as latrine improvements

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