



Mobile Diagnostics for Cervical Cancer

Milestone 1: Elevator Pitch & Background Research

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Cervical Cancer in Zambia



Source: CIA World Factbook.

- 80% of new cases and 80% of the annual deaths occur in women who live in developing countries.
- Projected #1 killer of women in Zambia

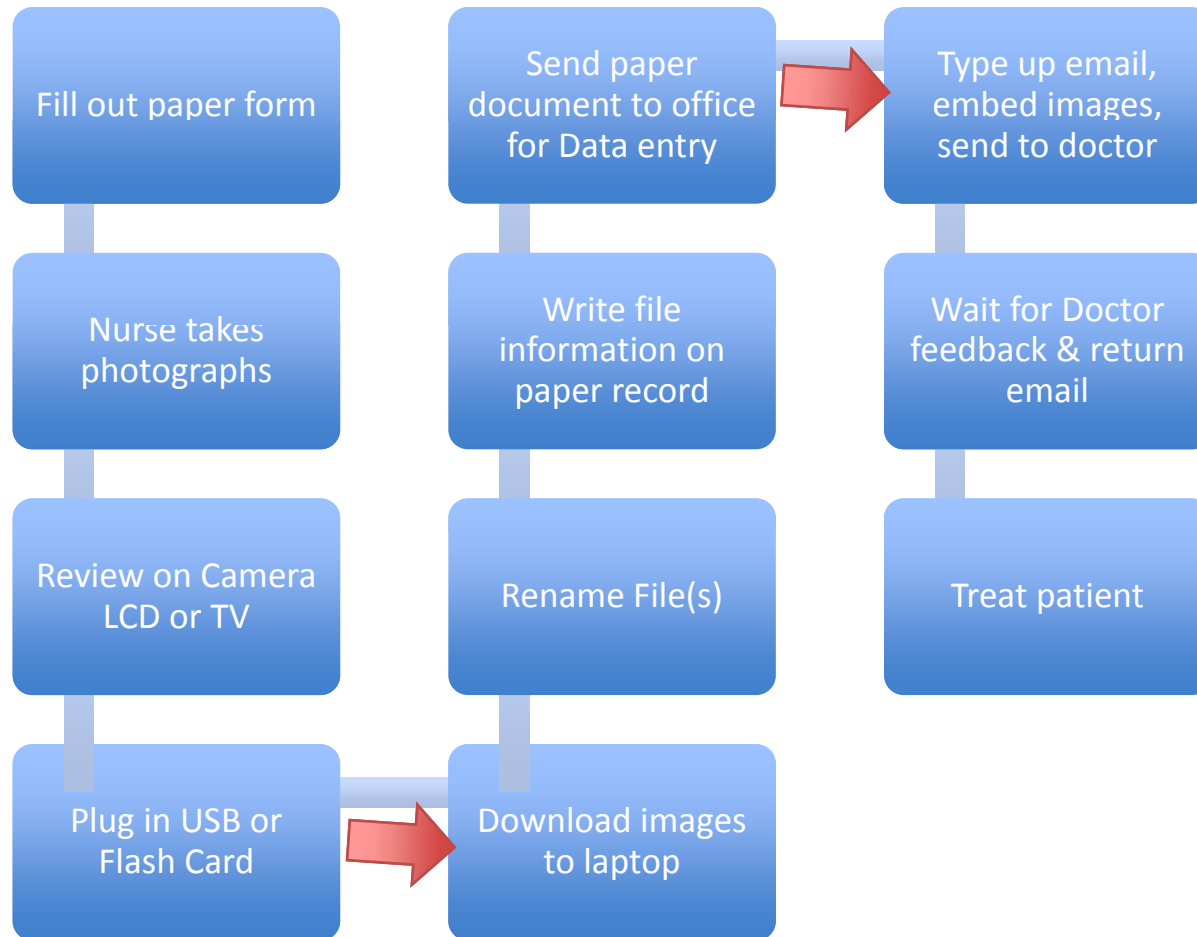
•Clinics have screened 30,000 women in the past 2.5 years. There are 4.5 million women who SHOULD be screened in Zambia alone. **How do we scale this up?**



Elevator Pitch

- ZamMoCa is a mobile-linked web application that allows doctors to remotely diagnose and recommend treatment for cervical cancer patients via images.
- Unlike the current email based system, our solution will function under low network reliability and support both mobile and laptop input into a Flickr-like web interface. Centralized experts can then review, comment and make diagnoses based on the images.

