EPICS Fall 2015

15 December 2015

Barnabas Task & Butler COPHS

Electronic Medical Records Application

Gayle Ocampo, Mariah Post, Kaitlyn Lee, Amy Street,
Funmi Arogbokun, & Kali Yimer

Table of Contents

Introduction

Team Members & Roles

Gayle Ocampo
Gayle is a Senior, Computer Science major and was the Team Leader for this project. As a the Team Leader, she was responsible for managing the team, assigning roles, and making sure there were no issues. She also participated heavily on the coding portion of the application, utilizing Apple's Xcode IDE and the language Swift 2.0. Gayle is graduating in December 2015, so she will not be able to continue working on the project, but hopes to see the remaining members complete it.

Mariah Post
Mariah is a Senior Computer Science major intending to work as a program analyst upon graduation. Though interested in each nonprofit's presentation at the start of the semester, she was particularly drawn to the proposal for Barnabas Task and Butler COPHS because of the direct impact the project would have on the Dominican Republic population. In her role as developer, Mariah assisted other team members in brainstorming ideas, creating a wireframe, and building the application using Apple's Xcode program and the Swift 2.0 language. Though new to software development, Mariah has found that her participation in this project has taught her the importance of observation, research, practice, and cooperation. And, despite being initially intimidated by the project's complexity, she hopes to challenge herself further by following in Gayle's footsteps and continuing next semester as a team leader.

Kaitlyn Lee
Kaitlyn is a Junior, Mathematics and Mechanical Engineering major. She helped in brainstorming ideas for the wireframes. She also entered the list of medications for the pharmacy's inventory.

Amy Street
Amy is a Junior, Interactive Media major and Computer Science Minor. Having recently declared her minor, she lacks a significant amount of CS knowledge and felt her best way to contribute to the Emergency Medical Record app project was with her design skills. She used primarily Adobe Illustrator and Adobe Photoshop for this specific project, but also has extensive knowledge in HTML, CSS, responsive design, Garageband, iMovie, general design, and formatting. She is grateful for the experience of designing and creating all of the application's icons, including carefully considering each design.

Fumi Arogbokun

Funmi is a senior majoring in chemistry and minoring in mathematics. She served as the Client Liason for the team and was the main form of contact for the client from the EPICS team. In addition to keeping the client up to date with the team's progress and scheduling meetings, Funmi worked with the Butler IT department to figure out how to best distribute a $1500 grant for iPads/equipment which will be used on medical missions in the Dominican Republic. As the COPHS team was granted the $1500 from SGA, the EPICS team is hoping to have the iPads and equipment purchased for next semester.

Kali Yimer

Kalkidan is a Sophomore, Computer Science and Mechanical Engineering major. Due to her lack of experience in programming, she only served as one of the quality testing technicians. She also helped in the brainstorming process for the wireframes. This project has helped her learn about the world of XCode and mobile development. Thanks to her teammates Gayle and Mariah, she has some understanding of how mobile development works. She has learned so much from each group member, and is particularly grateful for the help and encouragement she received throughout the process.

About Barnabas Task & Butler COPHS

Barnabas Task

Barnabas Task is a non-profit organization whose message is the transforming power of the gospel of Jesus Christ and whose mission is to transform communities by equipping, empowering, and encouraging. Though Barnabas Task hosts free clinics around the world, their main focus is providing physical and mental health training, medical and dental care, and spiritual support to the Dominican Republic. In addition, their leadership training program is designed to equip individuals with the skills necessary to make positive contributions to their community. Basic medical training also allows community members to participate in the establishment of their own medical team and pharmacy, as well as to engage in the on-going campaign for clean water.

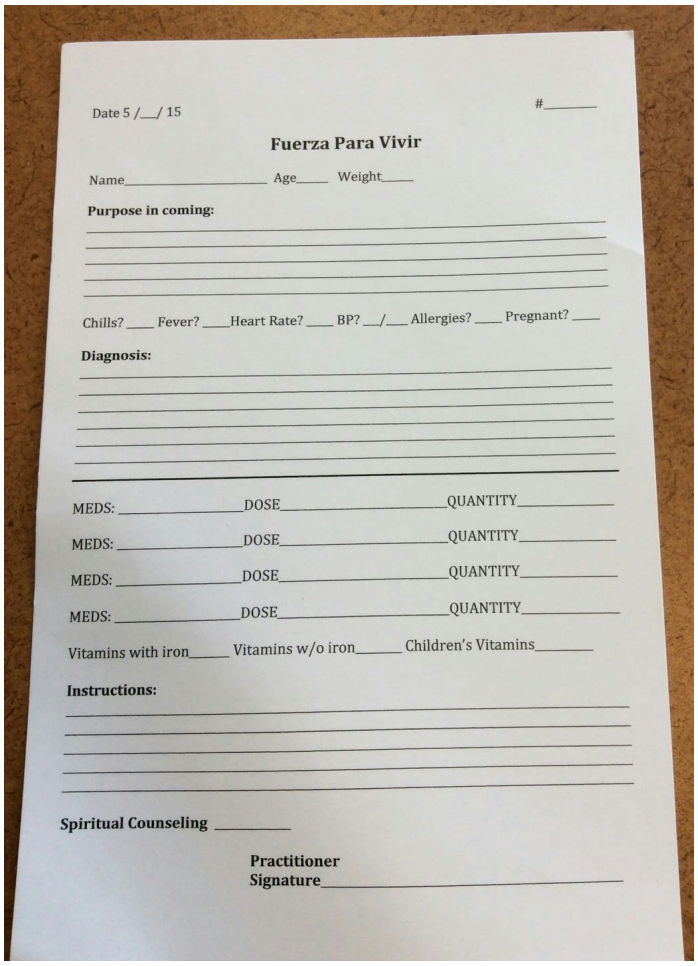
Butler University College of Pharmacy and Health Sciences (COPHS)

The mission of Butler University College of Pharmacy and Health Sciences is to provide effective educational experiences in the health sciences. By so doing, the College facilitates the development of lifelong learners with a liberal arts foundation who are able to serve society as dedicated, competent health professionals and community leaders. In combination with the efforts of Barnabas Task, students and faculty of the COPHS lend their expertise to those in need of medical care.

Requirements Specifications

Application Requirements

This is the form that Barnabas Task (Fuerza Para Vivir) has used on past medical mission trips to the Dominican Republic. With these requirements in mind and additional requests from Barnabas Task and COPHS, we have developed a list of requirements for the application which are described below.



Date 5 /__/ 15 #_____

Fuerza Para Vivir

Name_____ Age____ Weight____

Purpose in coming:

Chills? ____ Fever? ____Heart Rate? ____ BP? __/__ Allergies? ____ Pregnant? ____

Diagnosis:

MEDS: _____DOSE_____QUANTITY_____

MEDS: _____DOSE_____QUANTITY_____

MEDS: _____DOSE_____QUANTITY_____

MEDS: _____DOSE_____QUANTITY_____

Vitamins with iron_____ Vitamins w/o iron_____ Children's Vitamins_____

Instructions:

Spiritual Counseling _____

Practitioner Signature_____

The overall application requires a simple design with search functionality and the ability to translate between English and Spanish. The drop-down tabs throughout the app should also have a bilingual capability. As the project continues onward, if time permits, the client would prefer greater security in the application . However, for now, security is provided through one administrative login page.

Triage

The client would like the **triage team** (described below) to check in patients by taking a picture of the patient and then entering their personal information and vital signs into the application. Therefore, the client would like a check-in feature where triaged patients can be transferred over to a waiting list for the physicians to see. The members of triage taking patient information would need to enter information into these fields: name, gender, date of birth, history of past illnesses, history of present illness/purpose for visit, medications dispensed for patient, list of allergies, and vital signs such as blood pressure, weight/height, and blood sugar. During check-in, triage also needs to take a photo of the patient for further identification. Thus, the application needs to have picture-taking/retaking capabilities so that triage may retake pictures as patients mature over time.

The client has also provided the options to list in the drop-down section entered by triage in the areas of purpose for visit and allergies of the patient. The options are shown here below. Triage should be able to choose more than one option for the "Purpose for Visit" section and likely for the "Allergies" section as well.

