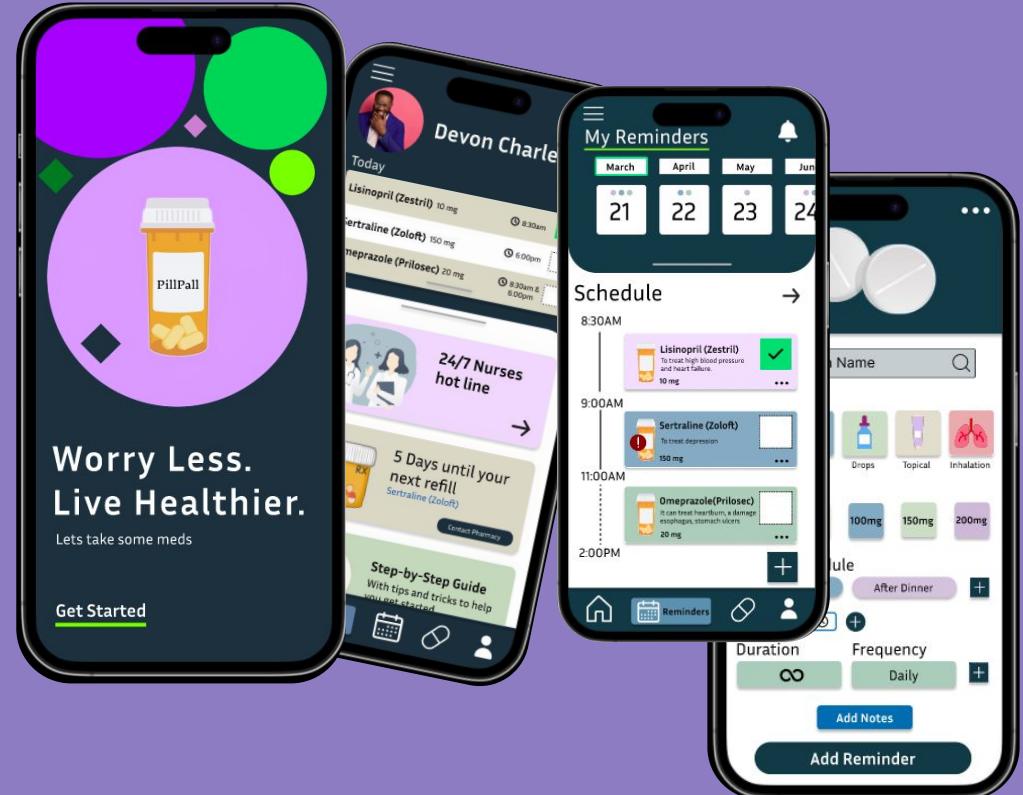


PillPal

The Medicine Reminding App



Mayur Chopra

Google

Project overview



The product:

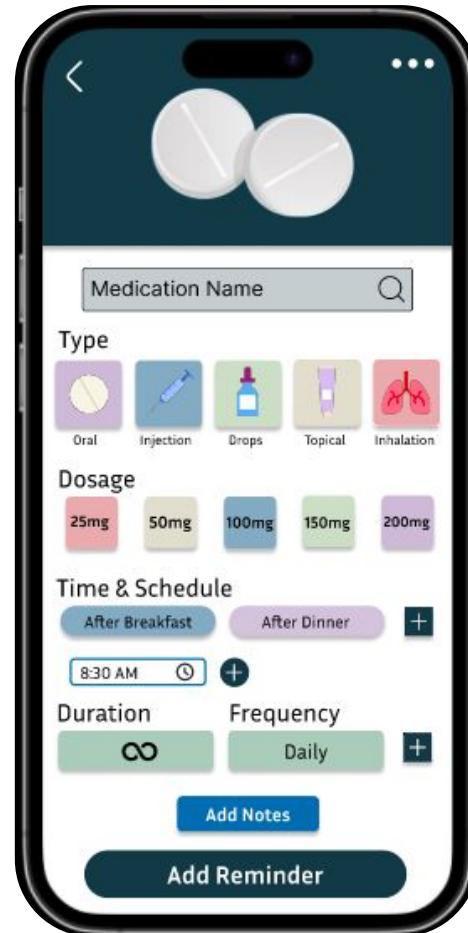
This is a medication reminder app that will help users take their medications on time and without delay.

Users will be able to add other profiles for kids, pets, ect., and be confident that their medication has been not been forgotten.



Project duration:

September 2023 - October 2023



Project overview



The problem:

Everyday users around the world are being prescribed medications. Weather it's new or they have been taking it for awhile, it can be difficult to remember to take medication on time everyday. Specially if it is a new prescription. Now add several medications and it can be difficult to remember what you've taken and when.



The goal:

I wanted to help users feel confident that they are taking the right medication at the right time without any worries. I want to take the worry of when to refill their prescriptions away by adding a countdown and making it easy to contact their pharmacy. If users have a child, a pet, or even an elder who needs help with medication, users will be able to add different profiles to help keep track and remember their persons medication as well.

