Massimo Paolini

40280323

February 2026

HealthMe – A Health Management Application

SOEN 357 Mini-Project

Section V

Contents

Blog post can be found here: https://masspaol.github.io/

Introduction

Problem

A study by the CDC, found that over 75% of Adults in the U.S. and Canada live with at least one chronic health condition, and more than 50% have two or more. For the millions of people with these conditions, there is a persistent, daily cognitive burden weighing them down. Managing these conditions requires recurring medical appointments, monitoring symptoms over time, and communicating effectively with healthcare providers, just to name a few of these recurring tasks. There needs to be reliable systems in place to support this massive sector of the population with such heavy duties. However, the tools most people currently rely on are fragmented: a pillbox on the kitchen counter, a paper calendar, a notes app, and a pharmacy's automated phone line. There isn't one single solution that ties these all together in an accessible and trustworthy manner.

Landscape Context

Most health management apps in the existing landscape have consistent shortcomings. They frustrate users by locking safety features behind paywalls or being far too complex for the average person. They also tend to overlook caregivers who are often juggling health data for both themselves and their families.

App Solution – HealthMe

HealthMe is a companion mobile app that is designed to act as a unified, intelligent health management tool for the millions of people living with chronic conditions. The app is specifically designed for a huge range of demographics, targeting Gen Z users who are digitally native but want health management to remain discreet and unobtrusive; Millennials and Gen X who are often managing their own health alongside the health of a dependent and need efficiency above all else; and Boomer users who may have lower digital fluency but the greatest medical need, and for whom app clarity is a must.

User Research and Persona Creation

User Research

Possible Methods

Understanding user needs and behaviors requires the use of multiple user research methods, each with its own strengths and constraints.

One possible avenue for research is surveys. These are quite common and can oftentimes be seen while using apps where the creators are looking for reviews or feedback. The main advantage of using surveys is that they can be easily compiled with as many questions as desired, and just as easily be sent out. There also exist many services that automatically compile and graph the answers you receive saving you time. However, many times the limiting factor for this is achieving significant outreach. They often times don't get answered or reach enough people to draw reasonable conclusions. Another huge issue is self-report bias where people will answer based on how *they feel they should* rather than answering honestly.

A separate avenue is interviews. This method requires finding specific people that would be able to be representative of the target user base and interviewing them. This has the main advantage of being able to go more in depth into specific pain points or interesting ideas. It would also not require a significantly sized sample, as just 4 or 5 interviews with different groups (based on age, gender, experience, etc.) within the target audience should be a good enough information source. One main issue of this approach is that if you choose people who don't actually represent the users well, the information can lead to significant time wasted on incomplete or sample-biased data.

Finally, secondary research such as analyzing existing research, forums, or user reviews on existing competitor products. This approach allows insights to be gathered efficiently without the need for direct user recruitment, and can reveal common user needs, recurring pain points, and established behavior

patterns. However, a key limitation of secondary research is that the data was collected for different objectives, meaning it may not fully align with the specific goals of the project or accurately reflect the target user population.

Interviews

The user research conducted for this project uses both interviews and secondary research to gain knowledge and insight into the target user base. Ten real people, each having some form of chronic condition, were interviewed, aged 17, 17, 21, 22, 23, 45, 47, 54, 73, and 75.

The interviews questions were organized in such a way to target specific areas of interest to directly inform decisions.

The first group was targeting demographics and context, asking 3 main questions

1. “Can you describe a typical day when you have to manage your health or medications?”
2. “What are the three apps you use most on your phone? What do you like about them?”
3. "How comfortable do you feel using your phone for important tasks compared to pen and paper?"

The second group was targeting pain points and challenges, asking another 3 questions

1. “Have you ever forgotten a dose or an appointment? What happened, and how did you feel?”
2. “When you need to talk to your doctor, what is the most annoying part of that process?”
3. “Where do you currently keep track of your health info? (e.g., a physical folder, notes app, calendar on the wall?)”

The third group was targeting needs and feature validation, asking the next 3 questions

1. “If an app sent you a notification to take medication, what information would you need to see on the screen immediately?”
2. “What information do you want to have ready right before you walk into a doctor's office?”
3. “If you were feeling unwell, how would you expect an app like this to help you in that moment?”

The final group of questions targeted the specific age groups

1. Gen Z: “How would you want this to fit into your social/work life without being intrusive?”
2. Millennials/Gen X: “As someone likely balancing work/family, how can this app save you time rather than add a chore?”
3. Gen X/Boomers: “What makes a screen hard for you to read or interact with? How do you feel about sharing health data digitally?”

After the interviews the key answers were recorded. For brevity, only the answers that are directly actionable are recorded below. As a note the answers have been cleaned up so as to clearly get the meaning of what each participant was saying.

First group of questions key answers

> Participant Age 23 > "A typical day is a series of 'remind me later' taps. I use Instagram and Notion the most because they are visual and flexible … I feel 100% comfortable with my phone for tasks … paper isn’t as useful because I can’t 'search' it or set an alarm on it … digital notifications are my main guide …"

> Participant Age 45 > "… I check my own vitals … text my dad to see if he took his medications. I mainly use Outlook and Teams for work … I use my phone for 'important' things because of the sync. I need to see my schedule on my laptop and my phone simultaneously … Paper is too slow and cumbersome for me …"

Participant Age 75 > "My health management is all physical reminders: the pillbox in the kitchen, the calendar on the desk … I use WhatsApp for family, but for health, I prefer my pen and paper … I don’t trust my phone, and it isn’t really a big part of my life …”

Second group of questions key answers

Participant Age 17 > "The most annoying part of seeing a doctor is having to communicate with them constantly by phone. Oftentimes I have to wait for a receptionist to call me back during class, and I can't talk then … I’ve missed doses before simply because the notification looked like a random app update … I felt 'notification blind' and then guilty for being irresponsible …"

Participant Age 45 > "The 'Mental Load' is the killer. I’m managing two sets of appointments. The most annoying part is the lack of transparency … I have to call the doctor just to find out if a prescription was actually sent to the pharmacy … It’s a 15-minute chore that should be a 5-second status check …"

Participant Age 73 > "I’ve forgotten appointments because I wrote them on a scrap of paper that got thrown away. It makes me feel unreliable … When I talk to the doctor, I feel rushed … I can’t remember the names of the three different white pills I take, and I feel like they think I’m 'losing it' because I don't have the info ready …"

Third group of questions key answers

Participant Age 22 > "If I'm feeling unwell, I don't want to type a journal entry. I just want icons for 'Nausea' or 'Fatigue.' … On my lock screen, I need the notification to be high-context, like, 'Take Blue Pill - With Food.' Don't make me unlock the phone to see the instructions."

