360 Life

Development Team

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Selected GCGO

Healthcare

- Effective healthcare delivery for non-communicable chronic diseases is hampered by inadequate vital pharmaceuticals.
- Patients with these diseases face interruptions in their treatment compromising their health outcomes.

User Persona

Name: Johny Tea

Gender: Male

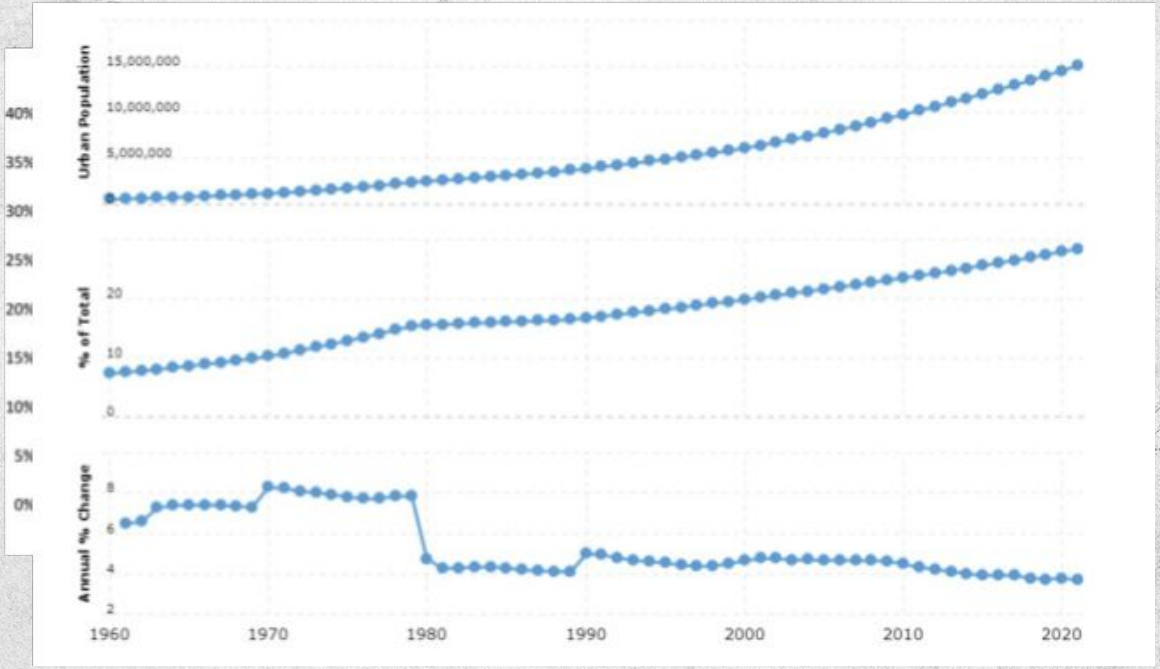
Age: 35Yrs

Profession: General Practitioner

Income: Ksh 2,600,000 p/a

Pain Point: Lack of data that shows which medicines a patient needs.

The Kenyan Urban Population Has Been Steadily increasing for the past 7 Decades



According to the 2019 census, there are a total of 47,558,296 people living within the country's borders. Of these, 28.49% or 15,102,890 people live in urban areas, a 3.78% increase from the previous year. A study conducted by Juma et al. (2019) found that urban centers are associated with a higher occurrence of NCDs such as cardiovascular disease.

The mortality rate for non-communicable chronic diseases has increased in Africa.

According to a study by WHO in 2019, the rate of change of age-standardized rates of Diabetes Mellitus has decreased by 11.9% in Africa. The rate of change in deaths has increased by 48.1% in 2019 compared to 2000. The rate of change of age-standardized rates of Cardiovascular diseases has decreased by 21.3% in Africa. The rate of change in deaths of Cardiovascular diseases has increased by 31.4% in 2019 compared to 2000. A decrease in the rates still shows that mortality is increasing only at a slower rate exerting strain on the availability of inexpensive medications which in turn leads to an increase in the rate of change of deaths.

Increase in Government Spending on Healthcare.

As of 2019, the cost incurred by the government to provide health services per person served was 4,035 Ksh. By 2050, this cost is expected to have increased to 9,945 Ksh per person. One of the factors contributing to the doubling of healthcare costs is the increase in the cost of medications for NCD treatments.