Triage Team *– Any person who is trained in taking blood pressure is able to perform a triage. This is the first step in the process. After the patient has waited in line to be seen they are directed to the triage team. Triage takes the patient in and takes their vital signs (Blood pressure, pulse, respiratory rate, weight, height). Once the vital signs are taken the patient is asked what the purpose of their visit is, what symptoms they're experiencing, if they have any drug or food allergies and what medications are they currently on, if any. This is also where we would take a picture of new patients and take down their personal information as well like their name and birthday. Once the patient is done with triage they are sent to a waiting area to be seen by a practitioner.*

Most Common Purpose for Visit

Anemia
Blurry vision
Chills
Congestion
Constipation
Coughing
Cramping (menstrual, muscle)
Diarrhea
Dizziness
Fatigue
Fever
Headache
High Blood Pressure
Laceration
No Appetite
Pain (Back, chest, arm, breast, ear, foot, mouth, kidney, knee, leg, neck, shoulder, vaginal)
Rash
Runny Nose

Seasonal Allergies
Sneezing
Sore Throat
Spots on Skin
Stomach Ache
Trouble Breathing
Trouble Sleeping
Vaginal Infection
Vomiting
Other (with comment box)

Allergies

No Known Allergies
Aspirin
Penicillin
Food (specify)
Other (with comment box)

Diagnostics

Since a member of the **diagnostic team** (described below) will be assessing the information taken in triage, the physician or practitioner must be able to view the triage report. With this in mind, the main difference between the diagnosis page and the triage page should be the addition of sections for diagnosis, recommendations, prescriptions (which should automatically be sent to the pharmacy), and pop-ups to alert the physician if a particular medication is unavailable. In the section of "Diagnosis" options, the client has asked that options appear in drop down boxes. Moreover, the client specified the addition of an electronic signature which would be required for medication prescription. Alerts containing the warnings associated with the medications were also mentioned. However, a more pertinent request by the client is a "Medical History" section in which past visits are stored and updated automatically. In this field of the application, the list of past visits should be ordered by date.

Diagnostic Team *– The practitioner (doctor, nurse practitioner, and physician assistant) will then see the patients in the order they come back from triage in. The practitioner will assess everything that was taken in from triage and ask the patient their diagnostic questions. Once the practitioner has made their diagnosis they will chart it on in the document along with any other notes they made and will write the prescription for the patient to be sent to the pharmacy.*

Common Diagnoses

Anemia
Arthritis
Asthma
Back Pain
Bronchitis
Cellulitis
Common Cold
Constipation
Dental caries
Depression
Dermatitis
Diabetes
Ear infection
Flu

Folliculitis
Gastritis
Gastroenteritis
GERD
Gingivitis
Gout
Gripe
Heat Rash
High blood sugar
Hypercholesterolemia
Hypertension
Impetigo
Kidney Stone
Laryngitis
Menopause
Migraine Headache
Muscle Pain
Otitis Media
Parasites
Pharyngitis
Pregnant
Psoriasis
Refer to Hospital
Scabies
Seasonal allergies
Sinusitis
Skin Infection
Tension Headache
Tonsillitis
Upper Respiratory Infection
Urinary Tract Infection

Pharmacy

For this section, the **pharmacy team** (described below) needs to be able to keep inventory of the medications. Therefore, the application needs to allow pharmacists to add to and adjust the inventory. In addition, the client would like the expiration dates of various drugs to be listed. Furthermore, the inventory should automatically update as physicians prescribe drugs and as the drugs are given from the pharmacy to the patients. A list of the medications which should be in the inventory have been provided by the client and are shown below in bullet-point format.

Pharmacy Team *– The pharmacy team inventories all medication upon arrival to the clinic on the first day and makes a list for all the providers to use so they know what medications they can prescribe. Once they receive a prescription one of the team members will count out the pills and place them in a medication vial. Then they will write a label for the prescription by hand (patient name, drug name, drug strength, frequency, route of administration and quantity) with the help of a translator if needed. Once the medication is labeled it is handed over to the pharmacist for verification. Once the medication is verified a pharmacy team member will then grab the medication and any informational material or giveaways such as toothbrushes and toys for the kids. They will take the medication and material to the patient where the patient will be counseled on their medication (when to take it, what to expect from your medication, what side effects you could encounter, what happens if you miss a dose, etc.) Once the patient is counseled they are given the medication and any other materials needed and they are able to leave the clinic.*

In the future, the client would like prescription labels to be printed. However, this is not a high priority.

Medication

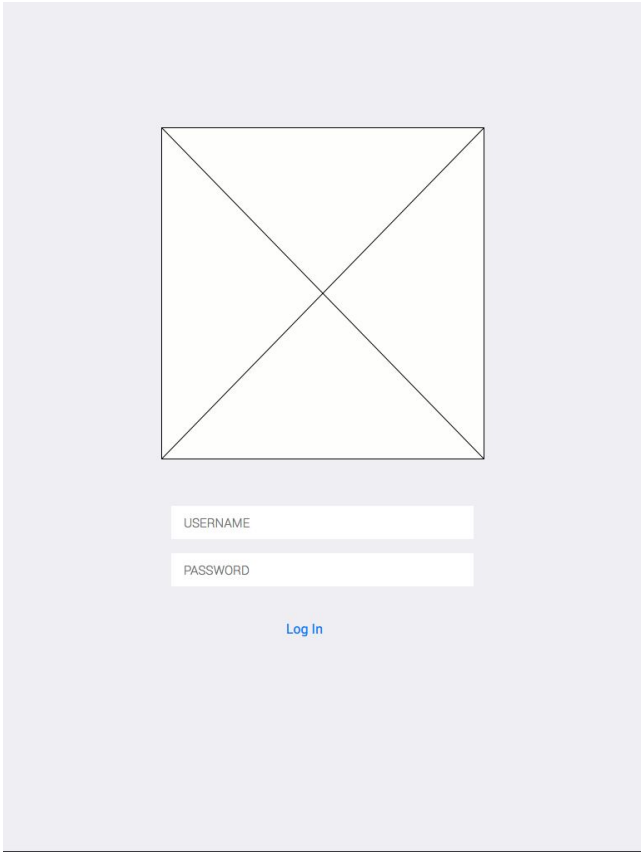
APAP
A+D Ointment
albendazole
amiodarone
amlodipine
amlodipine/atorvastatin
amoxicillin
atenolol
amoxicillin/ clavulanate
bacitracin
Bactrim
candesartan/HCTZ
cefalexin
cetirizine
ciprofloxacin
clotrimazole
cortisone 2%
Cough Drops
dextromethorphan
diphenhydramine
docusate
doxycycline
esomeprazole
eye drop
fluconazole
furosemide
glipizide
HCTZ
hydrocortisone
ibuprofen
levofloxacin
loperamide
loratadine
losartan
mebendazole
metformin
miconazole 2%
Miralax
Guaifenesin
nipple cream
nystatin
omeprazole
Parasite meds
prenatal vitamins
simvastatin
steroid cream
pseudoephedrine
sunscreen handout
Tums
vitamins

Design

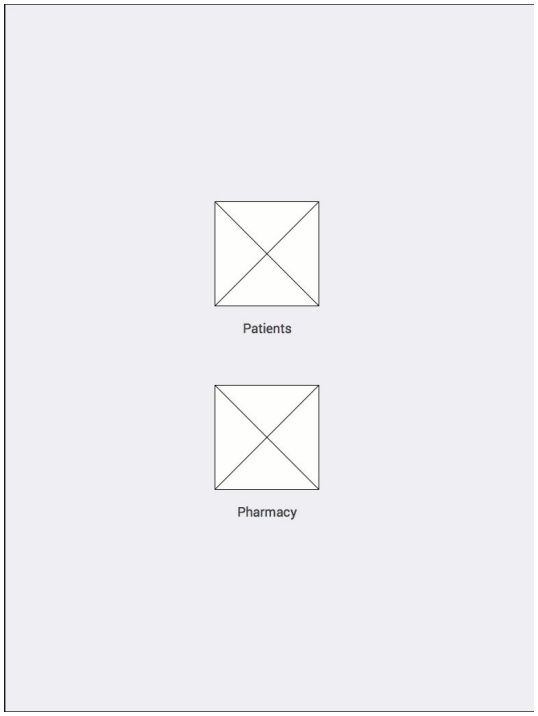
Wireframes

After meeting with the clients, we worked together to create wireframes exhibiting our ideas. We took into account their numerous requirements and designed our wireframes accordingly. The wireframes were created using JustInMind prototyper.