Participant Age 45 > "… A report that summarizes trends of my health would be perfect … I don't want a simple list; I want to show them a graph that says, 'Blood pressure spiked on Tuesdays.' It needs to back up my symptoms and claims …"

Participant Age 75 > "I need to see a photo of the medication on the screen. Names like 'Lisinopril' mean nothing to me, but I know the 'round pink pill.' … If I'm unwell, I expect the app to have a 'Call Daughter' or 'Call Doctor' button right there on the home screen so I don't have to hunt through contacts …"

Fourth group of key questions, focused on each generation

Gen Z (17-23): > "It needs to look like a 'lifestyle' app, not a 'sick person' app … If my phone is on the table during a meeting or date, the notification shouldn't broadcast something embarrassing … It should be discreet but persistent."

Millennials/Gen X (45): > "Save me time by automating the boring stuff. If the app can track my pharmacy refills and tell me before I run out, that's one less thing on my mental to-do list … It has to be a tool, not another 'pet' I have to feed with data entry …"

Boomers (70+): > "Stop using thin, light-grey fonts on white backgrounds. I need high contrast and large tap targets … I'm fine sharing data with my doctor, but I don't want it 'shared' with advertisers …"

Secondary Research

For the secondary research Reddit was the main source of information, specifically subreddits such as r/ChronicIllness, r/adhdwomen, and r/UXDesign.

Key insights found were

The "Subscription Fatigue" Barrier: Many users expressed frustration with popular apps (like Medisafe) moving features like "refill reminders" behind a paywall. This suggests that for a "Health Companion," basic safety features should remain accessible to ensure user retention and trust.

The "Mental Load" of Appointment Scheduling: A major pain point identified was the lack of asynchronous scheduling. Users (particularly those with ADHD or chronic fatigue) find "phone-only" booking systems a significant barrier to care. They specifically requested features that allow them to book or request appointments "after-hours" when they actually have the mental energy to handle admin tasks.

Notification Desensitization: Chronic illness patients often "ignore" standard reminders if they are too frequent or lack context. Secondary research highlighted a need for "snooze" functionality that is smarter, allowing a user to say "remind me in 20 minutes" rather than just dismissing an alarm they aren't ready to act on.

Privacy & "The Paper Backup": There is a notable segment of the population (especially seniors and privacy-conscious Gen Z) who still distrust cloud-syncing for sensitive medical data. This insight suggests a design requirement for local data storage options or an easy "Export to PDF" feature so users can bring a physical copy to their doctor.

The "Caregiver" Persona: Research showed that many users are not just managing their own health, but also a relative's. This points toward a need for "Multi-Profile" support or a "Shared Access" feature in the app's Information Architecture.

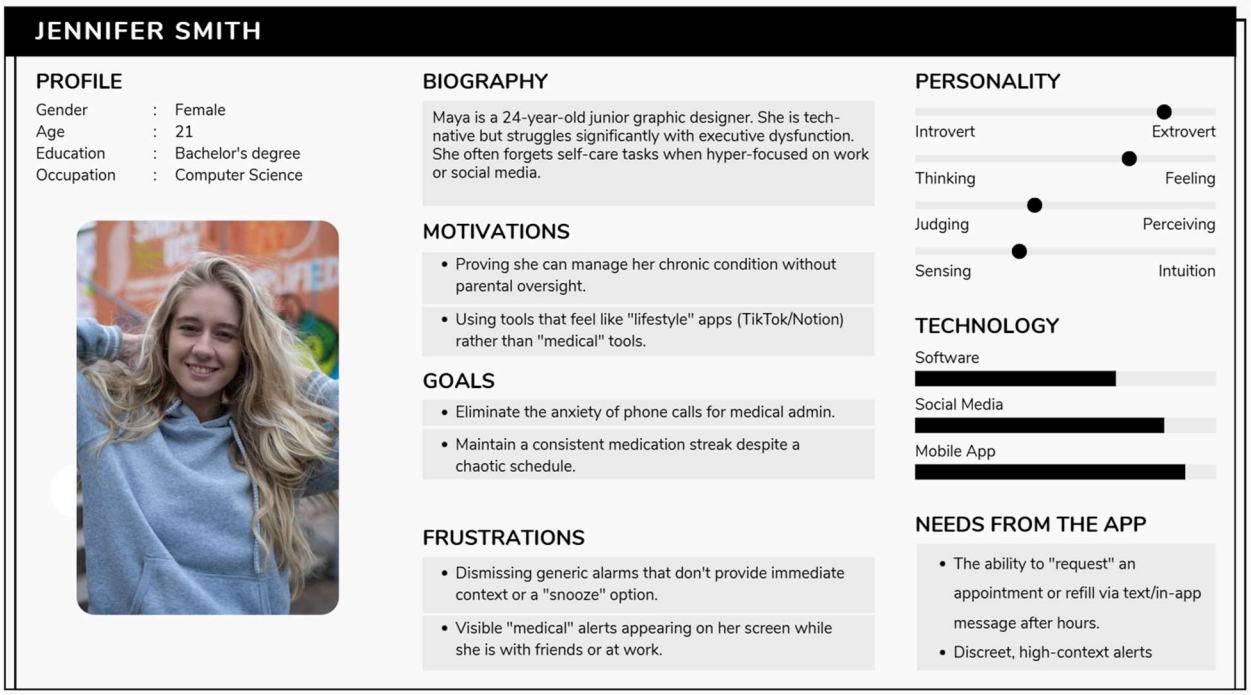
User Personas

Based off the research conducted, three primary personas come to mind in order to translate all the collected information across the internet and real-life interviews.

Jennifer Smith (Gen Z)

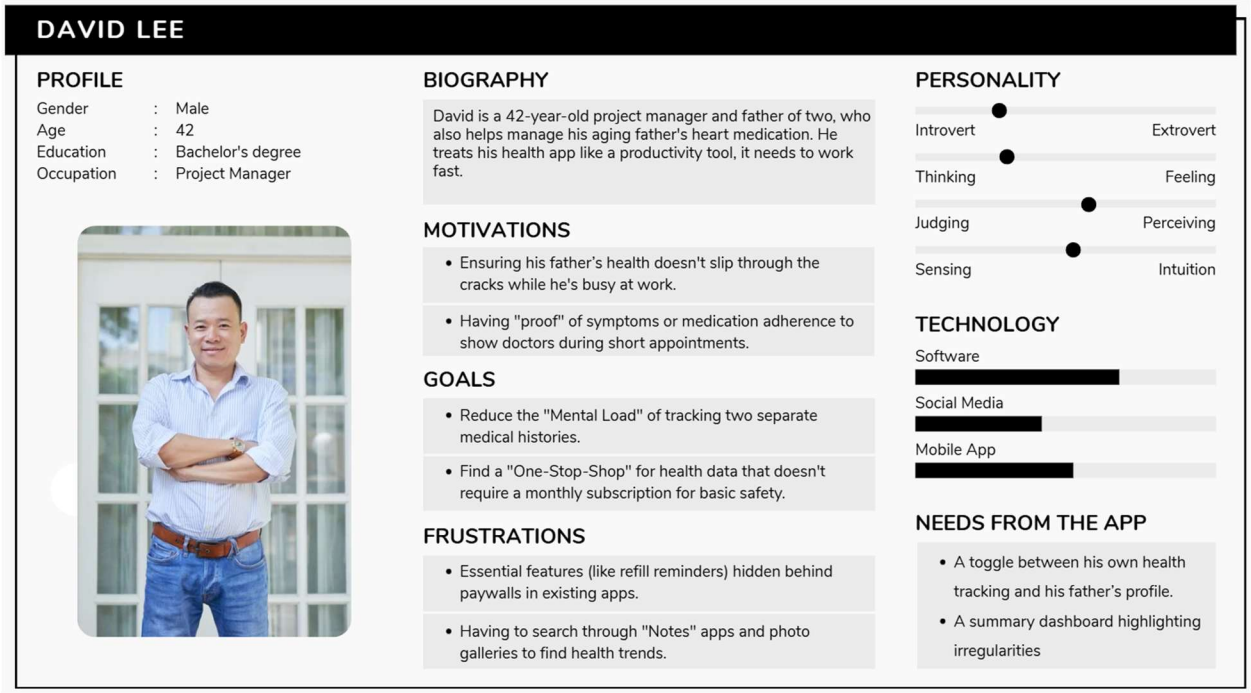
The first persona is one that could represent Gen Z. This persona is mainly informed based on the three Gen Z people that were interviewed and the secondary research conducted on reddit. This demographic

