

# Data Collection and Management Application-Malawi

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Vijaya Chinnam  
Tejaswee Katanguri  
Professor Patricia Alice Francis Lyon  
Mentor: Dr. Marcianna Nosek



# Background

- Women in Malawi have an average of five children. In Malawi, 6% of children die before the age of 5 years. Of these 6%, 68% die within their first year and 40% die within the first month.
- According to the World Health Organization's statistics, 12% of children in Malawi do not survive to the age of five and approximately 20% of these deaths occur within the first month of life.
- Currently, the health system in this place has a manual(paper) way of collecting patient information which includes mother and baby information, and then they take this information to another location where they enter it on to a digital platform





# AMHI- African Mothers Health Initiative

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- AMHI provides home-based nursing care to vulnerable babies and postpartum mothers to save their lives.
- They have different programs like mother care and baby care which provides supports to postpartum women and infants for the entire first year. So that we can have a significant impact on child survival.



# Aim

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- The project's goal is to implement a digital health application that can also be used offline on the low end Android devices and laptops, eliminating the need for manual data entry and possible human errors.



# Community Health Tool Kit

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- The Community Health Toolkit (CHT) is a project by a group of leading organizations who have come together to support the development of digital health initiatives in the hardest-to-reach areas.
- It provides a collection of open source technologies and open access design, technical, and implementer resources that help you build and deploy digital tools for community health.



# MEDIC MOBILE

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- Medic Mobile serves as the technical lead and a core contributor to the Community Health Toolkit, which helps health workers ensure safe deliveries, track outbreaks faster, treat illnesses door-to-door, keep stock of essential medicines, communicate about emergencies, and more.
- 14 Countries in Africa, and Asia where Medic Mobile is making an impact 24,463



MEDIC  
MOBILE™



# Installation of Core Framework

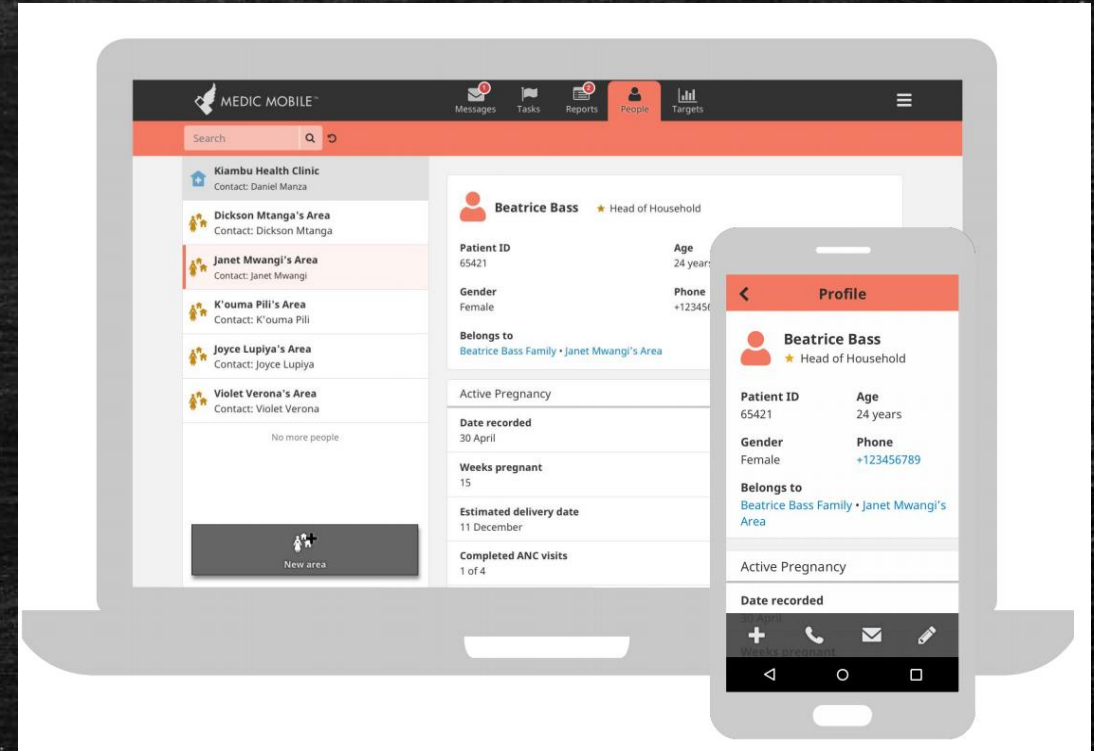
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- **DOCKER:** provides an easy-to-use development environment for building, shipping, and running dockerized apps.
- **MEDIC CONF:** command-line interface tool to manage and configure your apps built using the Core Framework of the Community Health Toolkit.
- **COUCHDATABASE**
- **Deploying the web app:** Web app code is stored in CouchDB
- **Start medic- api:** API is needed to access the application.
- **Start medic-sentinel:** Sentinel is responsible for certain background tasks.



