



MAMAREMIND: WHATSAPP-BASED PRENATAL CARE CHATBOT

A lightweight digital health solution to support pregnant women in rural Kano State

Capstone Project | DIF Fellowship
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Problem Statement

In rural areas of Kano State, many pregnant women miss critical prenatal appointments due to a lack of awareness, poor scheduling systems, and limited access to health information. Health workers also struggle with follow-ups, especially in areas with limited infrastructure.

Key Issues:

- ❑ Missed prenatal visits and health checks
- ❑ Poor record-keeping and appointment reminders
- ❑ Limited access to reliable health advice
- ❑ High maternal and infant health risks due to poor follow-up

Opportunity:

A simple, WhatsApp-based chatbot can help remind women of key appointments, share health tips, and improve communication with healthcare workers.

Introducing MamaRemind

MamaRemind is a simple WhatsApp-based chatbot designed to support pregnant women in rural areas. It helps them stay informed, attend key appointments, and maintain direct communication with healthcare workers, all without needing to download any new app or learn new technology.

MVP Features of MamaRemind Chatbot:

1. User Registration via WhatsApp
2. Automated Antenatal Reminders
3. Health Tips & FAQs
4. Emergency Contact Access
5. Health Worker Dashboard (Basic)

User Research

Method:

Simulated interviews and surveys of 20 participants (12 pregnant women, 8 health workers).

Key insights:

- ❑ 90% of women use WhatsApp regularly.
- ❑ 70% forget antenatal dates or are unsure of next steps.
- ❑ Health workers want a simple reminder system.

Conclusion:

WhatsApp-based reminders can close this communication gap.

Click [here](#) to see the survey form

User Persona

Persona 1 – Fatima (Pregnant mother)

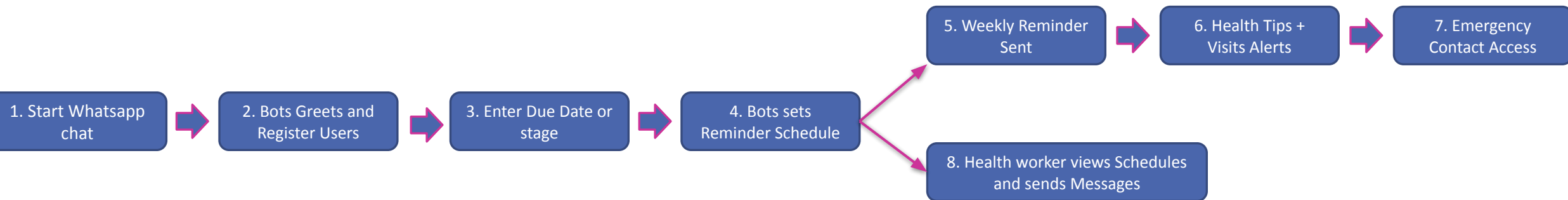
- ❑ **Age:** 27
- ❑ **Location:** Gwale LGA, Kano State
- ❑ **Occupation:** Tailor
- ❑ **Tech Use:** Owns a smartphone, uses WhatsApp daily
- ❑ **Challenges:** Fatima wants safe delivery but often forgets antenatal appointment dates and doesn't have easy access to verified health information

Persona 2 – Mallam Idris (Health worker)

- ❑ **Age:** 45
- ❑ **Location:** Kumbotso LGA, Kano State
- ❑ **Role:** Oversees maternal care in a rural clinic
- ❑ **Tech Use:** Uses WhatsApp for group chats with patients
- ❑ **Challenges:** Mallam Idris wants better tracking as paper records are hard to manage , he finds it difficult to follow up with patients on appointments and doesn't have enough time to educate all patients during visits.