seems to be heavily reliant on “phone-only” communication and management, despite this, they hate having to make phone calls. Also, this demographic seems to be overwhelmed by notifications due to the high interconnectivity between their daily life and social pastimes.



David Lee (Millennial/Gen X)

The second persona is one that could serve to represent late millennials and early Gen X’s. This persona is mainly informed by the interview conducted, but there are also some reddit posts, of which they mention their age, that are useful for additional information. This demographic is generally extremely busy, being at the height of their work life, and generally look for “straight-to-the-point” tools that directly help manage their stress load.



Elena Pucci (Boomer)

The third, and final, persona is one that can represent the Boomer generation. This is arguably the most important demographic as elderly people generally need much more medication and medical attention. This persona is mainly informed by the interviews conducted, but there were two or three reddit posts that were from the perspective of a Boomer which can help serve as insight as well. This demographic is significantly less adept with a mobile phone than the previous two, making printable files extremely important. Another huge impact is the app usability, as elderly people are less likely to have the “UI/UX intuition” that younger generations gained from experience, so the app interface must be both intuitive and simple.

ELENA PUCCI

PROFILE

Gender	:	Female
Age	:	73
Education	:	Bachelor's Degree
Occupation	:	Retired (Teacher)

BIOGRAPHY

Eleanor is a 73-year-old retired teacher. She uses a smartphone for Facebook and texts, but she currently uses a physical folder and a wall calendar to manage her health. She is skeptical of "the cloud."

MOTIVATIONS

- Knowing her information is safe and won't be "deleted" by a software glitch.
- Understanding exactly what her medications are and why she is taking them.

GOALS

- To feel prepared and "heard" during doctor appointments.
- To transition from a physical folder to a digital one without losing a sense of control.

FRUSTRATIONS

- Small, low-contrast text and "hidden" navigation menus that are hard to tap.
- Deep-seated distrust of sensitive medical data being stored on remote servers.

PERSONALITY

Introvert — Extrovert

Thinking — Feeling

Judging — Perceiving

Sensing — Intuition

TECHNOLOGY

Software

Social Media

Mobile App

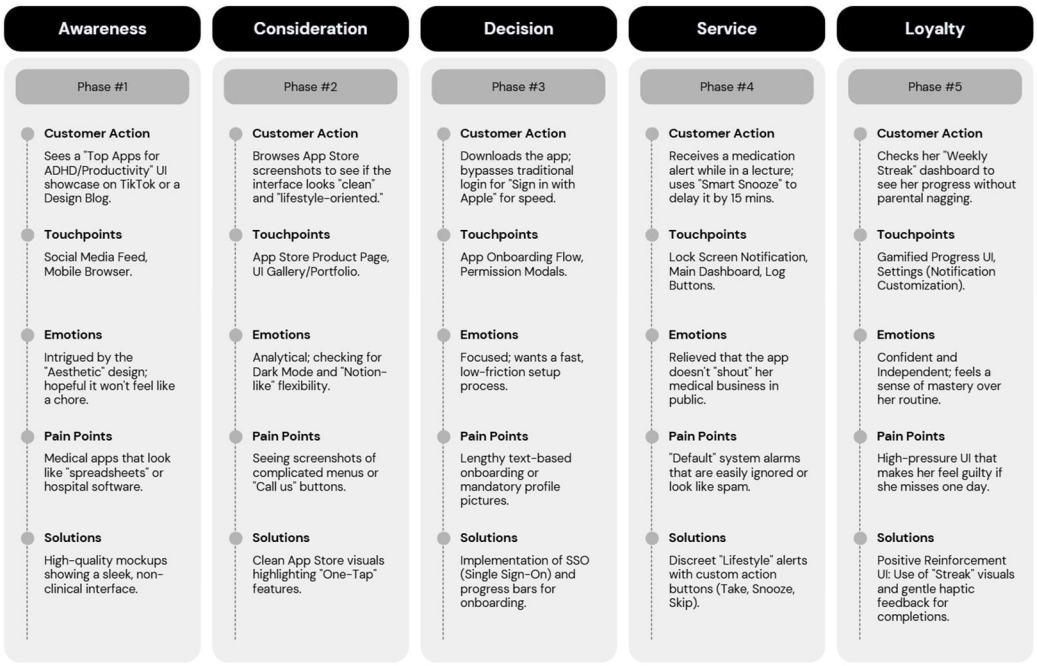
NEEDS FROM THE APP

- An "Export to PDF" feature
- A pill-image library that shows a photo of the medication

User Journey Mapping

In order to connect user feedback into actionable UI/UX design, user journey maps are used to help better understand the target user base. Each persona is given a user journey map so as to get a clear picture of user needs and pain-points.