Current Process

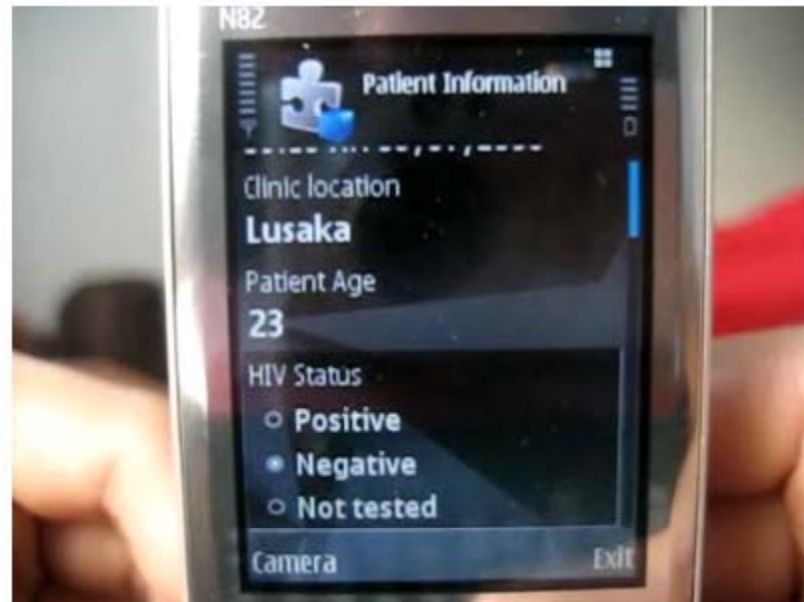


Room for Improvement

- Too many steps in current workflow
- Paper based data system is not incorporated with the electronic format
- Cell network connection in Zambia is spotty for reliable image transmission.
- Email image review is cumbersome, difficult to consolidate feedback

Last semester

- Functioning prototype
- Field tested by Andrés, Leo and Dan
- Limitations remain:
 - Low bandwidth
 - Excessive user confirmation
 - Camera quality lower than existing solution
 - Can only handle one image at a time
 - Bare bones web interface

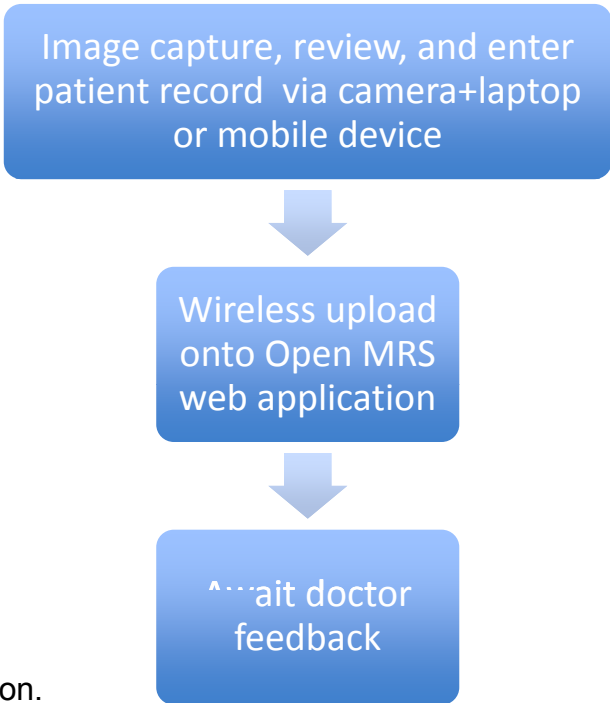




Courtesy of OpenMRS. Used with permission.

Open MRS

Our Solution



Other related projects

- **Diagnostics for All:** Last year's 100K winners!



Paper based microfluidic chip that changes colors when exposed to bodily fluids.

Allows for quick & easy diagnosis!

Courtesy of Diagnostics for All. Used with permission.

- **D-Tree:** Provides medical decision trees on PDAs
- **Voxiva's CareNet:** allows doctors to monitor patients' symptoms via SMS; provides reminders to patients to take pills, come in for treatment



Questions / Feedback?

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MAS.965 / 6.976 / ES.S06 NextLab I: Designing Mobile Technologies for the Next Billion Users
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