

SOEN357 - V



Mini-Project
Case Study: UX/UI Design of a Health Companion Super App

Project hosted at : <https://sofiacimon.github.io/CareWell.io/>

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Intro

CareWell is a mobile health companion application designed to support individuals managing chronic health conditions. The problem it addressed is both simple and critical: people living with conditions such as diabetes, hypertension, etc. must manage complex medication schedules, multiple specialist appointments and ongoing health tracking, often with inadequate tools. Research confirms missed doses and forgotten appointments are frequent, and existing solutions are not being found sufficient or satisfactory for use.

This case study documents the full UX/UI design process for CareWell, from initial user research and persona driven development through wireframing, prototyping and usability planning. Every design decision was grounded in what real users identified as needs: simplicity and reliability. Ultimately, the app's design aims to reduce the burdens of managing chronic illness, rather than adding to it.

1. User Research and Persona Creation

Research Objectives

The research objectives for CareWell were to understand the lived experiences of individuals managing chronic health conditions, specifically the challenges they face around medication adherence and appointment management, and to identify what features would make a digital health tool genuinely useful rather than burdensome. A secondary objective was to map the current landscape of competing solutions to determine where existing apps fall short and where CareWell could meaningfully differentiate itself. Together, these objectives ensured that subsequent design decisions were grounded in real user needs rather than assumptions.

Survey

Questions

A) Demographic Data

1. What is your age range? *

- 18–34
- 35–54
- 55–64
- 65+

2. Do you manage a chronic health condition that requires medication and/or regular doctor appointments?*

- Yes
- No

Note : If no is selected the survey will end here.

3. How many different medications do you take regularly? *

- 0
- 1–2
- 3–5
- 6–10
- 10+

4. How would you rate your comfort level with using smartphone applications? *

- Very uncomfortable
- Uncomfortable
- Neutral
- Comfortable
- Very comfortable

B) Current Management Information

5. How do you currently remember to take your medications? * (Select all that apply)

- Memory alone
- Phone alarm or reminder
- Pill organizer
- Medication reminder app
- Family member or caregiver reminds me
- Written notes or calendar
- Other: _____

6. How often do you forget or miss taking your medication? *

- Never
- Rarely (once a month or less)
- Occasionally (2–3 times per month)
- Frequently (once a week or more)

7. What challenges do you face with medication management? * (Select all that apply)

- Remembering to take medications on time
- Managing multiple medications with different schedules
- Knowing when to refill prescriptions
- Tracking side effects or symptoms
- Communicating medication concerns to my doctor
- Keeping track of what I have already taken
- Other: _____

8. How many doctor appointments do you typically have per year? *

- Less than 2 per year
- 2–5 per year
- 6–11 per year

- About once per month (12 per year)
- More than once per month

9. What challenges do you face with doctor appointments? * (Select all that apply)

- Forgetting appointments
- Scheduling conflicts
- Managing appointments with multiple specialists
- Communicating with doctors between visits
- Remembering what to discuss during appointments
- No significant challenges
- Other: _____

C) App needs

10. Do you currently use any medication or health management applications? *

- Yes
- No

11. If yes, please specify which application(s) you use and describe what you like or dislike about them:

(Text input field)

12. Please rank the following features in order of importance to you.

(1 = Most important, 6 = Least important) *

- Medication reminders
- Appointment reminders
- Direct messaging with healthcare providers
- Tracking medication history
- Refill reminders
- Symptom or side effect tracking

13. How important is it that family members or caregivers have access to your medication information? *

- Not applicable
- Very unimportant
- Unimportant
- Neutral
- Important
- Very important

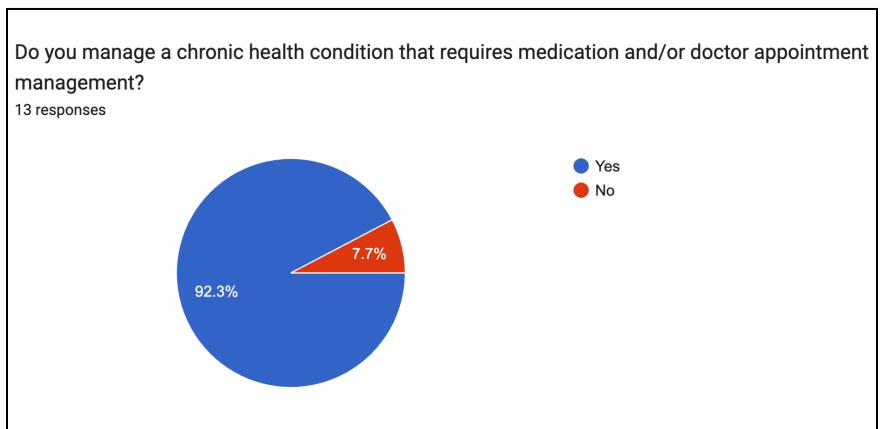
14. What factors would prevent you from using a health management app? * (Select all that apply)