WHAT IS OUR PROPOSED SOLUTION?

A Web-based Prescription Management System

9:41

Patient profile

Francis Mwingine
0723-456-098

Prescriptions

+

Drug name
Strength
Dosage

Drug name
Strength
Dosage

Allergies

- Patient is allergic to sunshine

Notes

- Patient is a pilot

9:41

Search...

+

Recent Patients

Patient's name
0723-456-098

Patient's name
0723-456-098

Patient's name
0723-456-098

Patient's name
0723-456-098

Patient's name
0723-456-098

Patient's name
0723-456-098

Patient's name
0723-456-098

9:41

Modify prescription

Select Brand

Current dosage — Change dosage

Strength — Change strength

Intake period — Change period

Save changes

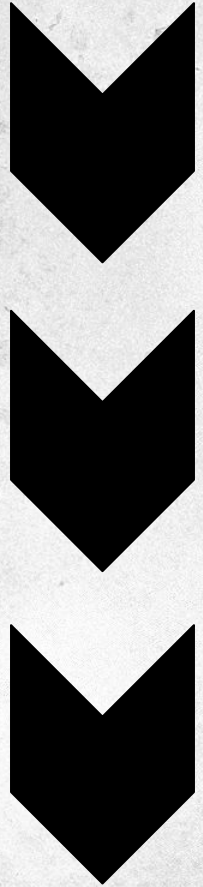
1. Manufacturers and importers need a reliable data source that can guide supply chain decision making.
2. Doctors need to track drug adherence in patients for better health outcomes.
3. The healthcare industry needs to understand patient drug preferences as they shift towards patient-centered care.

1. Doctors/clinical officers need to know the medicines their patients are currently taking.
2. Doctors/clinical officers need help ensuring that their patients are taking medicines as prescribed and archiving drug adherence.
3. Hospitals and Local pharmacies need to identify popular brands.
4. Hospitals and Local pharmacies need to know when to restock
5. Manufacturers and importers need accurate real-time information to streamline the supply chain.

Recommendations From User Interviews

- The app should employ robust security policies and measures to ensure that patient data is protected.
- Some hospitals already have their own systems in place and thus the app should be easy to plug into existing systems via API.
- Data bundle spend for app usage may be a barrier to entry so the app needs to utilise as little internet as possible.
- The app seems easy to use and further improvement should be made to make the usage even easier.
- Some users may not want to install a large app on their personal devices.

Potential Way Forward



Onboard Doctors and Patients as the initial users.

Collect feedback from initial users and improve UI/UX. Expand user base to include distributors and manufacturers.

Introduce the app as an online drug purchase platform and leader in healthcare data.

Our Why

This project aims to provide better health outcomes for patients living with chronic illnesses by providing access to vital drugs and medicines.

Impact of Our Solution

Should this solution be implemented, the health care costs associated with the treatment of chronic illnesses will be significantly reduced. Specifically, healthcare costs can be reduced by 50% if local manufacturers adopt their production processes to the market demand.

Source: https://www.airsystems-inc.com

WHAT CAN WE DO ?

Our Proposed Solution

Our proposed solution is a web-based prescription management system that tracks patient prescriptions and allows caregivers to modify them. Further, the app allows medication to be modified at any point in the treatment journey.

Why this Solution

One of the main causes of poor health outcomes for patients with NCDs is the lack of medicines they require for their treatment. This platform will address this gap by ensuring that hospitals stock up on the right medicines. Additionally, this platforms will provide manufacturers and importers with the data they need to acquire medicines for the kenyan NCD patient population.

Locally Manufactured Generic Drugs

Save up to 50% on the cost of medications by switching from Innovator branded drugs.

Local production can be easily subsidised to further bring down the cost of medicines.