These first two images consist of the initial login page and the dashboard a user will access after entering in the appropriate credentials.

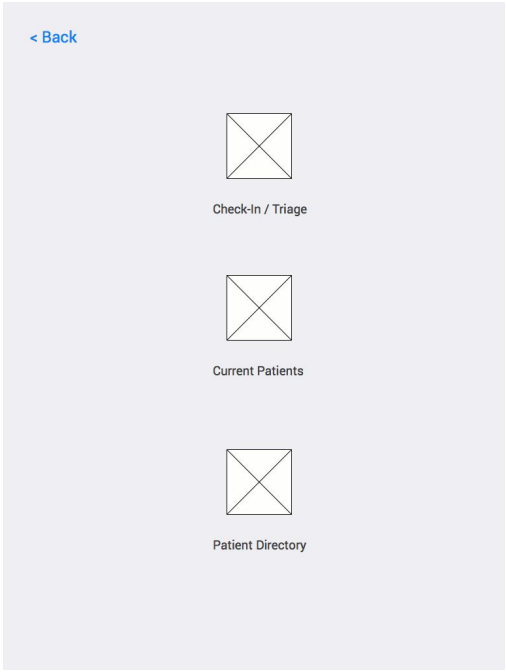


Login Page

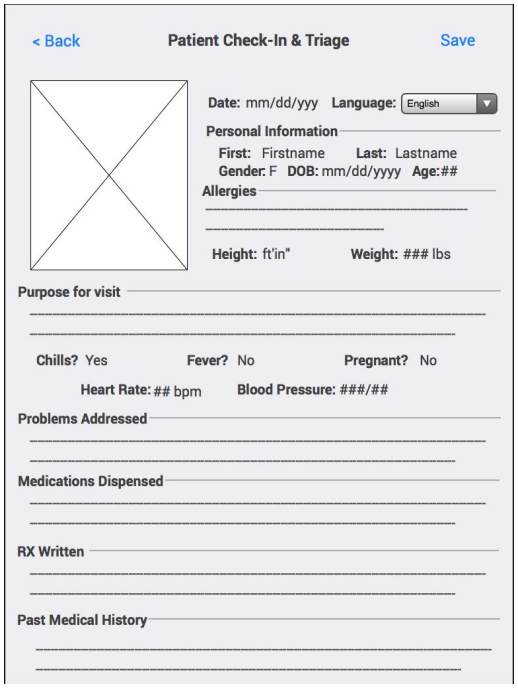


Main Dashboard

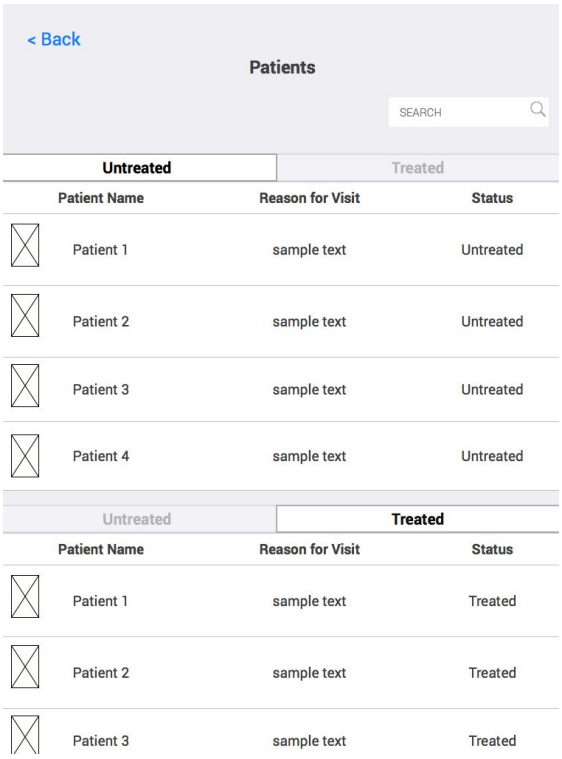
The next images show the options available once selecting the Patients icon. Users can either enter check-in and triage information for a patient, view the patients currently waiting, and manage the directory of patients in the database.