Project overview



My role:

Lead UX designer, UX researcher



Responsibilities:

User research, wireframing, prototyping,
mockups, UI design

Understanding the user

- User research
- Personas
- Problem statements
- Competitive audit
- Ideation

User research: summary



I conducted user research to gain insights into the preferences and needs of users regarding a medication reminder app. Our research involved surveys, interviews, and usability testing with a diverse group of participants. Initially, we assumed that the primary concern was simply medication forgetfulness, but our research revealed a broader range of challenges, including concerns about medication interactions and side effects. We also assumed users preferred basic reminder features, but they showed a strong desire for medication databases, calendar integration, and gamification elements. Our assumptions evolved, highlighting the importance of offering a comprehensive solution that addresses a variety of user concerns and preferences to improve medication adherence effectively.

Persona 1: Jessica Maisie

Problem statement:

Jessica Maise is a 31 year old living in Houston TX who needs a simple and easy way to remember to take her medication because she is busy and not super tech savvy. She likes to spend time outdoors and doesn't like to be on her phone too much.

[Click here to see personas](#)

Jessica Maisie



AGE: 31
EDUCATION: Bachelor's in Communication
STATUS: Relationship
OCCUPATION: HR
LOCATION: Houston TX
TECH-LITERATE: Medium

Quotation: I use tech everyday at work and for personal use, but never feel fully confident in it. I get tired of always being on my phone.

Personality: Reader, Outgoing, Impulsive, Adventurous

Bio: Jessica is currently living in Houston TX with her girlfriend. She enjoys her work but would like to continue to grow and educate herself. On her off time she enjoys exploring and hiking. She tends to be a bit impulsive and doesn't always plan things in advance.

Goals:

- Go back to school to get her Masters Degree.
- Be better at planning.
- Cook more healthy meals and bring left overs to work for lunch.
- She values her personal life and strives to maintain a healthy work-life balance. She enjoys spending time with her family and pursuing hobbies like hiking and photography.

Frustrations:

- Work-Life Balance: Balancing a demanding career with personal life can sometimes be a challenge.
- Complex apps: since she is not super tech savvy, using software or interfaces that are over complex or difficult to navigate can lead to frustration.
- Financial Stress: She is currently struggling with debt and budgetary constraints causing her much anxiety.

Brands: REI, Google, Starbucks, Spotify

Payment medium: Digital Payment, Debit Card

Platform: Mobile Phone, Desktop

Persona 2: Devon Charles

Problem statement:

Devon, a dedicated freelance photographer, is facing the challenge of consistently managing his medication while juggling a busy schedule filled with photography assignments and projects. He is seeking a solution to help him remember to take his medication at the right times and doses, ensuring he maintains his health without compromising his professional commitments.

[Click here to see personas](#)

Devon Charles



AGE: 34
EDUCATION: Bachelor's in Film/Photography
STATUS: Single
OCCUPATION: Photographer
LOCATION: London
TECH LITERATE: High

"Flexibility in my work allows me to find inspiration outside the confines of an office and stay creative."

Personality
Creative Client-Focused
Tech-Savvy Adaptable Stubborn

Brands
   

Payment medium
 Digital Payment  Debit Card

Platform
 Mobile Phone  Laptop

Pain Points:

1. **Forgetting Medication:** Users often forget to take their medication, which can lead to missed doses and compromised health.
2. **Complex Medication Regimens:** Some users have complex medication schedules with multiple drugs at different times, making it challenging to manage effectively.
3. **Motivation and Engagement:** Maintaining user motivation and engagement over the long term can be challenging, as users may lose interest in taking their medication regularly.
4. **Lack of Medication Information:** Users may lack comprehensive information about their prescribed drugs, such as side effects or how to take them, which can impact adherence.