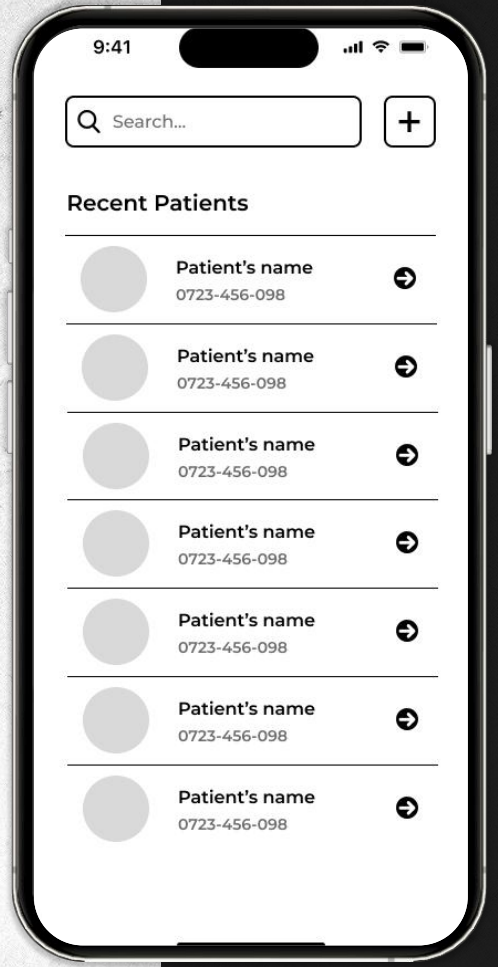
Product Wireframes

Page 1: Page with app logo

1. This is the page a user first sees when they click on the app on the home page.
2. Shows a logo and the creators of the app.
3. **Elements** include the logo and the app creator's name at the bottom.

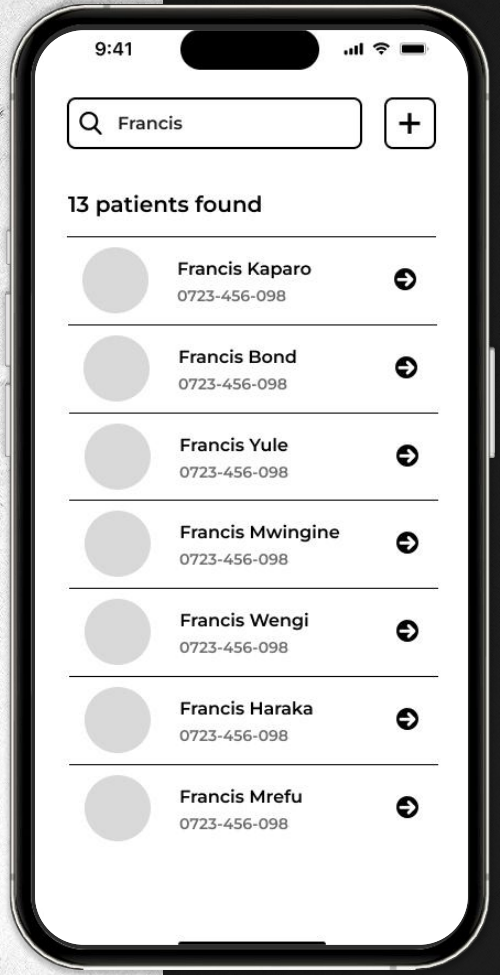
Page 2: App landing page

1. This is the app's landing page.
2. The **elements** are the search bar, + button, the patient images, names, and navigation buttons.
3. The + button allows users to add new patients.
4. The right arrows next to patients' names act as **navigation indicators**. Clicking on either the name or the arrow leads a user to a patient profile page.



Page 3: Search function

1. This is the app's search function.
2. The **elements** are the search bar, patient images, patient names, patient phone numbers, navigation buttons, + button.
3. When typing on the search bar, each keystroke causes the search results to be repopulated to match the search criteria.
4. The + button still allows users to add new patients on this page.
5. The right arrows next to patients' names act as **navigation indicators**. Clicking on either the name or the arrow leads a user to a patient profile page.