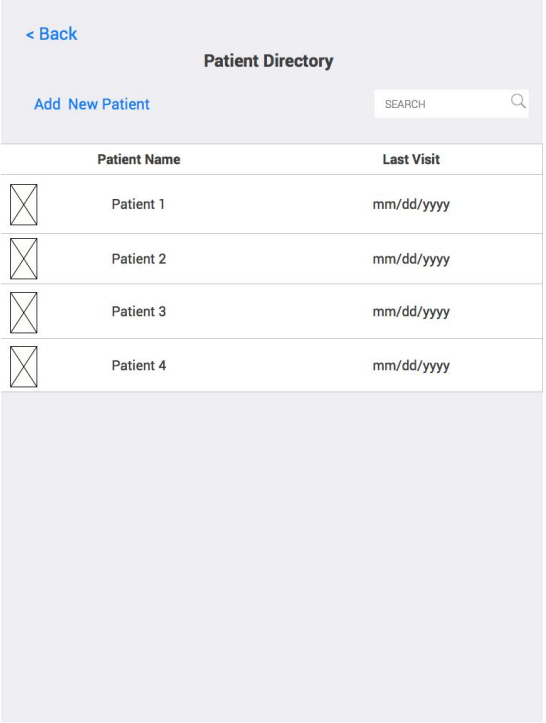
Patient Dashboard



Original Check-In & Triage Page

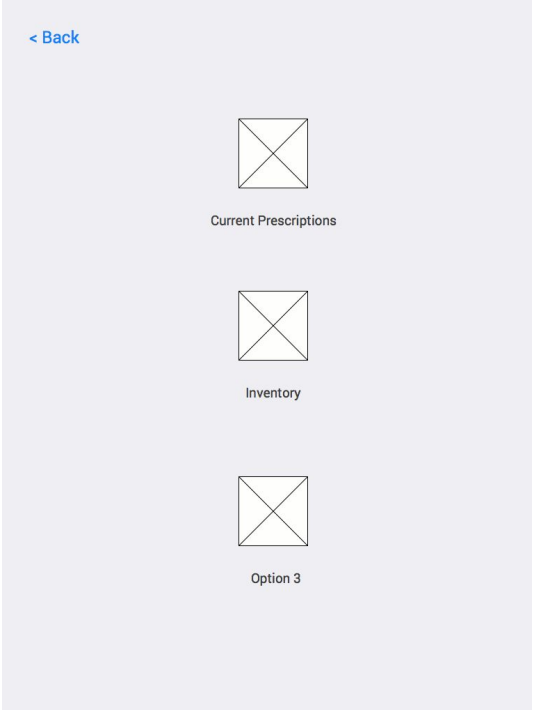


Waiting Patients Page

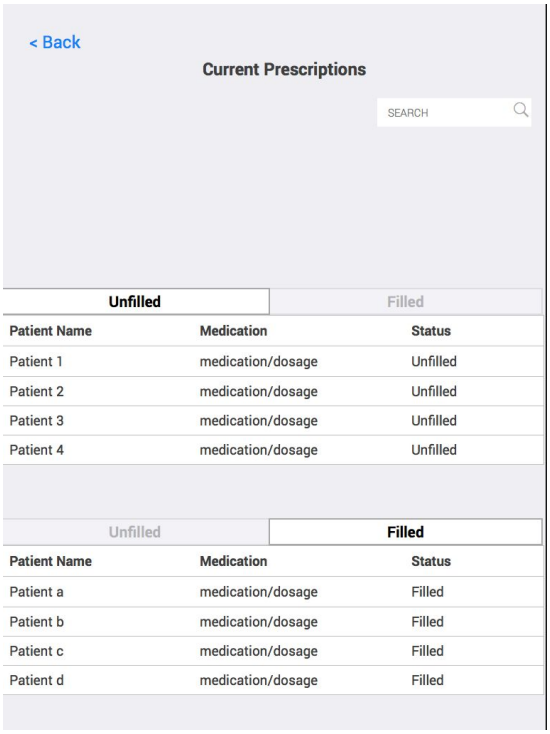


Patient Directory Page

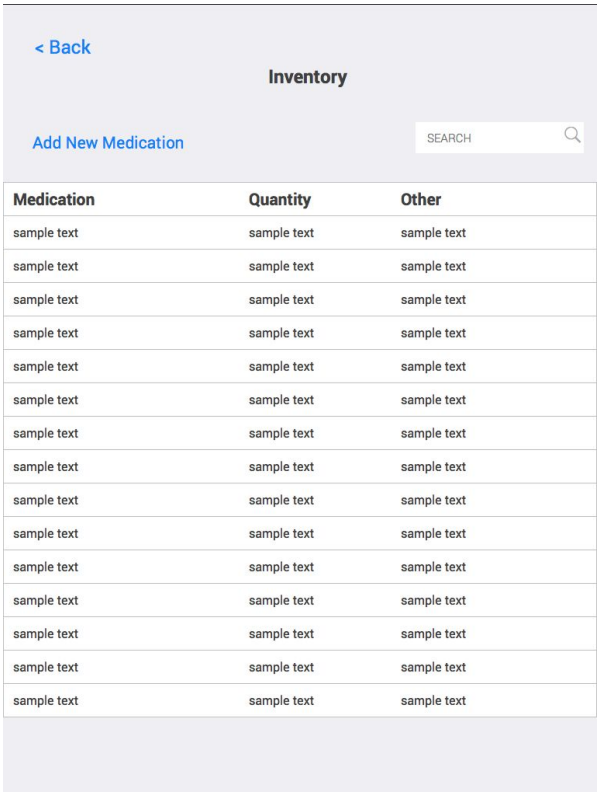
The following wireframes show the functionality for the Pharmacy portion of the application. Utilizing the Pharmacy option, users can view a list of current prescriptions and the inventory of medications.



Pharmacy Dashboard



Current Prescription List



Inventory List

Implementation

Application

The application was designed to be compatible with iOS devices. The app was created using the language Swift 2.0 and Apple Xcode. Xcode is an Apple IDE available only in an Apple OS environment.

To store and retrieve data, the application uses the Parse database backend. Parse is a cloud based system that contains the various tables for the app. So far, the tables include Users, Medication Inventory, Patients, Prescriptions, and Visits.

Icons

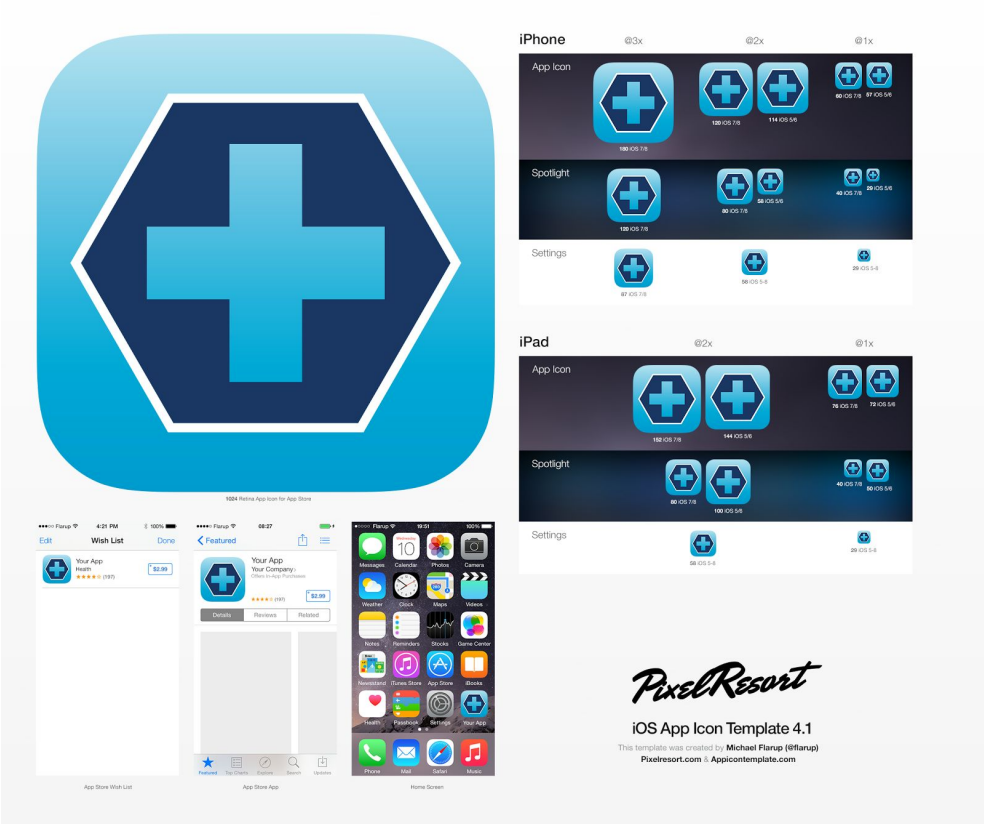
All application icons were designed with Adobe Illustrator. Adobe Illustrator is a program that creates and uses vector images which means the icons are scalable without pixilation.

The primary color, blue, is a universally pleasing color. It has psychological meaning of faith, protection, and nature. The designs include light and dark blue, as well as white for a minimalist design.

International meanings of certain symbols and figures were considered in order to ensure a successful design where the icons mean the same for different cultures. For example, Dominican Republic doctors and United States students must comprehend the icons and their visual meanings the same way.

Main Icon
It was a small feat to design the main app icon: its design needs to be perfect since it is the very image that leads all users to the digital EMR app. Ideas considered for the main logo include

- A doctor [person image with a stethoscope around the shoulders]
- A pharmacist [person image with the “Rx” symbol on the shirt]
- A heart (The COPHS team hoped to eventually incorporate heart health into the app)
- Some sort of Christian spiritual symbol (praying hands, cross, etc.)
- The first aid “+” symbol (universally recognized symbol for help, healing, first aid)
- Some sort of hexagonal design (The COPHS team seemed particularly keen on incorporating hexagons into the logos although it was impractical to have hexagonally shaped icons.)



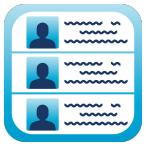
The icons above will be extracted from the template and be used in the Apple store.

Patient Icons

Patient Check-In

Patient

Active Patient Waitlist



Patient Directory

Pharmacy Icons

Pharmacy

Prescription

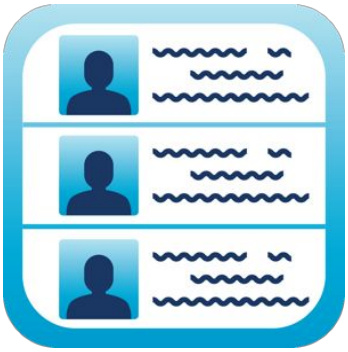
Medication Inventory

Design Explanation

The icon that links to the **Doctor/Triage** section emulates a patient information sheet on a clipboard that the doctors, nurses, students, volunteers, etc. recorded patient information on prior to the digital EMR app.

The icon that links to the **Check-In/Triage** section is very simply a patient image with a checkmark.

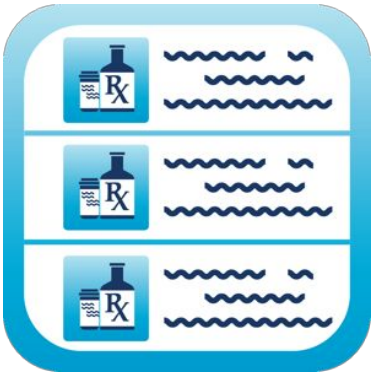
The icon that links to the **Active Patient Waiting List** is a line of people (the patient image with the rest of the body). The original concept was a profile view of a line of people, but was visually impractical.



The icon that links to the **Patient Directory** is visually similar to the wireframe as well as many other contact list wireframes.