Competitive audit

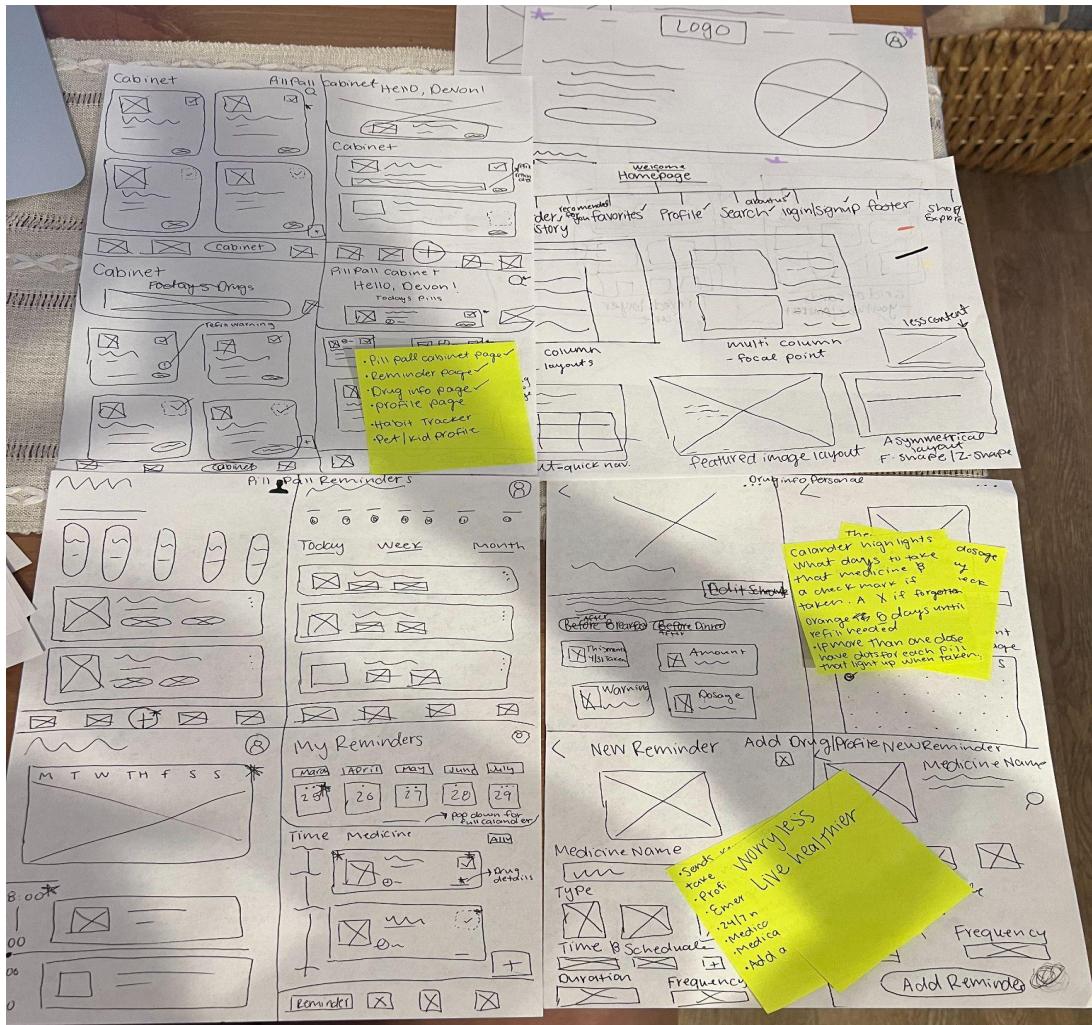
An audit on three other medication reminder apps to help provide information on gaps and opportunities to expand PillPall

	Unique value proposition	Company advantages			Company disadvantages			Similar capabilities
PillPall Our company	Define the unique value proposition of the company here 1. Medication interaction Checker 2. User friendly interface design 3. Medication information and warnings	Has 24/7 Nurses hotline for paid memberships.	Can add personalized notes to each medication	Refill medication countdown.	Doesn't have a reward for consistency.	Could have more fitness and health tracking.	Could have more reminders for different health related tasks.	What do all companies have in common? Describe here
Medisafe Competitor 1	1. Medication interaction Checker- while minimizes the risk of harmful drug interactions. 2. User Friendly Interface-Design makes it accessible and appealing to a wide range of users. It may be easier for seniors or those who may be less tech-savvy or have visual impairments.	Highly rated for user-friendly interface.	Offers medication interaction checking and health diary features.	Provides options for caregivers to monitor users' adherence.	Limited customization of reminder schedules.	Some users find the free version has intrusive ads.	Lack of integration with major fitness and health tracking apps.	1. Medication Scheduling. 2. Push Notifications 3. Medication Info 4. Customization 5. Medication History Tracking 6. Multi-Medication support
Mango Health Competitor 2	1. Gamification for Motivation - rewards and points for taking medication consistently. 2. Medication info and interaction checking- empowers users to make informed decisions about their healthcare.	Gamification elements to motivate users	Medication information and interaction checker.	Rewards for adherence	Limited medication database compared to other apps.	Less customization for reminder tones, and schedule.	Some users find the gamification features distracting.	
Walgreens Pill Reminder Competitor 3	1. Seamless Pharmacy Integration- allows users to easily refill their prescriptions. 2. Pill Images- making it simpler for users to visually identify their pills. This visual aid enhances medication safety and accuracy.	Integration with pharmacy services for prescription refills.	Medication information and interaction checking.	Pill Images for easy identification.	Focused primarily on walgreens customers.	Limited features for non-prescription medications.	Fewer reminders for other health-related tasks.	

Competitive Audit

Ideation

I did a quick ideation exercise to come up with ideas on how to address users issues with remember to take medication. Mostly focused on easily adding and editing medications and simple medication information access.