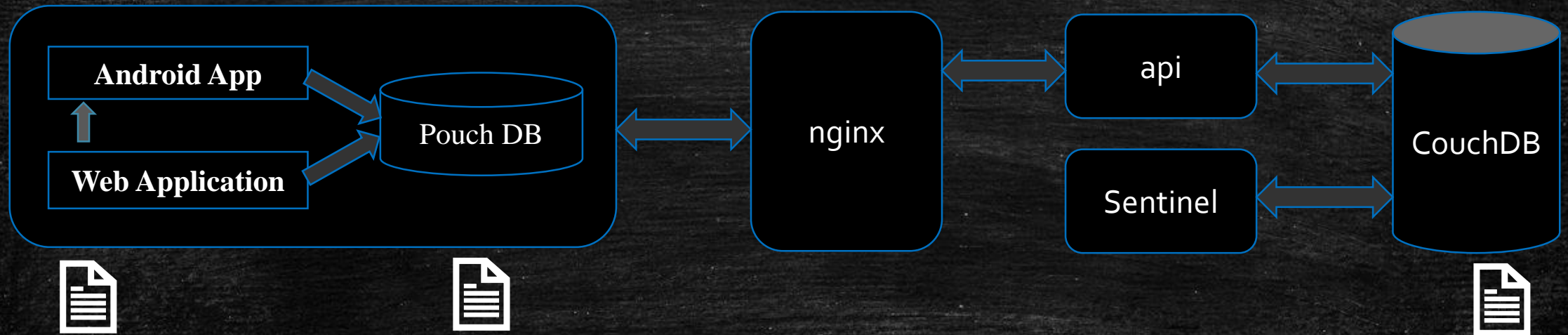
# Application

- Built on CHT framework foundation, this offline first application has five highly configurable areas:
  - Messaging
  - Tasks
  - Reports
  - Organization and person profiles
  - Targets





# Data Management





# Forms

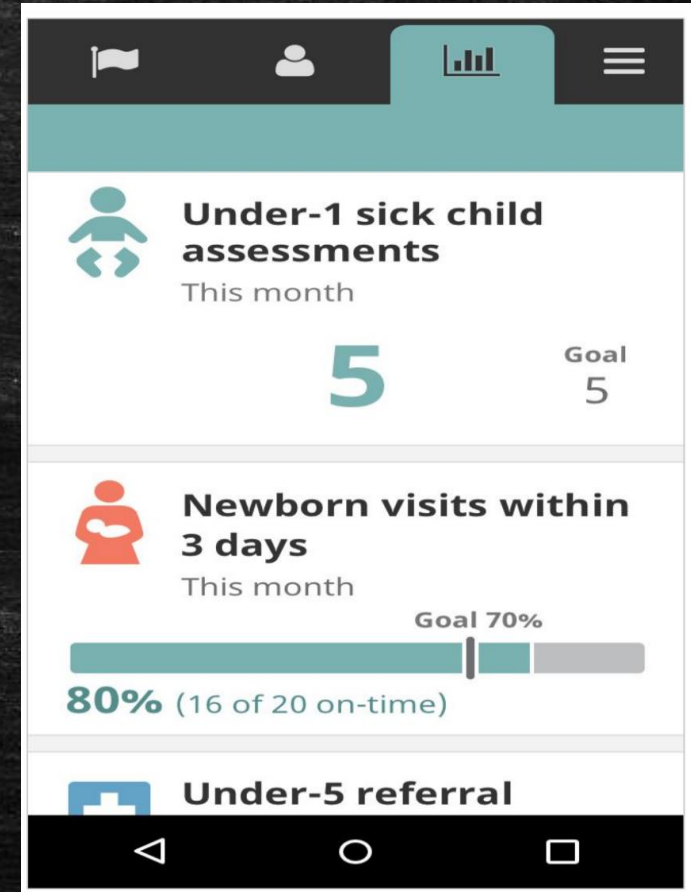
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- We used XForms standard which is a recommended way to define app forms.
  - *begin group*           // group summary   // label           // field list
  - *string*               // variable name   // question1
  - *Multiple choice*   // variable name   // question2
  - *end group*           // group name
- When a user submits an app form, the data is saved in the database with the type `data_record`.