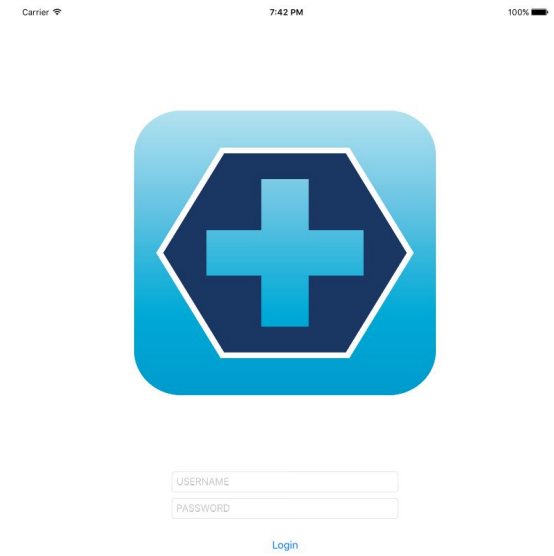
The icon that links to the **Pharmacy** section is the symbol “Rx” - the universal symbol for prescription derived from the latin word “recipe”

The icon that links to the **Prescription** section contains a medication pill bottle and medication liquid bottle with the “Rx” symbol.

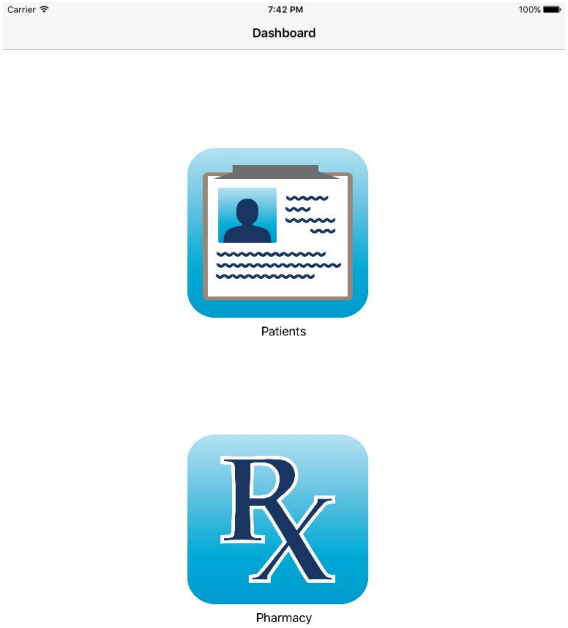


The icon that links to the **Medication Inventory** section is exactly the same as the patient directory icon since medication inventory is essentially a medication directory. In this case, the prescription medication image replaces the patient images.