- Too complicated to use
- Too many notifications
- Cost
- Not compatible with my phone

- Nothing would prevent me
- Other: _____

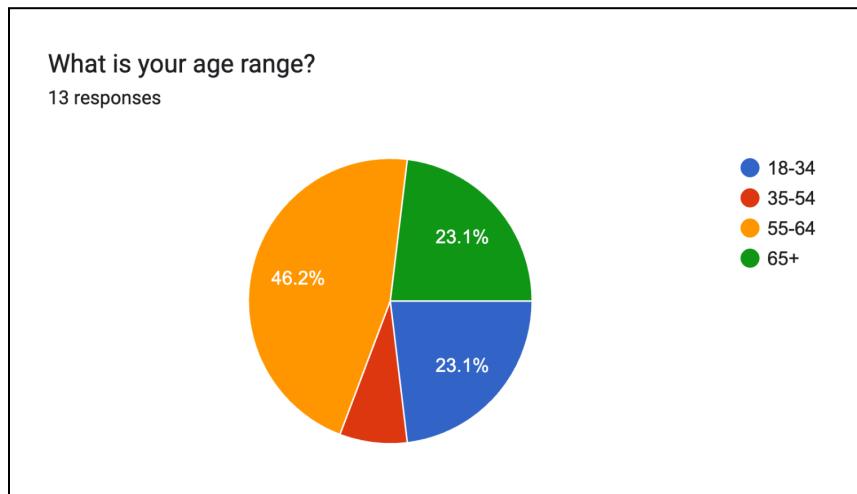
Results & Analysis

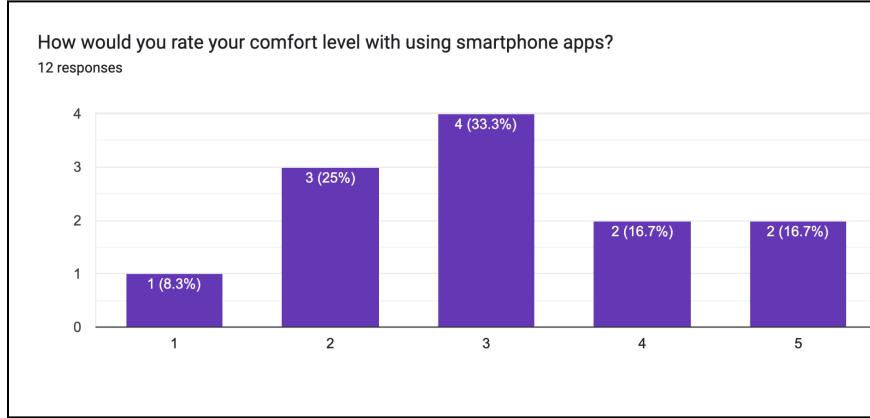
The survey collected 13 total responses, 12 of which manage a chronic condition which required medication management. The one participant who does not manage a chronic health condition was not further questioned, giving a total of 12 responses for the remainder of the survey.



