

Visualization and Data Analysis: Healthcare Needs of Rural Clinics in Malawi

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*Can technology enable CHWs to
fight the disease epidemics and
human resource crisis?*

Right now someone is using a mobile phone to report a new tuberculosis case...
These little actions are changing outcomes almost all over the world.

Challenges to Health in Malawi

- Worst Health Indicators
 - Life expectancy: 44 years (2007)
 - 1 / 124 births = Maternal mortality
 - 1 / 15 births = Infant mortality

Challenges to Health in Malawi

- Prevalent diseases
 - HIV AIDS: 12% (900,000)
 - Malaria: 40% of hospital deaths
 - Disease outbreak: Cholera, Plague

Challenges to Health in Malawi

- Human Resource Crisis
 - 257 doctors, 14 million people
 - High attrition, low training and recruitment
- Shortage of medications

E-health initiative in Malawi

- Outpatient clinic at a district hospital
- 3 years of point-of care data
(Feb 2008 – Mar 2011)

Goals

- **What can we learn from Malawi?**
 - Understand E-health initiative
 - Identify positives / negatives
- **Recognize planning and operational gaps**
 - Evaluate database
 - Improve ongoing data collection
- **Surveillance and Projections**
 - Create better situational awareness through real-time visualizations

Desired skills / interests

- Management / Operations
- Computational:
Database (MySQL), Data analytics
- Design, Information Visualization, Graphics

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