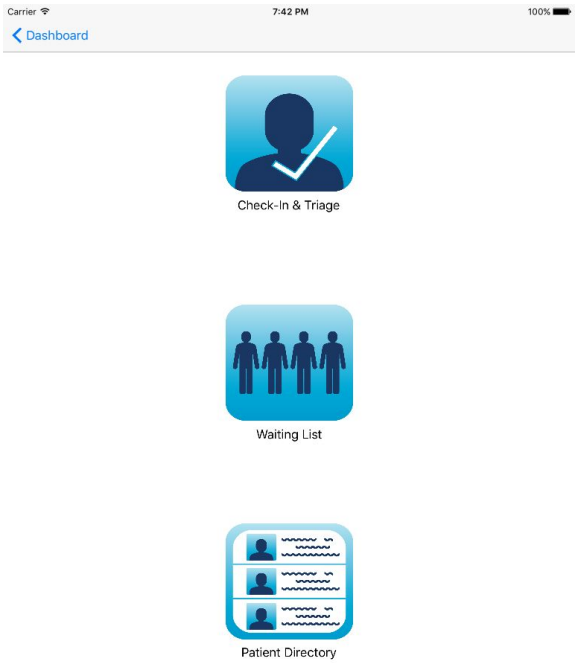
Working Prototype Photos



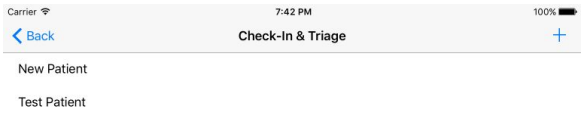
Log-In Page



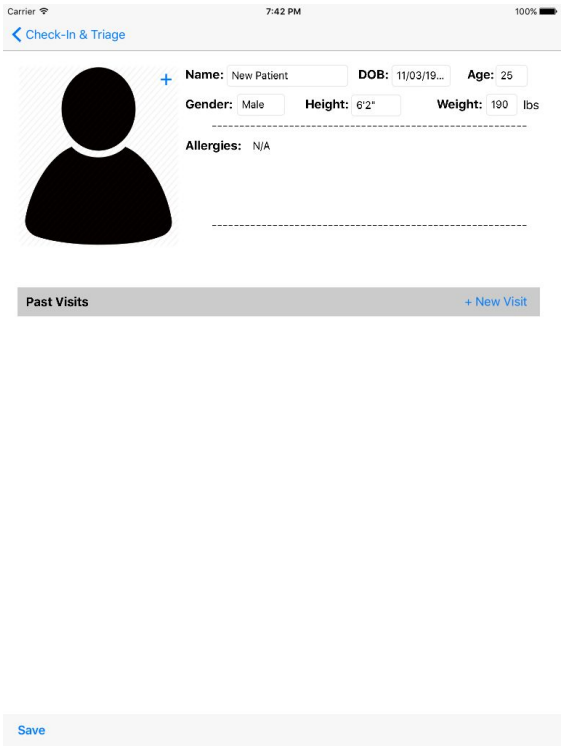
Main Dashboard



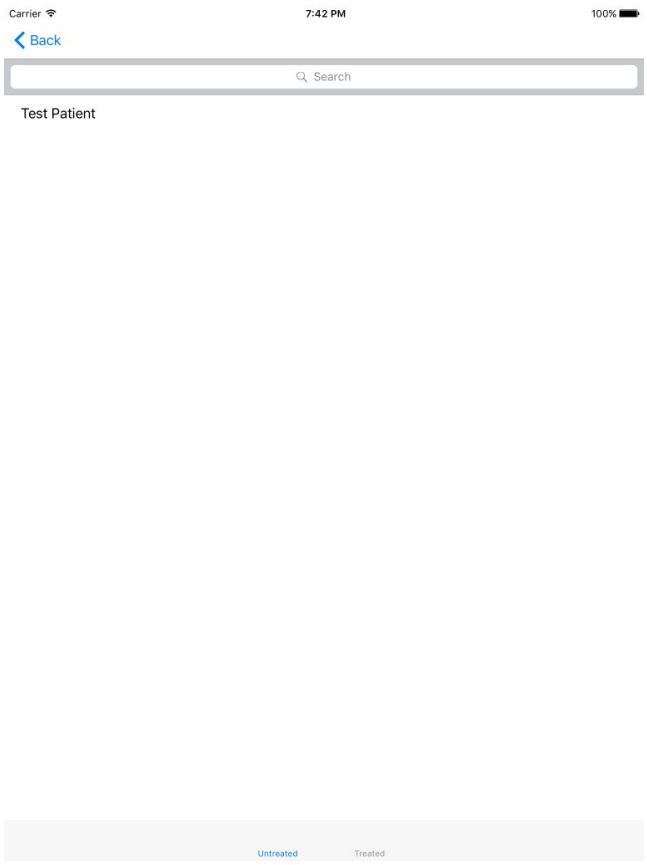
Patient Dashboard



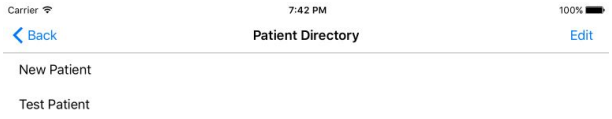
Check-In & Triage Page



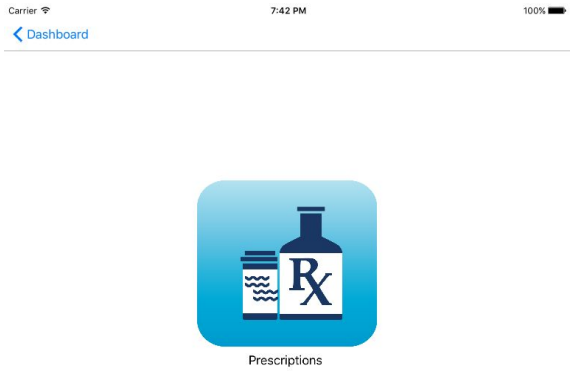
Patient Detail/Information Page



Patient Waiting List Page

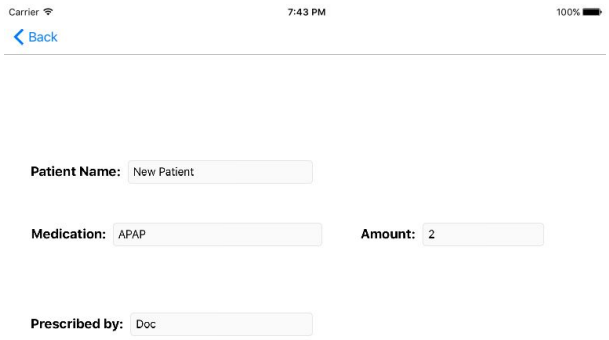


Patient Directory



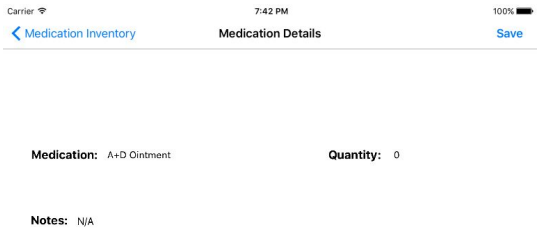
Pharmacy Dashboard

Prescriptions Page



Prescription Slip

Medication Inventory



Medication Details/Information

Future Work

Despite the work accomplished by our EPICS team, the fulfillment of all initial requirements will involve further effort. Below are those requirements that have yet to be completed.

Spanish Toggle: To facilitate the efforts of both English and Spanish-speaking medical professionals and volunteers, the application will include a toggle to convert between the two languages. This button will appear on each Controller and should convert the application's static information, such as labels and drop-down boxes. In addition, the client will supply the Spanish translation of the medications.

Medical Visit History: The View Controller associated with New Visits is a work in progress. The required fields for triage, consultations, and diagnoses should be edited, and the inputted information should store in Parse and populate the Past Visits table view. Per client request, checkboxes and drop-down boxes will be utilized, though the large number of options must be accommodated using a scroll view or additional segues.

Search Bar: Both the Patient Directory and Pharmacy Inventory would be more user-friendly with search capabilities. Though search bars are already positioned on the View Controllers, our team was unable to properly filter information from Parse and achieve functionality.

Photo Identification: Along with general information such as name, age, and gender, patient photos will help with identification. Thus, the application should be capable of taking and storing photos, as well as updating photos at a later time.

Pharmacy Inventory: The inventory of medications is located in a Table View Controller and is populated from Parse. However, pharmacists must be able to add to and adjust the inventory. Thus, an edit feature which requires administrator permission must be created. Furthermore, the inventory should automatically update as prescriptions are written and filled. Small changes to the input fields must also be made to include expiration dates.

Pharmacy Alert: Because doctors and pharmacists will be working in separate areas, the application should include a function in which the submission of a diagnosis and prescription alerts the pharmacy. Pending prescriptions will be located in the Unfilled tab of Current Prescriptions.

User Interface Design: Xcode's Interface Builder editor makes it simple to design a full user interface (UI) without writing any code. For this project, elements should be moved and resized

on the storyboard for a better, more appealing layout. The attributes of the elements may also be edited using the Attributes Inspector. Additionally, the use of stack views and Auto Layout will help create a UI that automatically adapts to the user's device size.

Weekly Status Reports

WEEKLY STATUS REPORT (WSR)
9/21/2015

TO: Mariah Post, Amy Street, Funmi Arogbokun, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 9/13/15 – 9/18/15

I. RED FLAGS: none

II. ISSUES: none

III. ACCOMPLISHMENTS 9/13/15 – 9/18/15**:**

9/14/15
- Selected projects and team members

9/16/15
- Set up meeting with Trish and DR team

9/18/15
- Met with Trish and DR team

IV. ACTION ITEMS FOR FOLLOWING WEEK (dates):

- Come up with ideas (All members)
- Finish project description for EPICS site (Gayle)
- Determine future meetings (Funmi)
- Create wireframes (All members)
- 2 pg mini spec requirements

WEEKLY STATUS REPORT (WSR)
9/28/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 9/20/2015 – 9/26/2015

I. RED FLAGS: none

II. ISSUES: none

III. ACCOMPLISHMENTS 9/20/2015 – 9/26/2015:

9/21/2015
- Decided on iOS application
- Compiled a list of requirements

9/23/2015
- Discussed application
- Creating wireframes

IV. ACTION ITEMS FOR FOLLOWING WEEK 9/27/2015 – 10/3/2015

- Wireframes (All members)
- Contact Trish and DR team (Funmi)
- Finish up documentation (Gayle)

WEEKLY STATUS REPORT (WSR)
10/5/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 9/27/2015 – 10/3/2015

I. RED FLAGS: We are unsure of the environment of the application—we cannot move forward with designing without knowing.

II. ISSUES:

III. ACCOMPLISHMENTS 9/27/2015 – 10/3/2015:

9/28/2015
- Narrowed down wireframe ideas

9/23/2015
- Discussed application and design
- Discussed how to move forward with the application

IV. ACTION ITEMS FOR FOLLOWING WEEK 9/27/2015 – 10/3/2015

- Wireframes (All members)
- Meet with Trish and DR Team (All members)
- Finalize wireframes (All members)

WEEKLY STATUS REPORT (WSR)
10/12/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 10/4/2015 – 10/10/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 10/4/2015 – 10/10/2015:

10/5/2015
- Narrowed down wireframe ideas

10/7/2015
- Discussed questions for Friday meeting

10/9/2015
- Met with Trish and DR team

IV. ACTION ITEMS FOR FOLLOWING WEEK 10/11/2015 – 10/17/2015

- Finalize Wireframes (All members)
- Start work on the application (All Members)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
10/19/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 10/11/2015 – 10/17/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 10/11/2015 – 10/17/2015:

10/12/2015
- Divided up work for application

10/14/2015
- Group did not meet
- Started researching how to get started on the app

IV. ACTION ITEMS FOR FOLLOWING WEEK 10/11/2015 – 10/17/2015

- Start work on the application (All Members)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
10/26/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 10/18/2015 – 10/24/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 10/18/2015 – 10/24/2015:

10/21/2015

- Amy showed sketches of dashboard icons
- Continued work on app

10/23/2015

- Gayle met with Katie for an overview of xcode

IV. ACTION ITEMS FOR FOLLOWING WEEK 10/18/2015 – 10/24/2015

- Continue work on the application (All Members)
  - Work on constraints for application
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
11/02/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 10/25/2015 – 10/31/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 10/25/2015 – 10/31/2015:

10/26/2015
- Divided up work for specific parts of the app

10/28/2015
- Set up git source control for project
- Amy began finalizing sketches

IV. ACTION ITEMS FOR FOLLOWING WEEK 11/01/2015 – 11/07/2015

- Continue work on the application (All Members)
- Start digitally designing icons (Amy)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
11/09/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 11/01/2015 – 11/07/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 11/01/2015 – 11/07/2015:

11/02/2015
- Worked on the app

11/03/2015
- Met with Trish, Tom, and the DR team
- Got more specifics
- Team told us more features they wanted

11/04/2015
- Amy began designing icons digitally
- Continued work on the app

IV. ACTION ITEMS FOR FOLLOWING WEEK 11/08/2015 – 11/14/2015

- Get Check-In & Triage portion working (Mariah)
- Work on Waiting List, Prescriptions, Patient Directory (Gayle)
- Work on Pharmacy Inventory (Katie & Kali)
- Start working on Final Dossier (Funmi)
- Start digitally designing icons (Amy)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
11/16/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 11/08/2015 – 11/15/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 11/08/2015 – 11/15/2015:

11/09/2015
- Worked on the app

11/10/2015
- Mariah and Gayle met to tackle search functionality

IV. ACTION ITEMS FOR FOLLOWING WEEK 11/16/2015 – 11/21/2015

- Get Check-In & Triage portion working (Mariah)
- Work on Waiting List, Prescriptions, Patient Directory (Gayle)
- Work on Pharmacy Inventory (Katie & Kali)
- Work on Final Dossier (Funmi)
- Digitally design icons (Amy)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
11/30/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 11/15/2015 – 11/28/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 11/15/2015 – 11/28/2015:

11/17/2015
- Worked on the app

11/22/2015
- Tried to work on the camera portion

IV. ACTION ITEMS FOR FOLLOWING WEEK 11/29/2015 – 12/5/2015

- Get Check-In & Triage portion working (Mariah)
- Work on Waiting List, Prescriptions, Patient Directory (Gayle)
- Work on Pharmacy Inventory (Katie & Kali)
- Work on Final Dossier (All Members)
- Digitally design icons (Amy)
- Keep Trish & DR team updated (Funmi)

WEEKLY STATUS REPORT (WSR)
12/07/2015

TO: Funmi Arogbokun, Mariah Post, Amy Street, Kali Yimer, Katie Lee
FROM: Gayle Ocampo
SUBJECT: Status report for week 11/29/2015 – 12/05/2015

I. RED FLAGS:

II. ISSUES:

III. ACCOMPLISHMENTS 11/29/2015 – 12/05/2015:

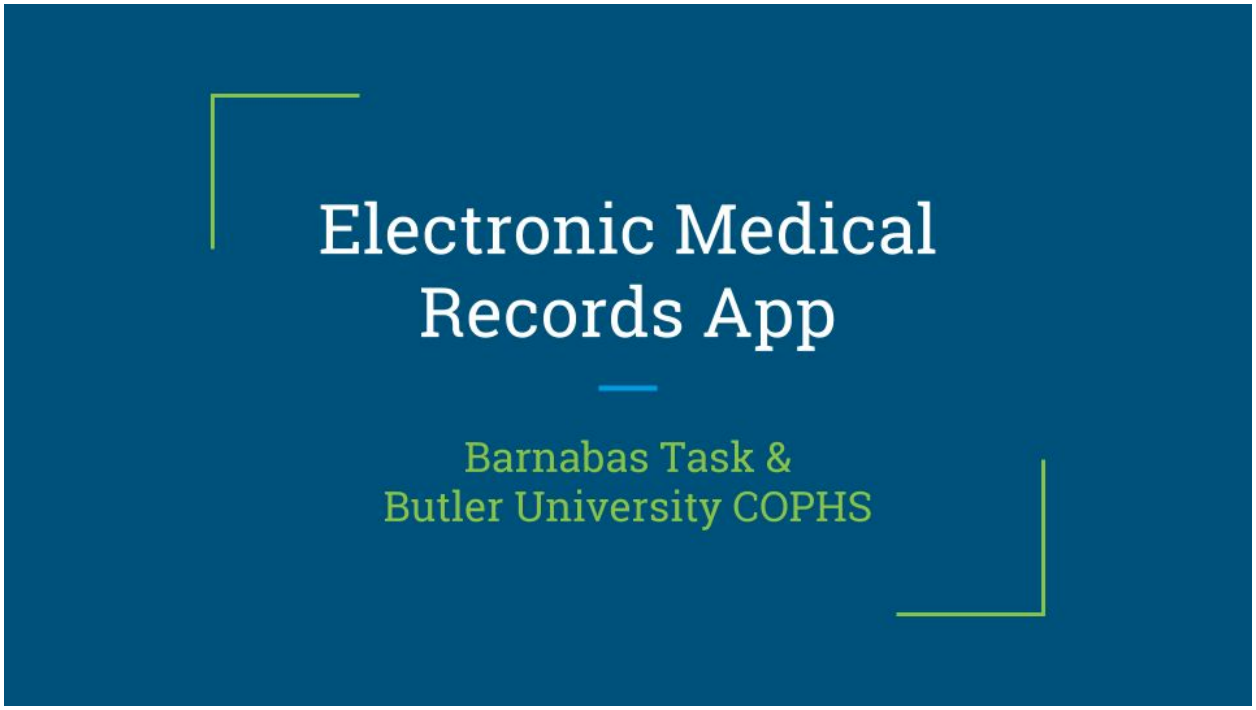
12/01/2015
- Worked on the app

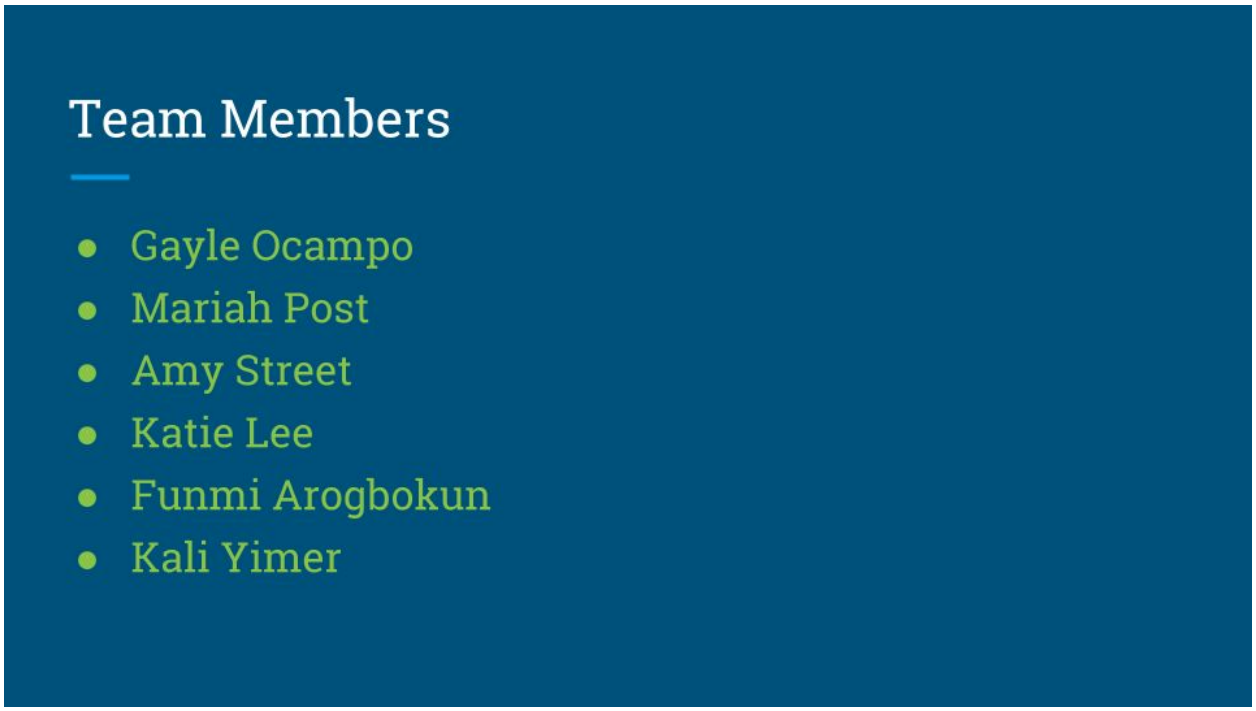
12/05/2015
- Met and worked on final dossier

IV. ACTION ITEMS FOR FOLLOWING WEEK 12/06/2015 – 12/12/2015

- Get Check-In & Triage portion working (Mariah)
- Work on User Login(Gayle)
- Work on Pharmacy Inventory (Katie & Kali)
- Work on Final Dossier (All Members)
- Finalize icons (Amy)
- Keep Trish & DR team updated (Funmi)

Appendix


Electronic Medical Records App
Barnabas Task &
Butler University COPHS


Team Members
Gayle Ocampo
Mariah Post
Amy Street
Katie Lee
Funmi Arogbokun
Kali Yimer

Barnabas Task & COPHS

- Barnabas Task is a non-profit organization committed to transforming communities from poverty to prosperity.
- Their mission is to facilitate the training of future leaders, to provide medical and dental care, and to build upon the strengths of the community through relationship and prayer.
- They are committed to sharing the Gospel of Christ through both teaching and serving.
- Though they have multiple clinics around the world, their main focus currently is the Dominican Republic.

Barnabas Task & COPHS

- COPHS is the College of Pharmacy & Health Sciences at Butler University.
- Their mission is to graduate students who are equipped with real life experiences.
- In the past they have partnered with Barnabas Task.
- Each year they send students and professors of the COPHS to assist with the mission of Barnabas Task.
- They assist by training people from the community to take over once they leave.