Jennifer Journey Map



David Journey Map

Awareness	Consideration	Decision	Service	Loyalty
Phase #1	Phase #2	Phase #3	Phase #4	Phase #5
Customer Action Searches "Tool to help manage chronic health condition" on Google.	**Customer Action** Compares the app's "Free Tier" feature list against competitors like Medisafe.	**Customer Action** Initiates the "Add a Dependent" flow to link his father's profile.	**Customer Action** Uses the "One-Tap Log" to record a symptom during a work break.	**Customer Action** Reviews the "Monthly Trend Dashboard" before a doctor's appointment.
Touchpoints Search results, landing page feature-grid.	**Touchpoints** App Store screenshots of the Dashboard and Settings.	**Touchpoints** Profile Switcher icon, Onboarding "Role" selection (Caregiver/Self).	**Touchpoints** Main Dashboard, Medication Progress Bars, Notification Center.	**Touchpoints** "Insights" Tab, Data Visualization Graphs, PDF Export Button.
Emotions Stressed by his current "messy" system of notes and screenshots.	**Emotions** Analytical; looking for a "no-fluff" productivity tool.	**Emotions** Relieved that "Refill Reminders" are clearly marked as free UI elements.	**Emotions** Productive; feels a sense of "task completion" for the day.	**Emotions** Confident; feels he has the data "proof" needed for the doctor.
Pain Points Landing pages that don't clearly state which features are free.	**Pain Points** UI screenshots that look too "lifestyle" and not enough like a tool.	**Pain Points** Friction in the UI when trying to switch between personal and father's data.	**Pain Points** Busy UI that requires too many taps to log a single event.	**Pain Points** Raw data lists that are hard to interpret at a glance during a 15-minute visit.
Solutions Create a "Core Features" section on the landing page with a "Free Forever" badge.	**Solutions** Utility-First UI: Use clean, high-density dashboard screenshots in the store to show "at-a-glance" data.	**Solutions** Implement a persistent "Account Toggle" in the main menu.	**Solutions** Use simple "Quick Action" buttons for logging, hiding complex details behind a "More" tap.	**Solutions** Replace lists with color-coded line graphs and "Averages" cards (e.g., "Avg. Blood Pressure: Normal").

Elena Journey Map

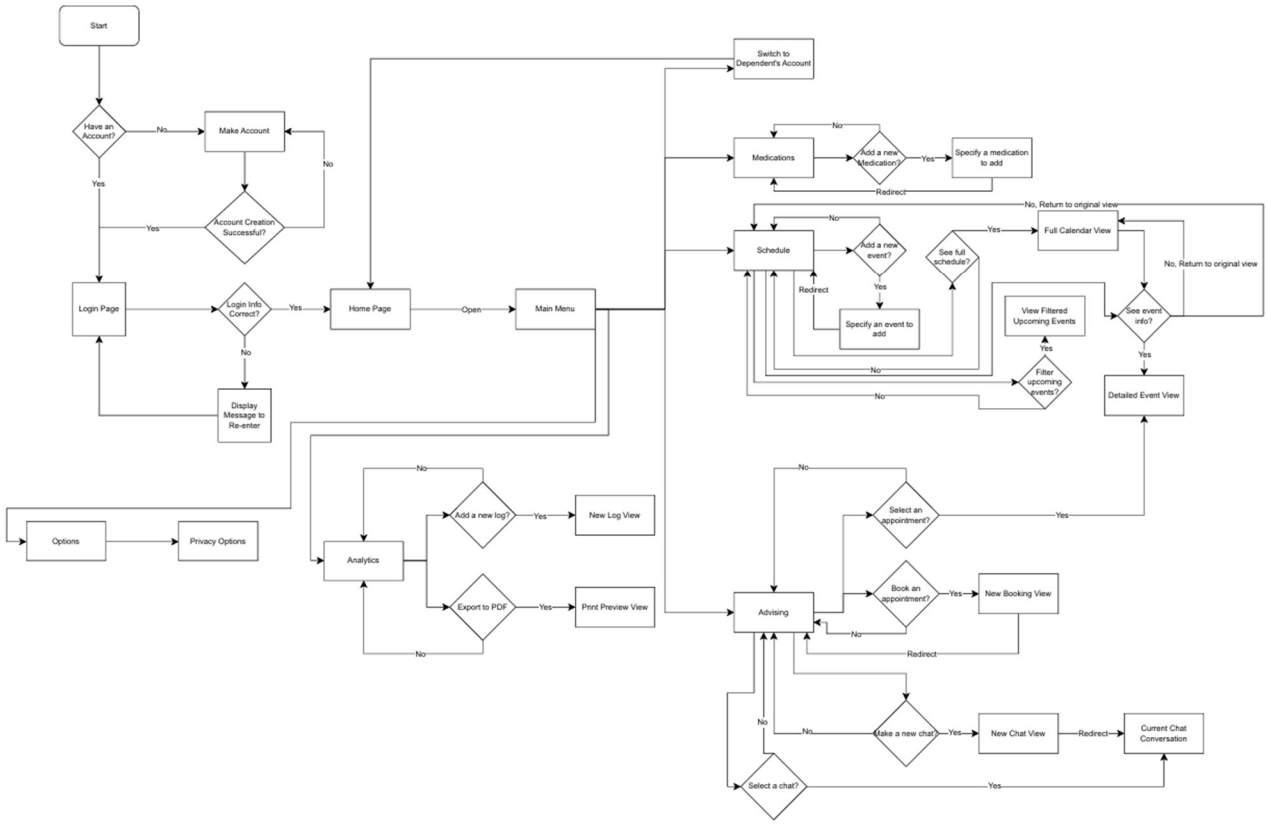
Awareness	Consideration	Decision	Service	Loyalty
Phase #1	Phase #2	Phase #3	Phase #4	Phase #5
Customer Action Searches for tools to replace her physical health folder on a tablet or computer.	**Customer Action** Browses the app store/landing page to see if the interface is legible.	**Customer Action** Downloads the app and looks for "Privacy" or "Local" settings.	**Customer Action** Logs her morning medication and records a symptom during a flare-up.	**Customer Action** Exports her monthly data to bring a physical copy to her specialist.
Touchpoints Web Browser, Tablet App Store.	**Touchpoints** App Gallery Screenshots, Feature List.	**Touchpoints** Onboarding Flow, Privacy Settings Toggle.	**Touchpoints** Home Dashboard, Medication Log, Symptom Tracker.	**Touchpoints** "Export" Menu, PDF Preview Screen.
Emotions Hopeful but wary of "tech" complexity.	**Emotions** Skeptical; worried about seeing "tiny text."	**Emotions** Relieved to see safety controls.	**Emotions** Satisfied by the visual recognition of her pills.	**Emotions** Confident and prepared for her doctor's visit.
Pain Points Search results with cluttered, high-density UI.	**Pain Points** Screenshots showing low-contrast "grey-on-white" text.	**Pain Points** Ambiguous wording regarding where data is stored.	**Pain Points** Navigation menus hidden behind "hamburger" icons (three lines).	**Pain Points** Small "Save" buttons that are difficult to tap accurately.
Solutions Use 18pt+ font sizes and AAA color contrast ratios.	**Solutions** Use bold icons and large "Card" layouts instead of text lists.	**Solutions** A prominent UI switch for "Local Device Storage Only" in settings.	**Solutions** A UI library of high-res medication photos next to the corresponding medication.	**Solutions** A large "Export to PDF" icon right near the data's location.

Storyboard

To get a better understanding of how a typical user would interact and incorporate the product into their everyday life, a storyboard was created with the persona Elena Pucci. This persona was chosen as the demographic most likely to have a chronic condition are the elderly.