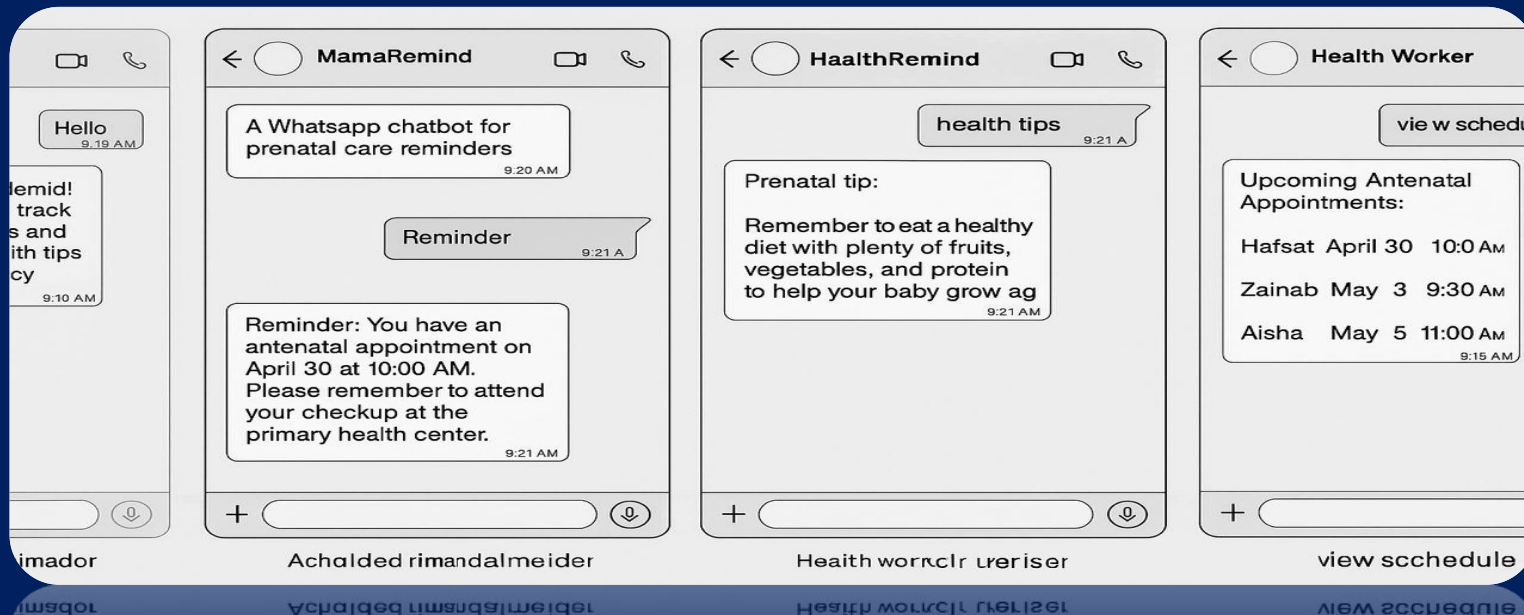
User Flow

A simple flow showing how a pregnant woman interacts with the WhatsApp chatbot, receives reminders and tips, and how health workers can also access schedules.



Wireframes

These wireframes show how users interact with the MamaRemind chatbot via WhatsApp. The chatbot provides appointment reminders, health tips, and emergency access, while health workers can view patient schedules.



User Stories & Acceptance Criteria

User Story 1:

As a pregnant woman, I want to receive weekly antenatal reminders so I don't miss appointments.

✓ **Acceptance:** User gets WhatsApp reminder every week.

User Story 2:

As a health worker, I want to be notified if a woman misses an appointment.

✓ **Acceptance:** Bot sends alert to health worker dashboard.

User Story 3:

As a user, I want to ask the bot questions or get tips.

✓ **Acceptance:** Bot replies with preset health messages.

Market Analysis

Target Market:

- ❑ Pregnant women in rural Northern Nigeria, starting with 3 LGAs in Kano State
- ❑ Community health workers and midwives operating in public and private clinics

Estimated Market Size (Kano Example):

- ❑ Over 200,000 pregnancies annually in Kano State
- ❑ 60%+ in rural areas with limited access to tech-enabled care
- ❑ High smartphone and WhatsApp penetration even in low-income areas

Competitor Landscape:

Competitor	Strengths	Weaknesses
mDoc / HelpMum	Provide digital maternal health support	Often app-based; limited WhatsApp use
Lifebank	Emergency care + blood delivery	Not focused on antenatal care
Offline Clinic Paper Systems	Widely used and familiar	Easily lost, hard to track reminders

Gap in the Market:

- ❑ Most existing solutions require users to download and learn new apps, which can be a barrier for rural users.
- ❑ WhatsApp is already widely adopted, especially among women in rural communities.

Value Proposition

For Pregnant Women:

- ❑ No app download needed
- ❑ Personalized reminders and tips
- ❑ Easy to use, even with low literacy

For Health workers:

- ❑ Track patients' visit
- ❑ Low-cost solution
- ❑ Reduce maternal risks

Why MamaRemind is Better Than Other Options:

Feature	MamaRemind	Mobile Apps	Paper Cards
Works on WhatsApp	✓	✗	✗
Requires no downloads	✓	✗	✓
Reminders & health tips	✓	✓	✗
Easy for health workers	✓	✗	✗

Product Metrics

To measure success, we will track:

- ❑ Number of active users per LGA
- ❑ Appointment adherence rate
- ❑ Feedback score from health workers
- ❑ Increase in antenatal visit completion
- ❑ Number of emergencies responded to via bot

Roadmap

Phase 1 (Weeks 1–2):

- ☐ Conduct user research
- ☐ Create prototype
- ☐ Test chatbot with sample users

Phase 2 (Weeks 3-5):

- ☐ Integrate health worker dashboard
- ☐ Improve tips and local language support
- ☐ Prepare for launch in 3 LGAs

Week 1:
Research & User
Personas



Week 2:
Wireframes and
Feature Definition



Week 3:
Bots Development
(MVP)



Week 4:
Testing with Users



Week 5:
Pilot launch in 3
LGA's

Prioritization Framework

RICE Method:

- ❑ **Reach:** Number of women in each LGA
 - ❑ **Impact:** Lives saved via timely care
 - ❑ **Confidence:** Based on WhatsApp usage stats
 - ❑ **Effort:** Minimal tech, low bandwidth needed
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- ✅ **Helps us launch features with maximum impact and low build time.**

Product Launch Plan

❑ **Pilot LGAs:** Kumbotso, Gwale, Dala

❑ **Awareness via:**

- Local health clinics
- Women support groups
- WhatsApp community broadcasts

❑ **Goal:** 500 signups in first 3 weeks

❑ **Impact Tracking:** Measure adoption, retention, and feedback

Business Objective & Monetization



Objective: Improve maternal health through digital communication



Revenue Model:

- ☐ Partner with NGOs/public health orgs
- ☐ Premium dashboard for private clinics
- ☐ Impact reporting for donors



Growth Vision: 1 million users by 2027