Requirements

- Previous medical mission trip forms
  - used by triage, diagnosis area, and pharmacy

Fuerza Para Vivir

Name: _____ Age: ____ Weight: ____

Purpose in coming:

Child? ___ Fever? Heart Rate? ___ BP: ___/___ Allergies? ___ Pregnant? ___

Diagnosis:

MEDS: _____ DOSE _____ QUANTITY _____

MEDS: _____ DOSE _____ QUANTITY _____

MEDS: _____ DOSE _____ QUANTITY _____

MEDS: _____ DOSE _____ QUANTITY _____

Vitamins with iron ____ Vitamins W/o iron ____ Children's Vitamins ____

Instructions:

Spiritual Counseling _____

Practitioner Signature _____

Requirements

- **Application** → Triage | Diagnosis Area | Pharmacy
- Features
  - Administrative log-in
  - Search functionality
  - English ⟷ Spanish
  - Bilingual drop down boxes
    - diagnosis | medications | purpose for visits | allergies
      - *also "check" boxes to allow for multiple responses*

Requirements

- Triage
  - Check-in feature
  - Collecting patient information
    - personal identification information
    - photo
    - history of medical visits
    - vital signs
    - allergies
    - medications

Requirements

- Diagnosis Area
  - Physicians can see everything that triage sees
    - AND have access to write *diagnosis*, *recommendations*, and *prescriptions*
  - Electronic signature for physicians
  - Waiting list of patients

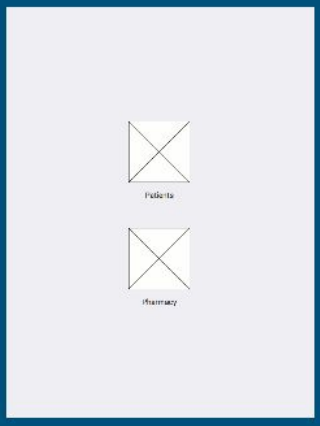
Requirements

- Pharmacy
  - Inventory of medications
    - updates automatically
    - expiration dates listed
    - ability to add to inventory & change inventory
  - Notification from diagnosis to pharmacy

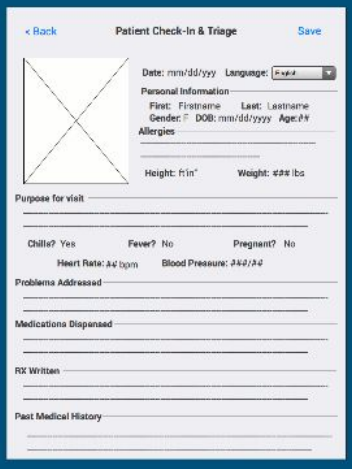
Wireframes

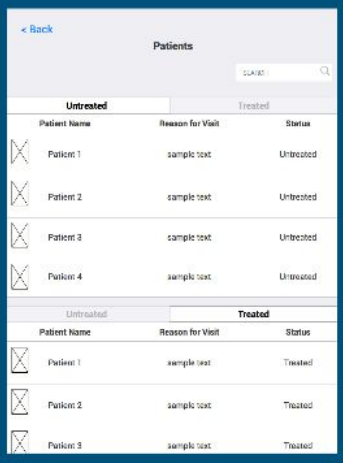
- The wireframes were created using JustInMind prototyper

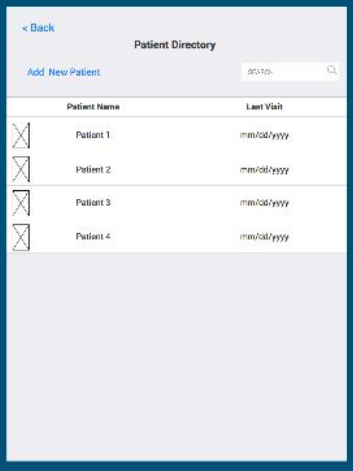
Wireframes



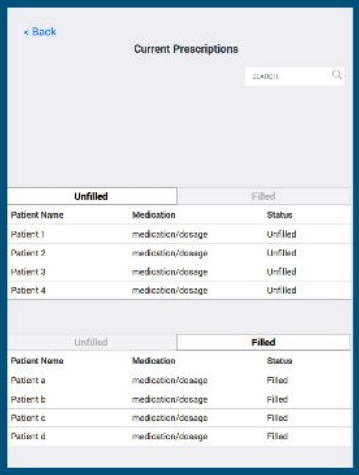
Wireframes

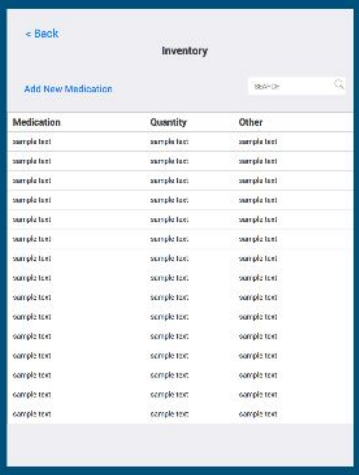






Wireframes





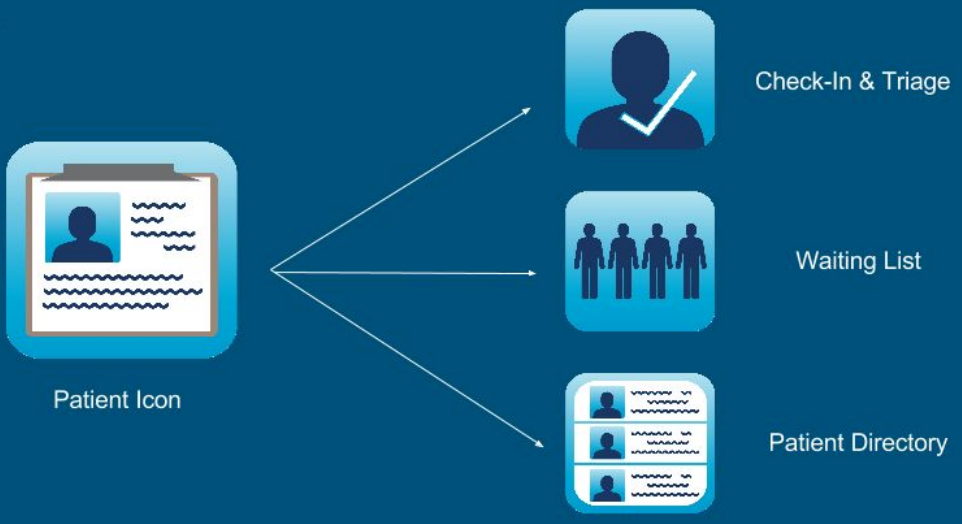
Icons

Program Used: Adobe Photoshop

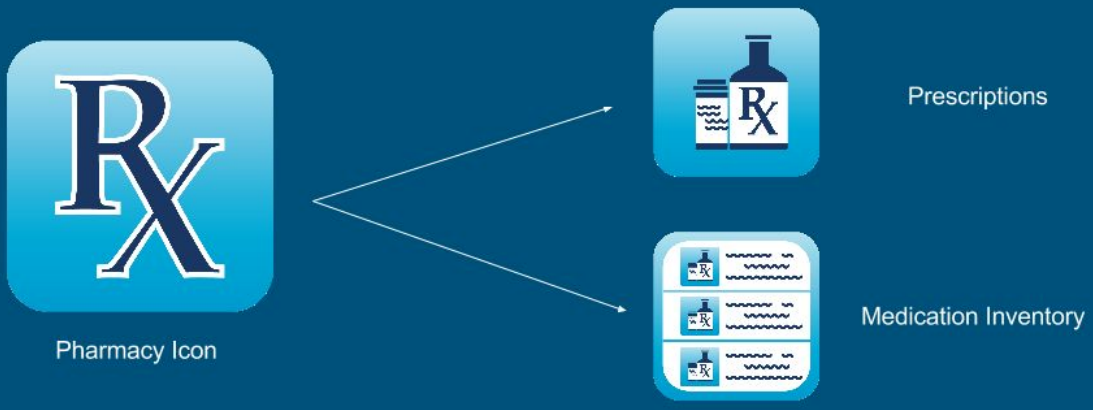
- Considered international meanings of symbols and colors

Main EMR App Icon

Patient Icons



Pharmacy Icons



Example Walk Through

Future Work

- Spanish Toggle
- Medical Visit History
- Search Bar
- Photo Identification
- Pharmacy Inventory
- Pharmacy Alert
- User Interface (UI) Design