# Targets

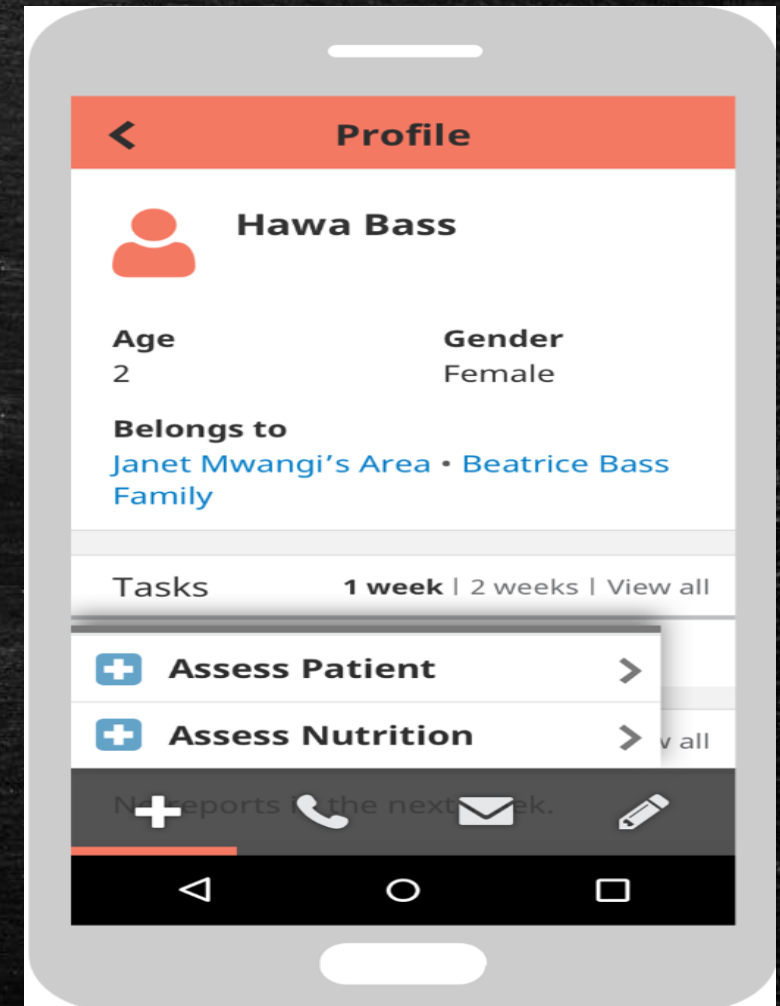
- Targets is a user dashboard or analytics tab.
- These widgets provide a summary or analysis of the data in reports that have been submitted
- For CHWs, the Targets tab can provide a quick summary of their progress towards their goals.
- Targets can be modified and added using java script.





# Android

- The app runs on Android phones and tablets. It works best on devices running version 5.1 or later with at least 8 GB of internal memory and minimum 1 GB RAM.
- Once the Android Application is built using Android Studio and installed on a device. User can then click on the app and enter the server address to connect or ngrok provided address for local instance.
- All the changes made on the web application will then be reflected on the Android application.





# Future Work

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- Complete Target requirements.
- Clean up the Application for Roll out.
- Repeat the installation process with the EC2 server and work with contact in Malawi for the set up process.



*Thank You*

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