Starting the design

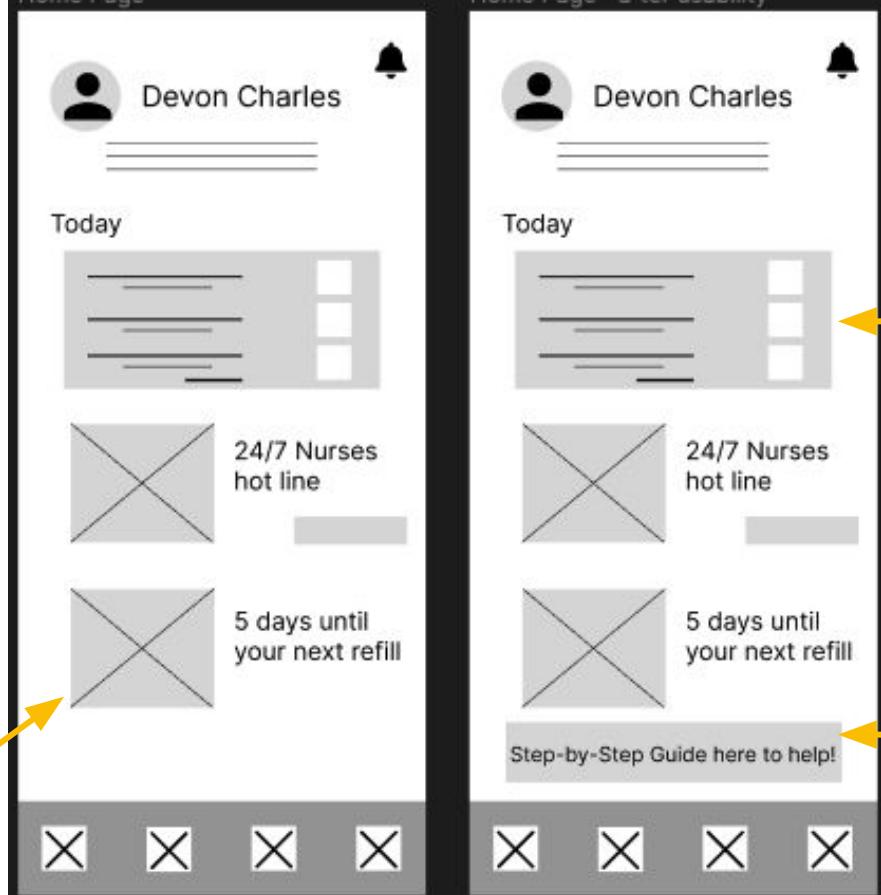
- Digital wireframes
- Low-fidelity prototype
- Usability studies

Digital wireframes

After the ideation step and drawing paper wireframes, I made digital wireframes of the main homepage. I wanted the medication of the day to be front and center, the profile signed in to easily see whose medication is on screen, and easily seen refill notification.

Countdown for refill and easy access to contact pharmacy.

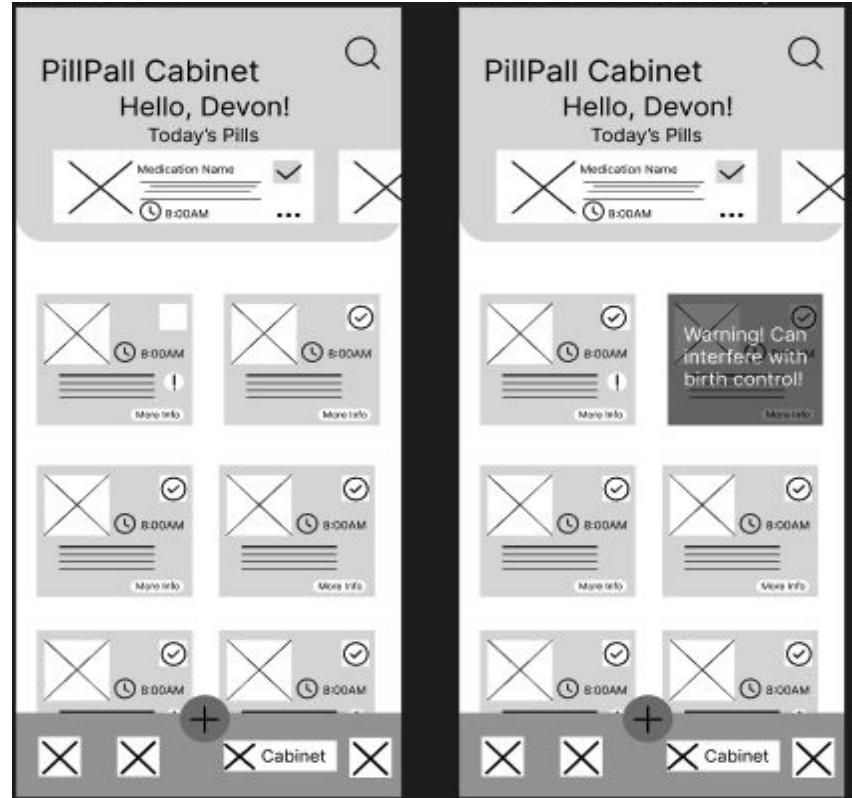
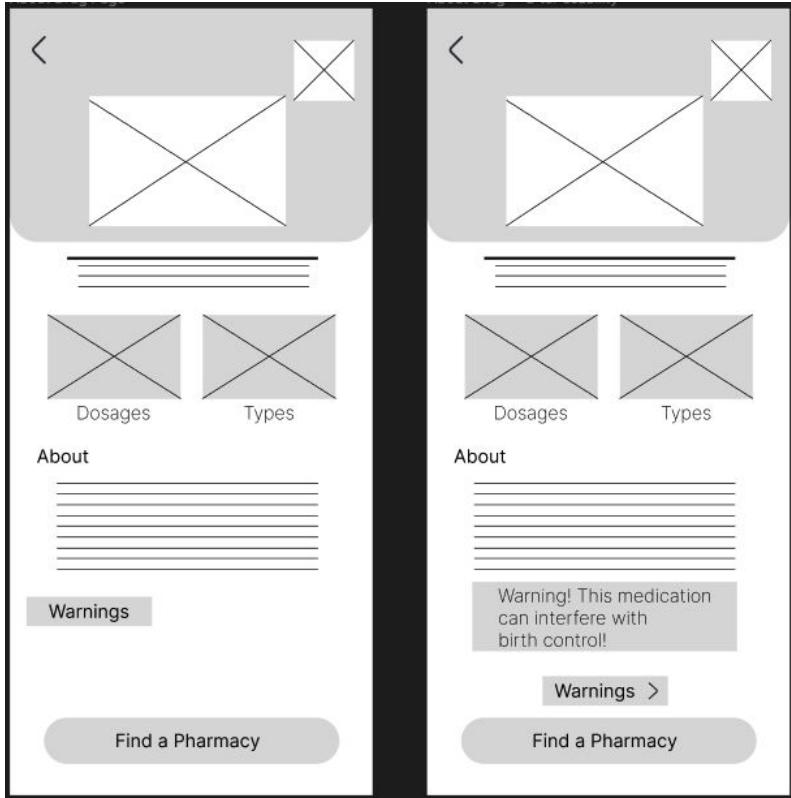
Before Usability Study After Usability Study