User Flow Diagram

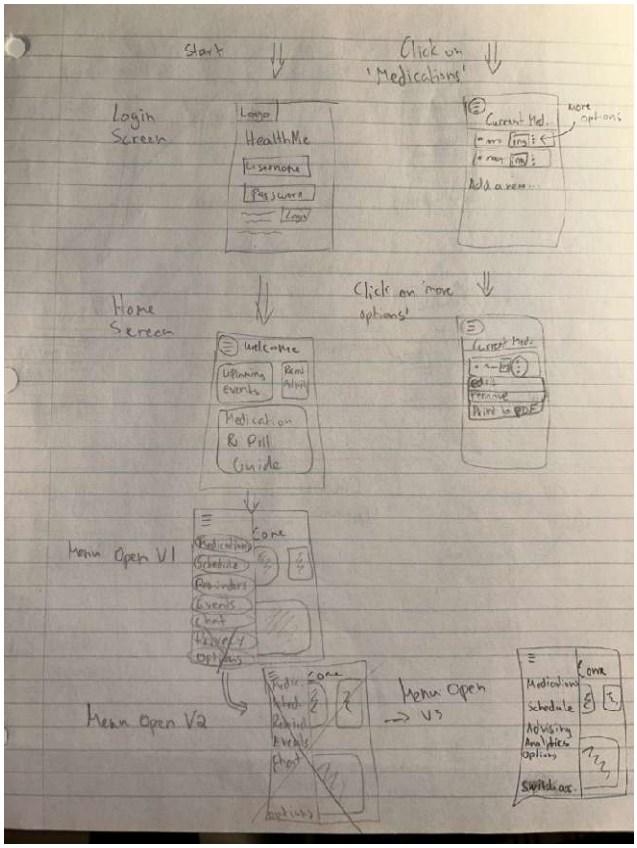
Once a general idea of the application is developed, further planning can be done relating to the functional flow of the app itself. The general purpose can be expressed in the form of a user flow diagram, which can effectively communicate the step-by-step process a user would go through when interacting with the app. This user flow diagram is visualized below.

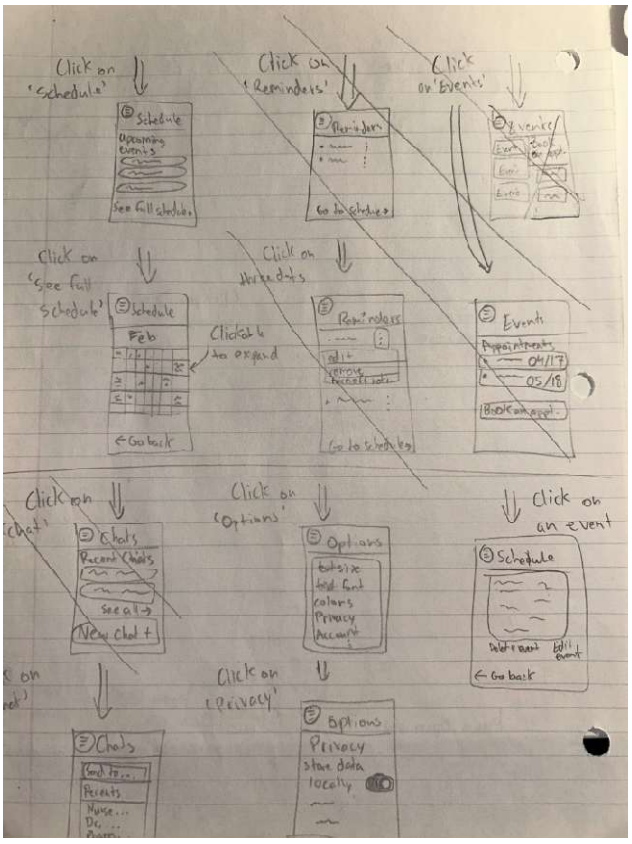


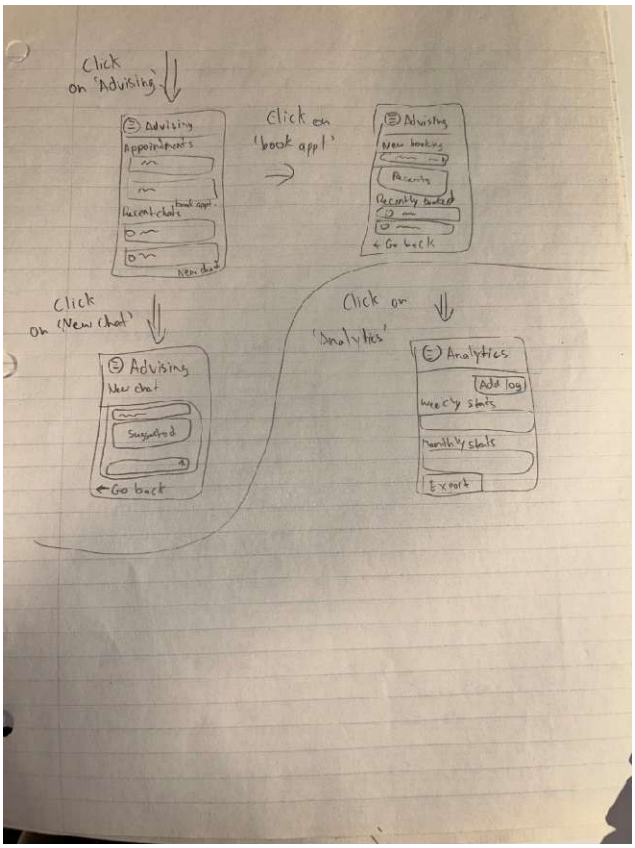
Sketching, Wireframing, Prototype Design

Sketching

Sketches were roughly drawn in order to quickly get an idea of what the layout of the app should be. They are easy to draw-up and still give great visual feedback. Despite not being the clean and organized version of the UI that one would expect from wireframes or a prototype, they serve their purpose well.




