Encouragement System for Pregnant Women in Kenya

William Pitts, David Swanson, Alan Ridwan, Jamie Badilla, Yi-Chen Sung, Brian DeRenzi

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Maternal mortality is high

Kenya 530/100k

US 24/100K
Low clinic visits during pregnancy

only attending 1 of the 4 recommended clinic visits
• pregnant women lack practical health knowledge
• Women often do not plan for the financial burden of pregnancy and birthing
• Cell phone coverage is reasonable
• the female literacy rate is around 80%
Send **interactive** SMS messages containing **practical** and **actionable** information that will **encourage** and **empower** the women to take their health care into their own hands.

Patients get **automated** messages **regularly** that are **tailored to their health condition** (such as high blood pressure, anemia, etc).
Solution

- A web-based application that allows nurse to handle messages from patients
- Nurses have a list of all patients and one click access to all correspondence
- Nurses get periodic reminders to call and check in with patients who have not texted in two weeks
- Nurses may add notes and visit histories, call logs, and keep track of health conditions
Design

6 iterations based on feedback from the followings:
- Ahero Clinical Staff in Kenya
- Dr. Jennifer Unger
- Kathryn Curran, PhD Candidate in Global Health
- Kenya Research Program

The encouragement system runs on the **Django** framework, with automated message scheduling using **Celery**, an asynchronous task module and a **JavaScript** front end.

Since we are using an HTTP-based SMS service, no hardware or SMS libraries are needed.

The server may be hosted on any webhost that allows Django projects.
Overview – Patient List

- Patients are sorted in order of urgency
- Live search enables searching by name or ID number
- Add patient button pulls up an intuitive form for adding a new client
- If it is urgent to call a patient or if they have pending messages, a notification displays by their name
• The entire correspondence with the client, one click away
• Send messages to the client, view received messages, and add call notes
• The hub of interaction with clients
Overview – Patient Details

- The overview for all of patient's information
- Keeps track of a patient's medical conditions, any notes, and their visit history
- Allows adding of notes, visits, and editing of patient information
• Handles messaging through interface with web-based SMS service API
• Written to make changing interfaces as easy as possible
• Need a service that does reverse billing
• The standout feature of the Encouragement System
• Sent out twice a week
• Keyed into a patient's medical conditions, as well as which week of pregnancy she is in
• Administrators can modify the list of medical conditions and add, edit, and remove automated messages.
• Some conditions and messages will come pre-loaded
Demo server hosted at 23.23.212.97

1. adding a patient
2. registering
3. editing the patient’s status
4. sending a message to the patient
Pilot deployment in Kenya this summer with Dr. Unger and Brian DeRenzi

Looking into SMS provider to use