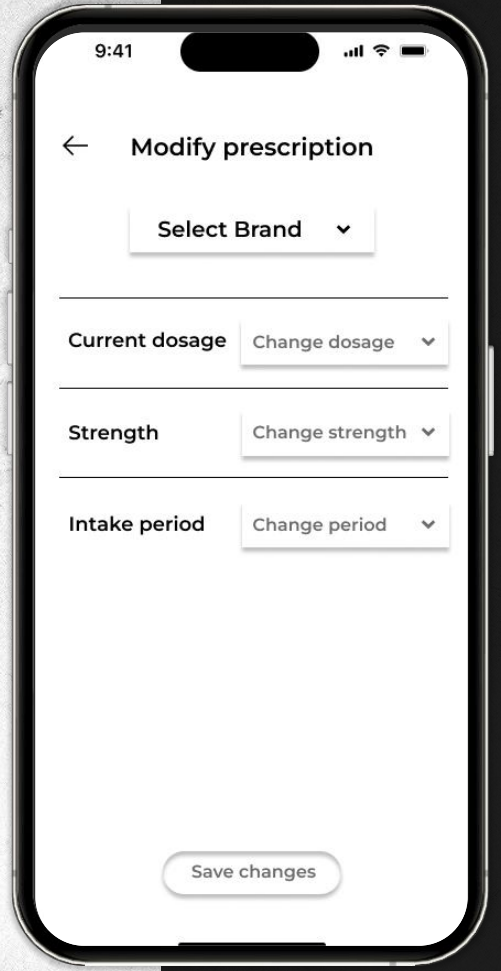


Page 4: Profile page

1. On this page, a user can edit and view patient details.
2. The **elements** are the prescription cards, buttons to add prescriptions, patient image, patient name, etc.
3. The back-arrow button is the **navigation indicator** on this page. It allows users to go back to the landing page.
4. The first + button under prescriptions leads a user to a page where they can create a new prescription.
5. The pencil buttons will allow users to edit the details under allergies and notes.

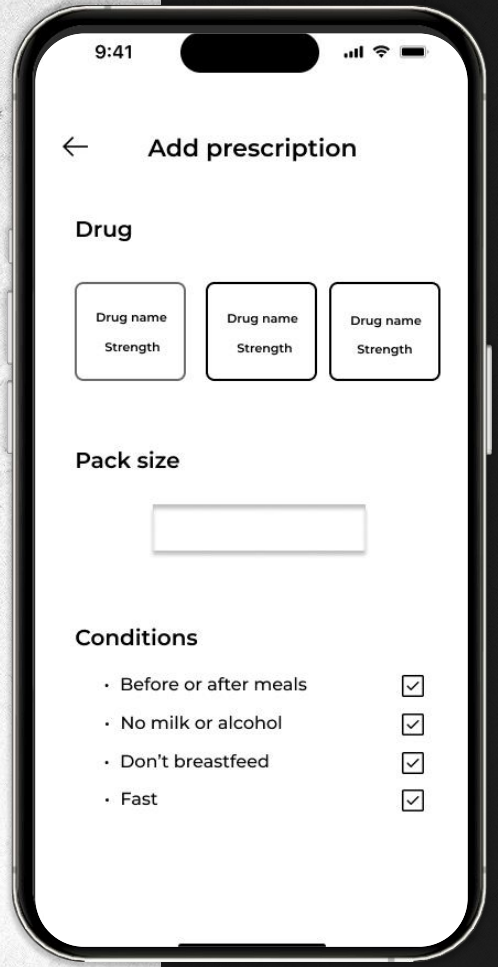
Page 5: Modify prescription page

1. The back-arrow is a **navigation indicator**, it navigates to the previous page.
2. **Elements** on this page include the save changes button, drop-downs, etc.
3. On this page a user utilizes the drop-downs to craft a prescription for a patient.
4. The Save changes button confirms a prescription and takes you back to the patient's profile.