Click on 'Schedule'
Schedule
Upcoming events
See full schedule
Click on 'Reminders'
Reminders
Go to schedule
Click on 'Events'
Events
Click on 'See full schedule'
Schedule
Feb
Click to expand
Go back
Click on Reminders
Reminders
Edit
Remove
Go to schedule
Events
Appointments
04/17
05/18
Click on 'Chat'
Chats
Recent Chats
See all
New chat
Click on 'Options'
Options
Text size
Text font
Colors
Privacy
Account
Click on an event
Schedule
Go back
Click on 'Privacy'
Options
Privacy
Store data locally

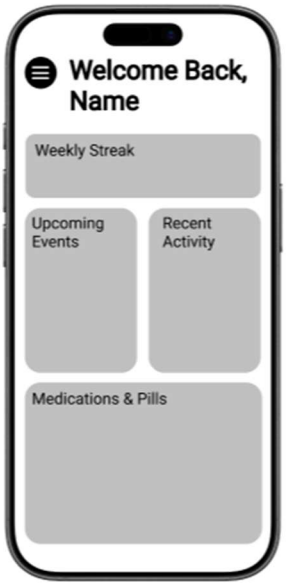

Click on 'Advising'
Advising
Appointments
Recent chats
Click on 'book appt'
Advising
New booking
Recents
Recently booked
Go back
Click on 'New chat'
Advising
New chat
Suggested
Go back
Click on 'Analytics'
Analytics
Add log
Weekly stats
Monthly stats
Export

Wireframes

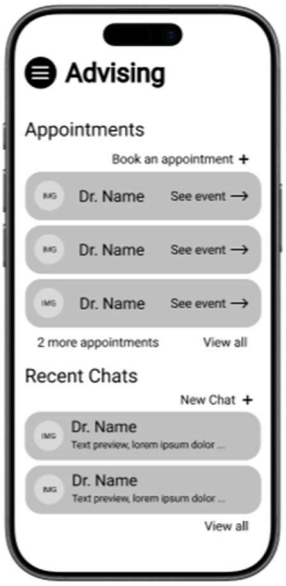
Based off the sketches, it is possible to flesh out a more complete idea of the flow and UI of the application. Wireframes serve to focus more on the UX and functionality of the application than the aesthetics. These early wireframes serve to put in place the groundwork that ensures the app is easy-to-use, intuitive, and seamless.

Login Screen

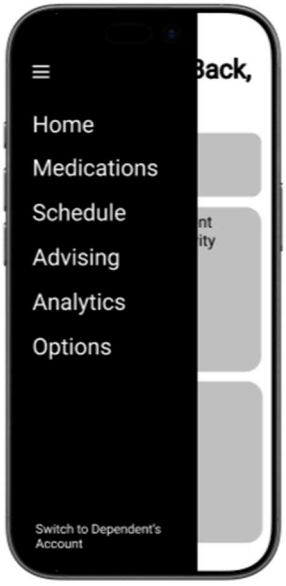
Home Screen



'Advising' Screen

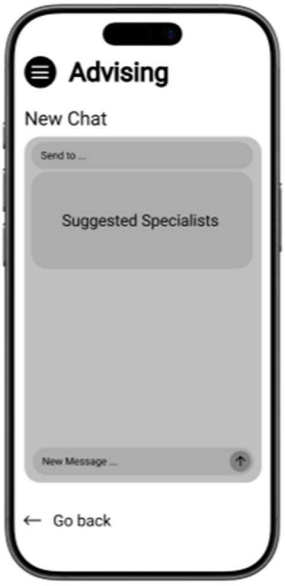


Home Screen (Menu Open)



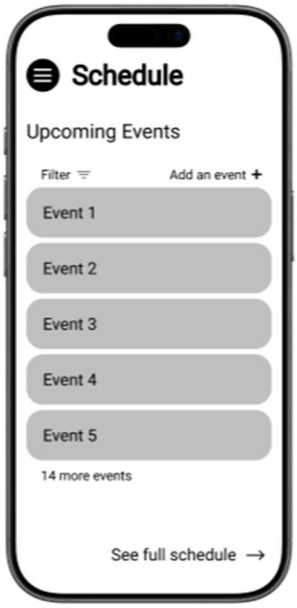
'Medications' Screen

'New Chat' Screen

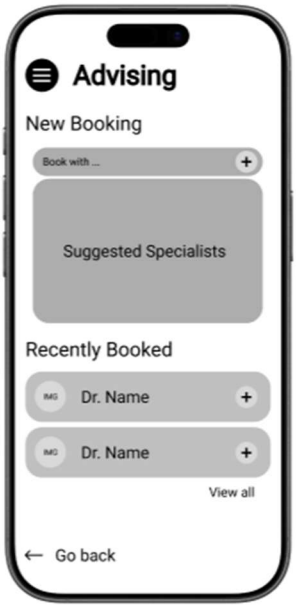


‘Medications’ Screen (With 3 dots clicked)

‘Schedule’ Screen



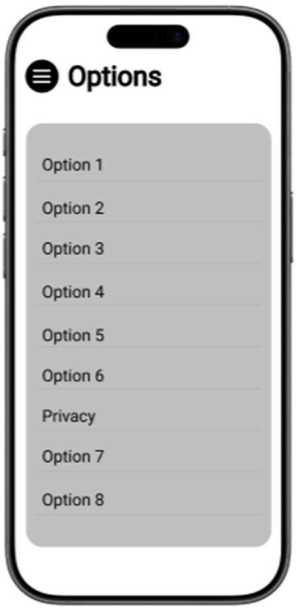
‘Book an Appointment’ Screen

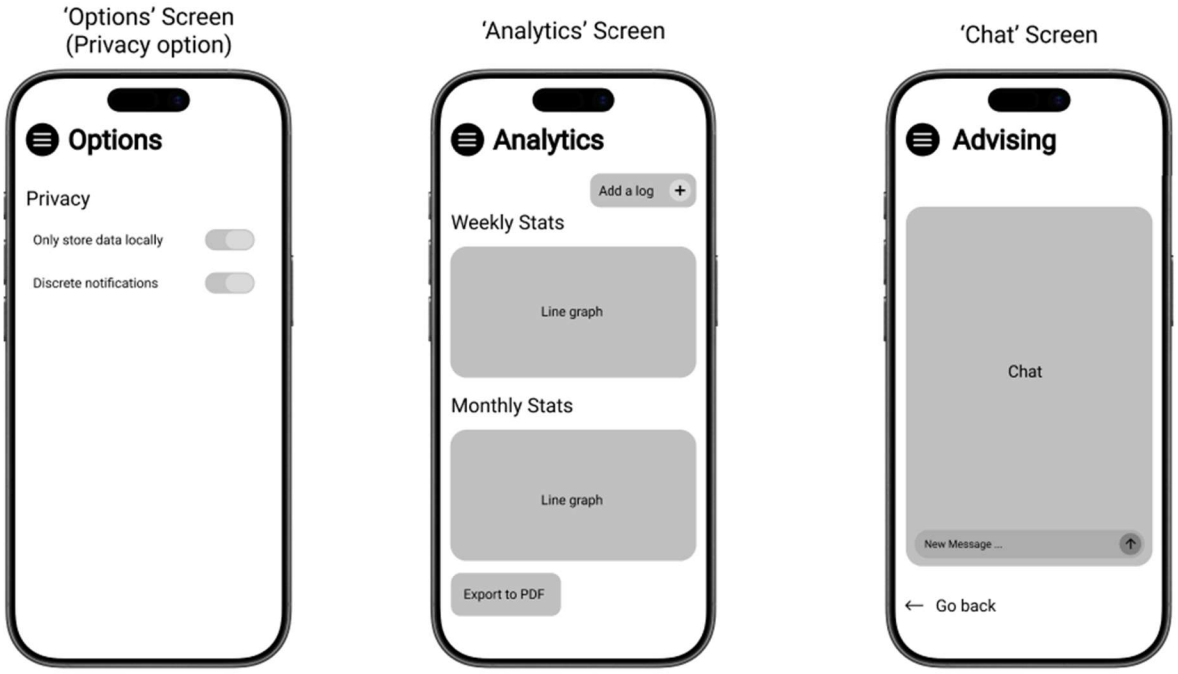


‘Schedule’ Screen (See full schedule)

‘Schedule’ Screen (Clicking an Event)

‘Options’ Screen





Prototype

A clickable prototype was built, with user needs in mind. It doesn't encompass all possible functionalities of the app but with 15 screens implemented, it gives a good idea of the main flow and how the user experience is. The main menu in the clickable prototype always routes back to the same menu screen with the home page in the back, this was for improved navigability without having to duplicate all the current screens.