List of today's medication with time to take and interactive check mark

Step by step guide for the app to make it easier to use

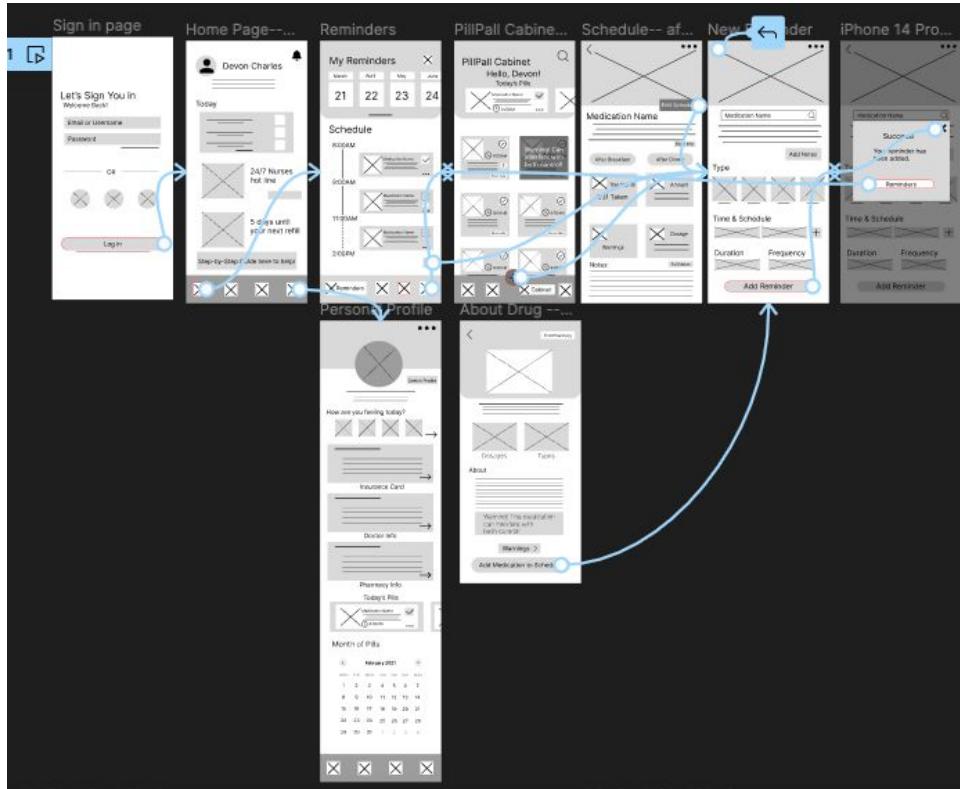
Digital wireframes



Low-fidelity prototype

I prepared a low-fidelity prototype to prepare for a usability study. The process is to add a medication to the users schedule.

Low-Fidelity prototype



Usability study: parameters



Study type:

Unmoderated usability study



Location:

Los Angeles, Remote



Participants:

7 participants



Length:

15-30 minutes

Usability study: findings

These were the main findings from my usability study.



1

Finding

Users want to see their medication history.



2

Finding

Pill imagery for easy identification.



3

Finding

Caregiver Support: enable family members or caregivers to monitor and assist users in their medication management.

Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

Mockups

From my usability study, I found that users want medication imagery for easy identification. Instead of the original animated pills I had placed by each medication information, I added real images of the medication.

