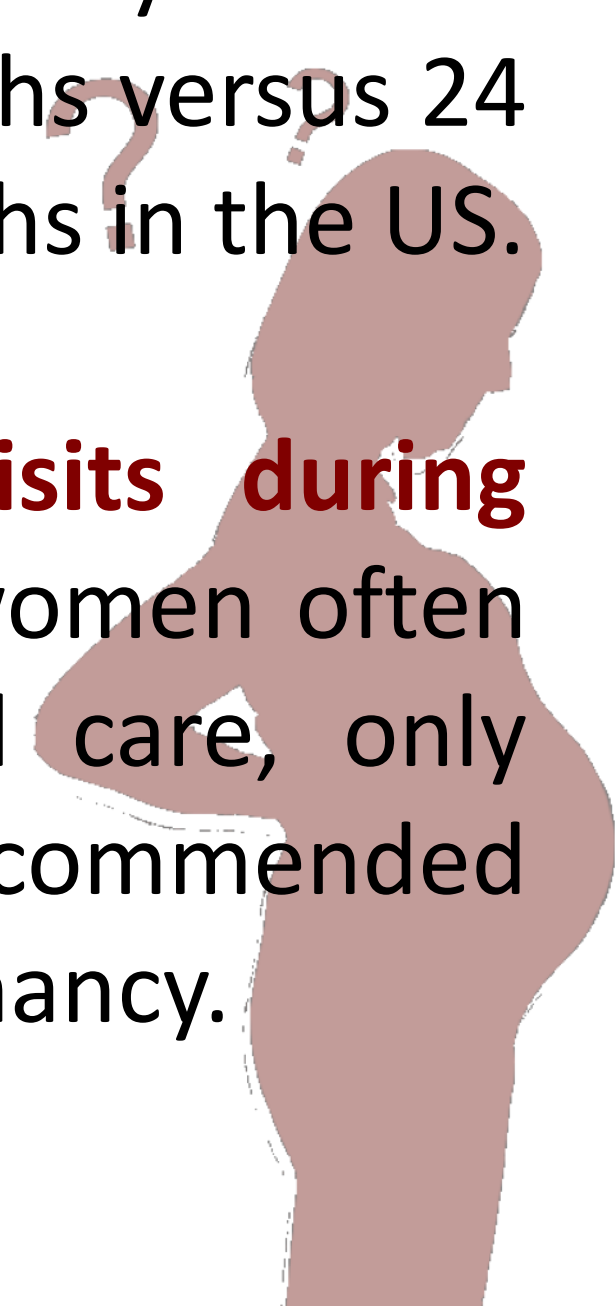


Encouragement System

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

PROBLEM

- **Maternal mortality is high**
Maternal mortality in Kenya is 530 deaths per 100,000 births versus 24 deaths per 100,000 births in the US.
- **Low rate of clinic visits during pregnancy** Currently, women often receive little antenatal care, only attending 1 of the 4 recommended clinic visits during pregnancy.



RESEARCH

RELATED WORK

- **MOTECH** sent text messages to pregnant women in Ghana and found that they needed to use voice messages due to low literacy rates in Ghana.
- **WelTel Kenya1** is a study in Kenya with HIV positive patients that showed that including SMS communication improved treatment.

FIELD WORK KEY FINDINGS (RESEARCH BY DR. UNGER)

- Pregnant women lack health knowledge
- Women often do not plan for the financial burden of pregnancy and birthing
- SMS is a popular form of communication in Kenya
- Cell phone coverage is reasonable
- Female literacy rate is high