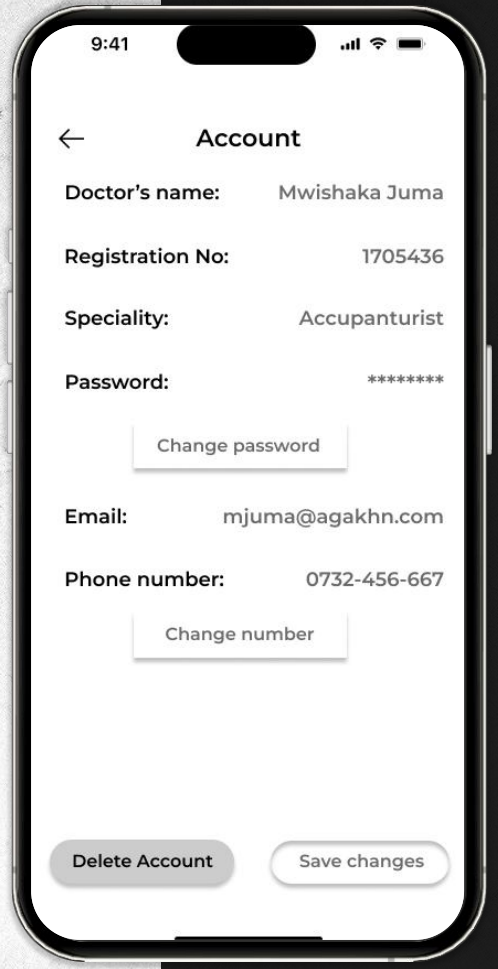
Page 6: Add prescription page

1. This page allows a user to add a new prescription.
2. **Elements** include the prescription cards, conditions, checkmark inputs, pack size, etc.
3. The back-arrow button on the top-left is the **navigation indicator**.



Page 7: Edit user profile

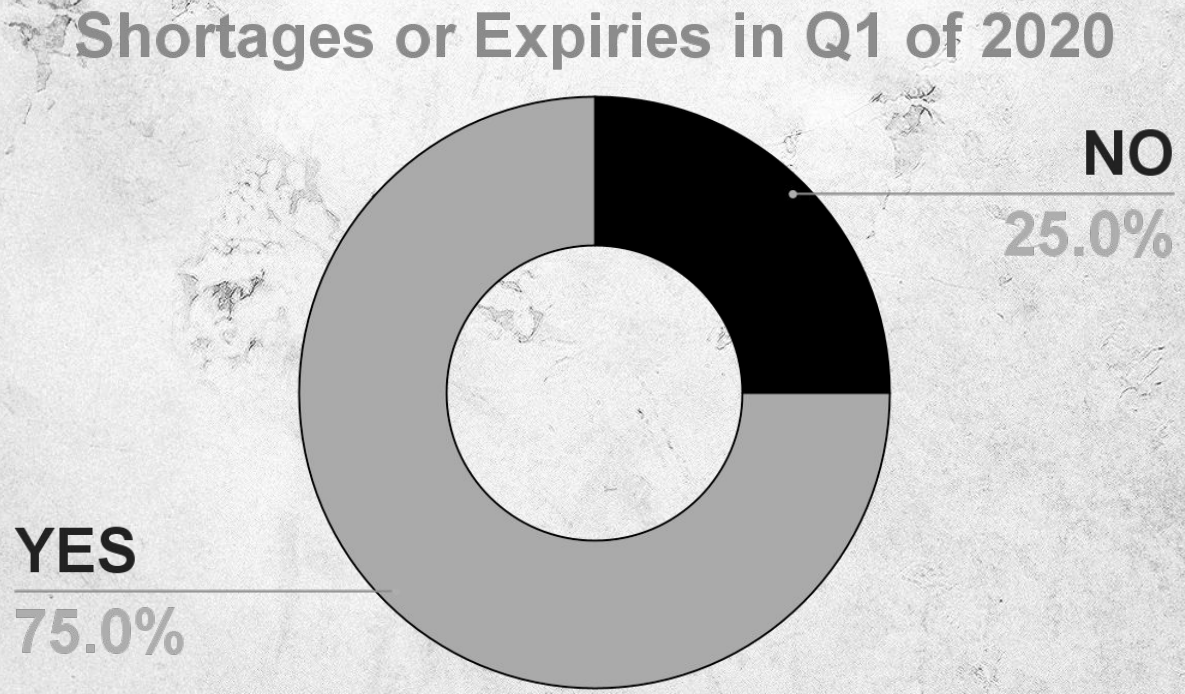
1. This page allows a user to edit their profile.
2. The **navigation indicator** is the back-arrow key on the top left. It allows users to go to the previous page.
3. The change password, change number, delete account and save changes buttons allow users to perform the actions mentioned on the buttons.
4. **Elements** on the page include buttons, titles, user details, etc.



Nairobi facilities experienced both drug shortages and drug expiries in Q1 of 2020.

75% of facilities had a fill rate of between 50% and 70%.

Meaning 30%-50% shortage.



Source: Pharmaceutical Journal of Kenya Vol 24 No 3 of 2020

Thanks !