Before usability study



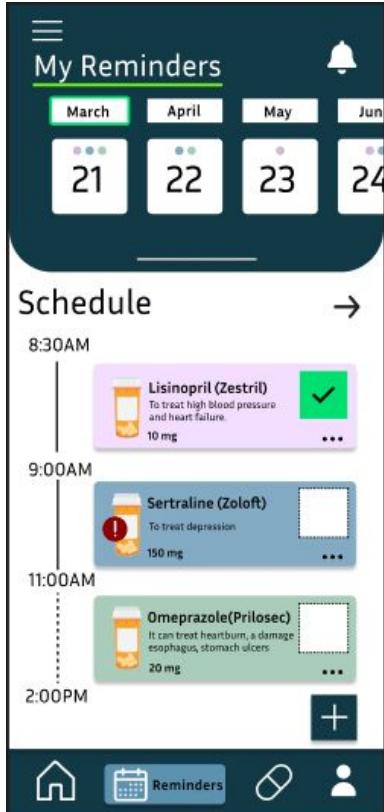
After usability study



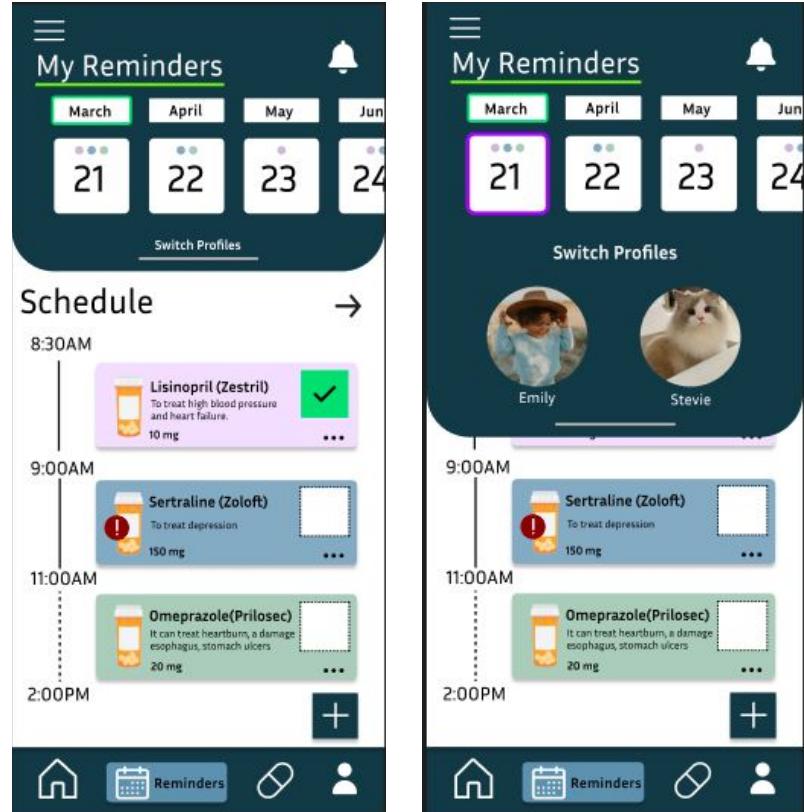
Mockups

Users want to have a caregiver option and while I had the option, I wanted to make it easier to switch profiles.