The prototype itself can be found here: Click Here, Password is 'Soen357_prototype'.

Some features to highlight, that directly affected the design:

1. A 'AAA' color scheme was implemented, signifying high contrast; this is for improved accessibility (primarily for elderly users). The color hexes used are listed in the table below:

Element	*Color Name*	*Hex Code*	*Usage*	*Ratio (vs. White)*	*Ratio (vs. Cloud Gray)*
App Background	Pure White	#FFFFFF	Main page canvas	N/A	N/A
Card Background	Cloud Gray	#F0F2F5	Containers/Sections	1.1:1	N/A
Primary Text	Near Black	#1A1A1B	Headers & Body	18.7:1 (AAA)	16.6:1 (AAA)
Action / Secondary Color	Deep Sea Blue	#004B87	Buttons & Highlights	8.7:1 (AAA)	7.7:1 (AAA)
Success	Forest Green	#006837	Plus-sign buttons, other highlights	7.5:1 (AAA)	6.7:1 (AA)
Warning	Ruby Red	#B30000	Delete buttons	7.1:1 (AAA)	6.3:1 (AA)
Card Border	Medium Gray	#595959	Card borders	7.1:1 (AAA)	6.3:1 (AA)

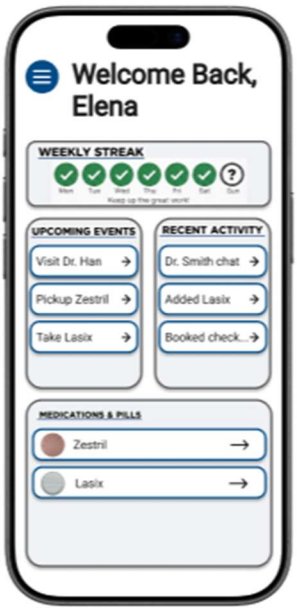
2. An option was added in the menu for switching between users, primarily for people who act as caretakers to someone else. They can then view the app from their dependent's account.
3. A streak counter was added to encourage a Gen Z audience to stay on top of their medications and ensure they stay loyal to the application.
4. An 'Analytics' page was added for the Gen X – Boomer users so they can easily track both their metrics that they log, and those of their dependents.
5. A modern card-based layout was used for a less complex but still informative design, this helps everyone as it looks nice which is good for Gen Z, its very functional good for Millennials/Gen X and is much easier to interact with than a text-based layout which is good for Boomers.
6. A sign-in with apple button is added as a login option, this is to decrease the friction of signing up and onboarding, particularly targeted towards Gen Z.
7. A font size of above 18pt was prioritized and all buttons have a high contrast; this is for better accessibility targeting Boomers.
8. A feature allowing chatting was also added to cater to Gen Z who much prefer to text asynchronously than call directly.

Login Screen

Login Screen

Home Screen

Home Screen

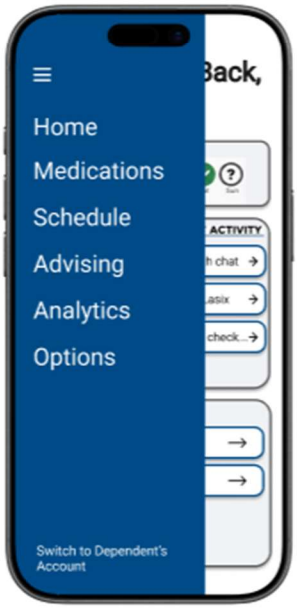


Advising Screen

'Advising' Screen

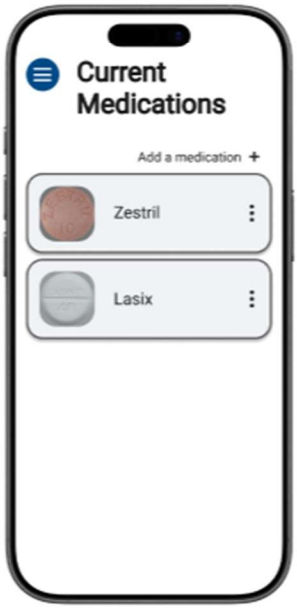
Home Screen (Menu Op...

Home Screen (Menu Open)



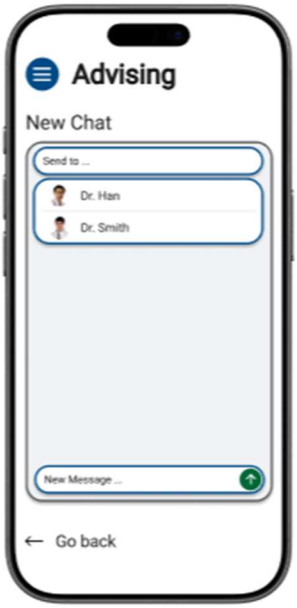
Medications Screen

'Medications' Screen



New Chat Screen

'New Chat' Screen

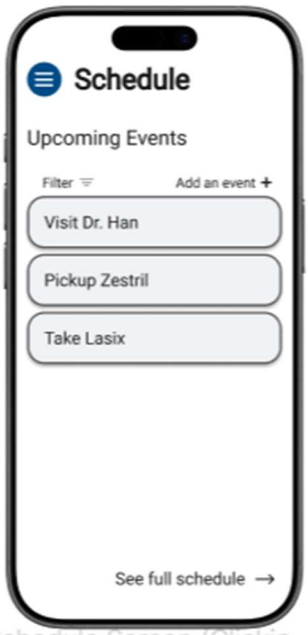


Medications Screen (Wit...