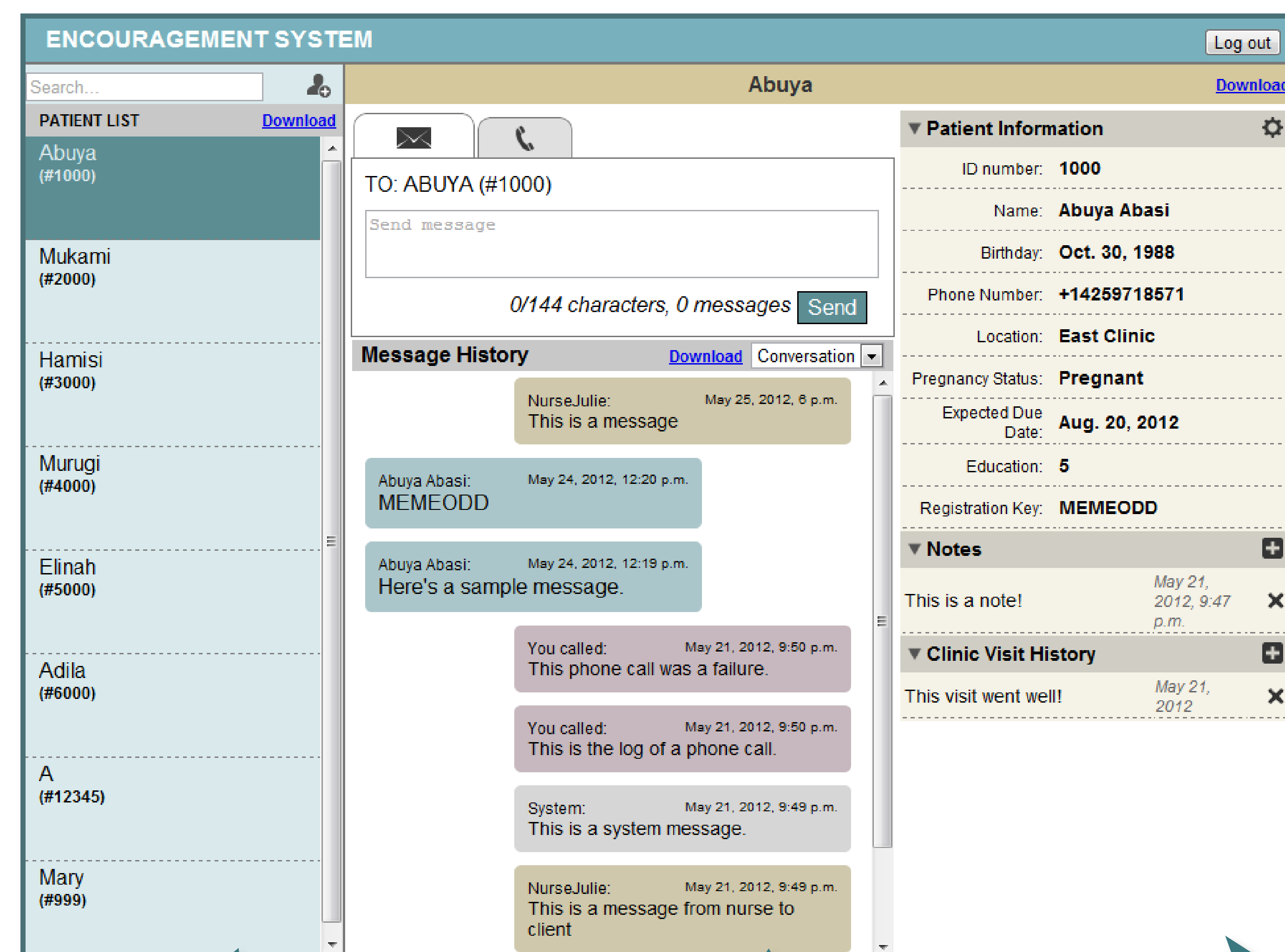
SOLUTION

Send SMS messages containing practical and actionable information that will encourage and empower the women to take their health care into their own hands.

KEY FEATURES

- **For Pregnant Women**
 - Messages tailored to each woman's healthcare needs
 - Allows women to reply to text messages
 - Encourages participation by requiring timely responses
- **For Clinics**
 - Automatically and periodically sends messages to women based on their pregnancy status
 - Reminds nurses to call patients who are unresponsive
 - Enables two-way text message communication with patients to improve participation
 - Export patient data and message history

CLINIC INTERFACE



The UI consists of three major pieces: the patient list pane on the left, the message pane in the middle, and the patient details pane on the right. Each of these panes also has a link to download the pane's information.

The patient list is sorted by urgency. A patient who must be called will appear at the top with a red phone by her name. Following urgent patients are patients who have texted the nurse recently, and then the rest of the patients ordered by ID number.

In the message list, the messages may be viewed as either a conversation view or in a table. The messages are sorted by date, and phone call notes are also displayed in their proper place.

The patient details pane contains details specific to the patient, such as expected due date and health conditions. The patient details pane also displays notes and the clinic visit history, and allows adding notes and visits.

NEXT STEPS

- Integrate with the SMS service we will use in Kenya
- Begin Kenyan deployment in June