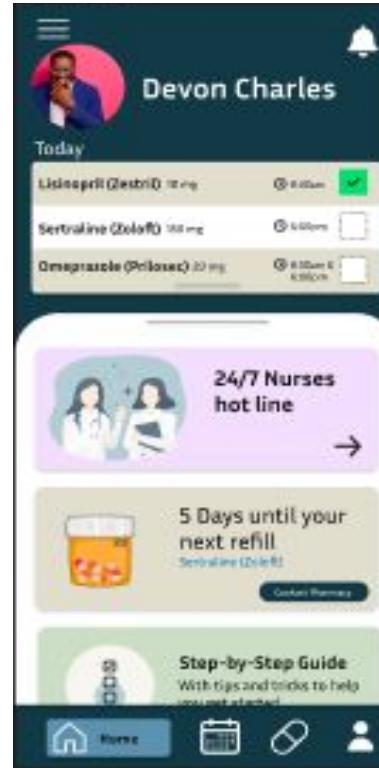
Before usability study



After usability study

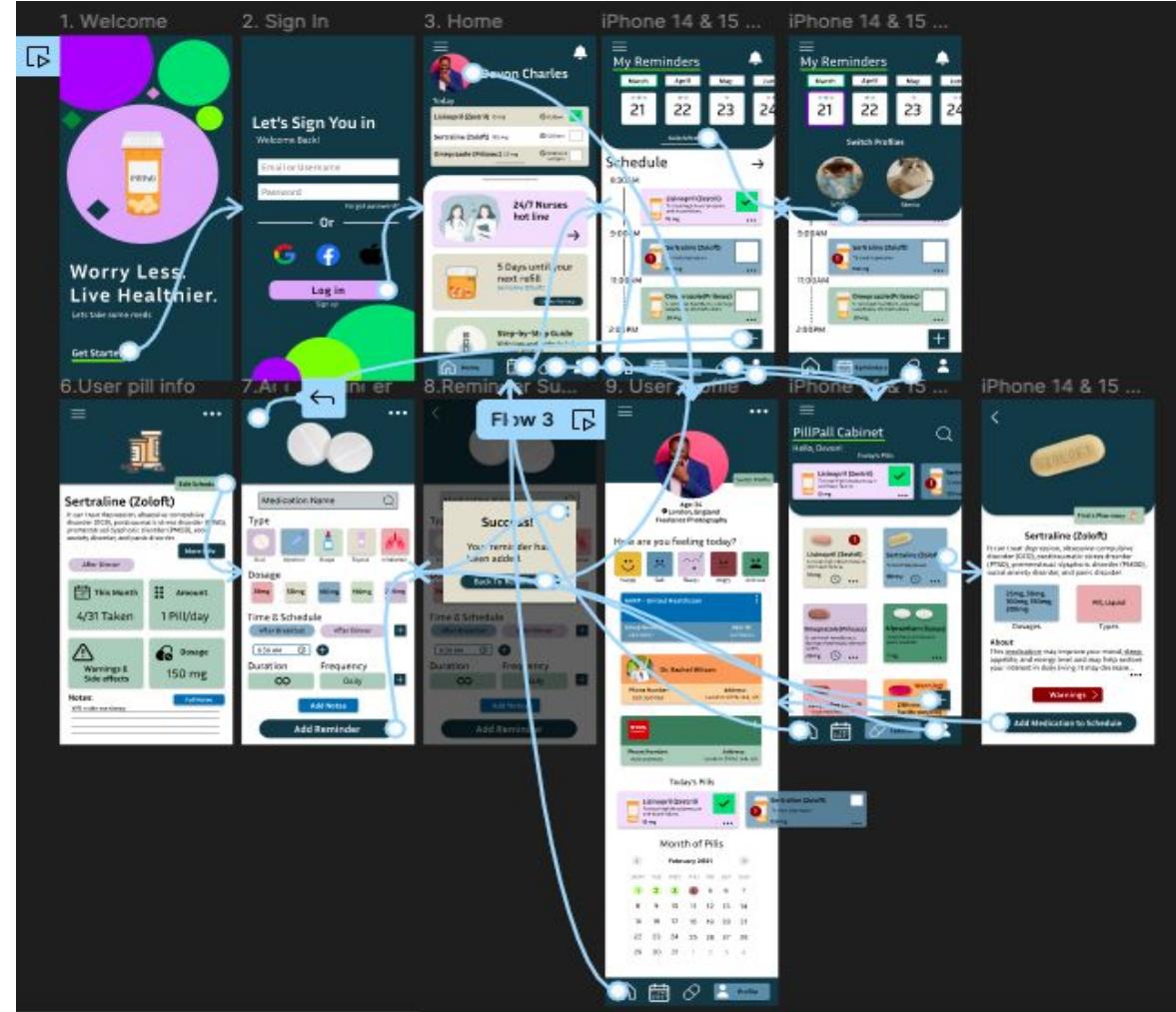


Mockups



High-fidelity prototype

After creating my mockups, I implemented my prototype. The user flow is to add a new medication to their schedule.



Accessibility considerations

1

Clear medication imagery for easy identification and to reduce the chances of taking the wrong pills.

2

When a medication can interfere with another medication a user is taking, a warning will pop up next to that medication to warn the user. They will be able to acknowledge the warning saying they are aware of the interference.

3

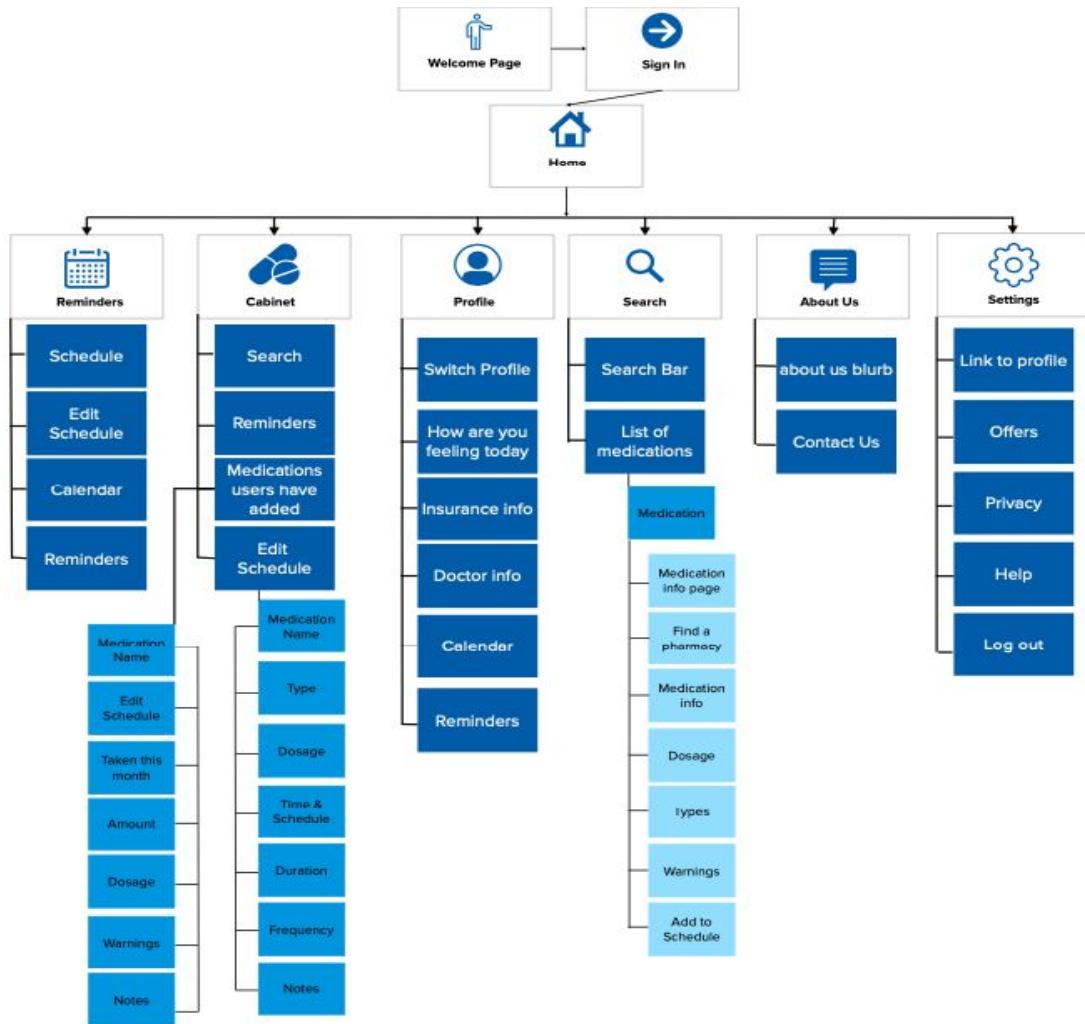
I created a smart watch interface to help users with reminders. They will be able to customize their reminders not only on the app but on their smart watch too. This will make it easier for them to be reminded to not only take their medication, but if they are a caregiver, to make sure the person they are caring for has taken their medication.