'Medications' Screen (With 3 dots clicked)

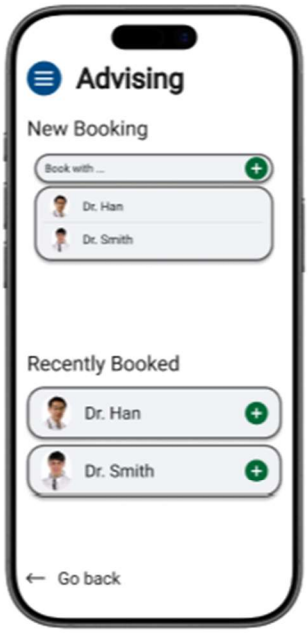
Schedule Screen

'Schedule' Screen



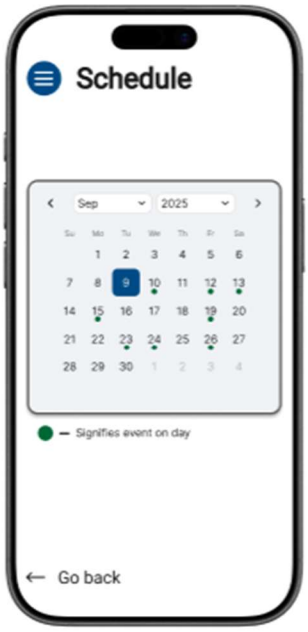
Book an appointment sc...

'Book an Appointment' Screen



Schedule Screen (See fu...

'Schedule' Screen (See full schedule)



Schedule Screen (Clickin...

'Schedule' Screen (Clicking an Event)

Options Screen

'Options' Screen

Options Privacy Screen

'Options' Screen
(Privacy option)

Analytics Screen

'Analytics' Screen

Chat Screen

'Chat' Screen

Usability Testing

Usability Testing Plan

Goals

The primary goal of this usability test is to evaluate how effectively the Health Companion prototype supports real users across three distinct generational groups: Gen Z, Millennials/Gen X, and Boomers. Specifically, the test aims to (1) determine whether users can independently complete core tasks without confusion or error, (2) assess whether the app's visual design, contrast, and layout meet accessibility expectations particularly for elderly users, (3) identify friction points in navigation such as switching between user profiles or logging a symptom, and (4) validate that the tone and discretion of notifications align with Gen Z's desire for privacy in social settings. A secondary goal is to measure overall satisfaction and perceived trustworthiness of the app, since trust was identified as a key concern during user research.

Participants

A total of nine participants would be recruited, three per persona group, mirroring the demographic breakdown established during user research. Participants would be selected to have some experience managing a chronic health condition, either their own or a dependent's. To avoid bias, none of the participants would have prior exposure to the prototype. Each session would be conducted individually and would last approximately 30 to 45 minutes.

User Tasks

Each participant would be presented with the following four scenario-based tasks, designed to cover the primary user flows in the prototype. Tasks are intentionally phrased as realistic scenarios rather than direct instructions, to avoid leading the participant and to better simulate real-world use.

Task 1 — Medication Reminder: "You just received a notification to take your medication. Please interact with it as you normally would and confirm that you have taken it." This task evaluates the clarity and actionability of the notification flow, a key pain point identified in both the interviews and secondary research.

Task 2 — Log a Symptom: "You're not feeling well. You have some nausea and fatigue. Please log how you're feeling in the app." This tests the icon-based symptom logging flow, which was specifically requested by younger participants during interviews who did not want to type lengthy journal entries.

Task 3 — Switch User Profile: "You are also managing your mother's medications. Please navigate to her profile and check whether she has taken her morning dose." This task specifically targets the multi-profile caregiver feature and assesses how discoverable and intuitive the profile-switching mechanism is across age groups.

Task 4 — View Analytics: "Your doctor has asked about trends in your blood pressure over the last month. Find where you would go in the app to show them this information." This task validates whether the Analytics section is discoverable and whether the data visualizations are interpretable, particularly for older participants who are less familiar with mobile UI conventions.

Feedback Collection Methods

Multiple feedback collection methods would be used in combination to capture both quantitative and qualitative data. During each task, the facilitator would observe and record the participant's actions silently, noting any moments of hesitation, incorrect navigation, or confusion. Participants would be encouraged to think aloud throughout the session, verbalizing what they see, expect, and feel as they interact with the prototype. Think-aloud protocols are particularly valuable for surfaces like this one, where a participant's mental model of how a notification or card should work can reveal deep misalignments with the designed behavior.

After completing all tasks, each participant would fill out a standardized post-test questionnaire. This would include a 5-point System Usability Scale (SUS) adapted for a mobile health context, asking questions such as “I felt confident using this app” and “I found it easy to find what I needed.” Additionally, two to three open-ended questions would be included, such as “What was the most confusing part of the app for you?” and “What feature did you find most useful and why?” Finally, a short debrief interview of approximately five minutes would follow each session, allowing the facilitator to probe specific moments of hesitation observed during the tasks.

Analyzing Feedback and Iterating on the Design

After all sessions are complete, the analysis would proceed in two phases. In the first phase, quantitative analysis, the SUS scores would be averaged overall and broken down by persona group to identify whether any specific demographic struggled more than others. Task completion rates and time-on-task would be compared across groups. A completion rate below 80% for any given task would be flagged as a critical usability issue requiring immediate redesign attention.

In the second phase, qualitative analysis, the think-aloud notes and debrief interview responses would be reviewed and coded into thematic categories such as “navigation confusion,” “visual readability,” “notification clarity,” and “feature discoverability.” Patterns that appear across multiple participants or multiple persona groups would be prioritized, as these represent systemic issues rather than individual preferences.

The findings from both phases would then be organized into a prioritized list of design changes, ranked by severity (critical, moderate, minor) and scope (affects all users, specific persona only). Main issues, such as a Boomer participant being unable to locate the export to PDF button, would be addressed in the prototype immediately before any subsequent testing round. Moderate issues, such as notification wording being unclear to one demographic, would be explored in a second round of targeted A/B testing. Minor issues, such as cosmetic preferences, would be logged for a future iteration. This structured, evidence-based

approach ensures that each design iteration is grounded in real user behavior rather than assumption, directly reflecting the spirit of the user-centered design process followed throughout this project.

Reflection

Using a structured UX process for the Health Companion app fundamentally changed my perspective. I initially envisioned a simple medication tracker, but research quickly revealed that users needed something much deeper. The journey from research to prototyping acted as a reality check, bridging the gap between my assumptions and actual user needs.

Interviews with ten participants, aged 17 to 75, provided the most vital insights. One 75-year-old participant described her system as just "a pillbox and a desk calendar." This reframed my entire approach: the app couldn't just be "easy to use"; it had to gently guide users through a significant behavioral shift from physical to digital tools.

Because of this, I prioritized features that might have otherwise been overlooked. Such as AAA high-contrast colors and large tap targets for better legibility and photo-based medication identification to reduce errors.

A major challenge was designing for three distinct generations. My early ideas were too "trendy," I was thinking of using more modern UI with thin and “flowy” components. By treating AAA accessibility as a hard requirement, I developed a card-based layout that satisfied everyone. It felt modern to Gen Z, organized to Millennials and Gen X, and spatially clear to Boomers. Using real data rather than stereotypes allowed me to find this middle ground.

Ultimately, this project taught me that good design isn't about intuition; it is about disciplined listening. The UX process provides the structure to turn user reality into a functional tool. It ensures every decision is grounded in truth, creating an interface for an app that isn't just "nice to have," but truly useful.