Responsive Design

- Information architecture
- Responsive design

Sitemap

With the app design finished I started working on a responsive website. I used my sitemap to help guide the organization structure to make sure the website's user experience was consistent across devices.



Responsive designs

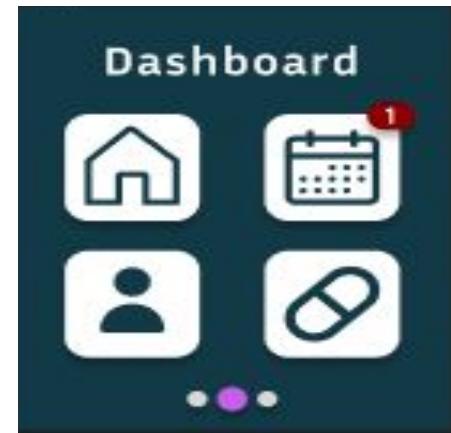
The design for different screen sizes include phone, desktop, tablet and smartwatch. I did a mobile-first approach and worked my way up to desktop size. Then decided to include smartwatch designs as well. I prefer mobile-first design approach, it keeps me focused on the most important features to make the user experience more enjoyable and keep it accessible.

The image displays four screenshots of the PillPall app interface, illustrating its responsive design across different screen sizes and platforms:

- Mobile Screen (Top Left):** Shows the "Home" screen with a dark teal header. It includes a profile picture of Devon Charles, a search bar, and tabs for Home, Reminders, and Cabinet. The main area shows a "Today" section with three scheduled medications: Lisinopril (Zestril), Sertraline (Zoloft), and Omeprazole (Prilosec). To the right is a decorative floral graphic with the text "Take care of yourself today! Future you appreciates it!". Below this is a "How are you feeling today?" section with a mood scale from happy to sad. At the bottom left is a calendar for February 2021, and at the bottom right is a "Month of Pills" section with a "Cold Season is here!" reminder and links to breathing exercises and a nurses hotline.
- Desktop Screen (Top Right):** Shows the "Schedule" screen with a light blue header. It lists scheduled medications for the day: Lisinopril (Zestril) at 8:30AM, Sertraline (Zoloft) at 9:00AM, Omeprazole (Prilosec) at 11:00AM, and Levocetirizine (Xyzal) at 2:00PM. A "My Reminders" section shows a weekly calendar with scheduled reminders for Emily and Stevie. A "Add a Reminder" button is at the bottom.
- Smartwatch Screen (Bottom Left):** Shows the "Saved Medications" screen with a dark teal header. It lists four saved medications: Lisinopril (Zestril), Sertraline (Zoloft), Levalbuterol (Xopenex), and Ibuprofen. Each entry includes the medication name, a small icon, a dose (e.g., 10 mg, 150 mg, 20 mg), and a "More info" button.
- Mobile Screen (Bottom Right):** Shows the "Saved Medications" screen with a light blue header, identical to the smartwatch version but with a light blue header. It lists the same four saved medications with their respective details.

Responsive designs

Here is my mockup for a smartwatch design. This was a challenge in that I had to make sure to have the most important features available while being accessible. I found it important to have a smartwatch design to make it easy for users to be reminded of their medication even if they don't have their phones next to them.



Going forward

- Takeaways
- Next steps

Takeaways



Impact:

Users shared that they were able to remember to take their medication on time and stay consistent. One user said, "I was able to remember to give my dog Rocket her medication on time the first day I used PillPall".



What I learned:

I learned that there are a lot of different user needs when it comes to taking medication. At first I thought this project would be pretty straight forward, but after doing research I found many different needs and wants from users that I had never thought of. I learned a lot about how users prefer to be reminded and how they like more interactive and customization qualities in their schedule making

Next steps

1

Conduct research on how successful that app is globally and how different needs in different countries need to be met.

2

Add more resources for users who don't have insurance.

3

Add a reward system for taking their medication consistently.

Let's connect!



Thank you for taking the time to review my work on the PillPal App. If you'd like to see more of my work please contact me!

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