Demographics

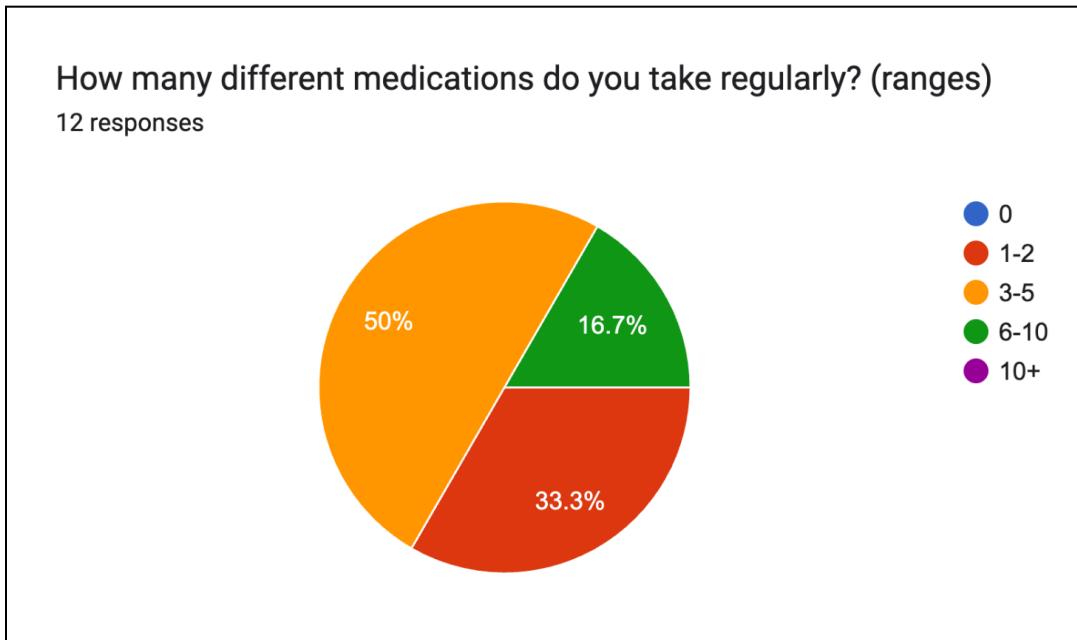
The respondents skewed older, with 42.2% of respondents in the 55-64 range and another 23.1% in the 65+ range. 23.1% of respondents were on the younger side: the 18-34 bracket. This distribution is valuable as it reflects the population most likely to be managing chronic conditions, though young adult representation is limited. In terms of comfort with smartphone apps, results were very mixed with the majority (33.3%) voting 3/5 and roughly equal numbers on either side suggesting that the user base spans from tech hesitant to tech savvy and that the app must accommodate all levels of technological literacy.





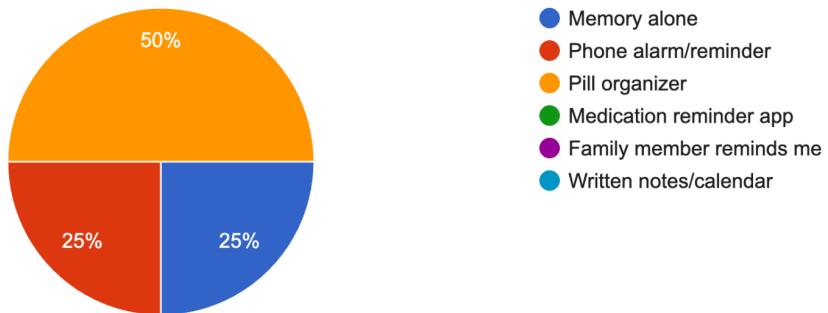
Medication Management

Half of respondents manage 3-5 medications daily, with another third managing 6-10. This confirms that the core studied group deals with genuine complexity, not just a single prescription. The most common method for remembering medications was pill organizers, by half the respondents. The other half are evenly split between using pure memory and phone alarms (25% each). This indicates that while some digital tools are in use, physical aids remain dominant and missed doses are a real concern : only 8.3% reported never missing a dose while the majority miss medications rarely (16.7%) or occasionally (58.3%). Top medication management challenges include managing multiple medications with different schedules (83.3%) and remembering to take medication on time (58.3%).



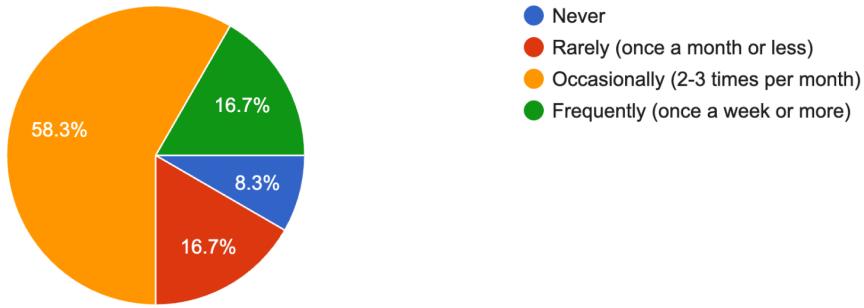
How do you currently remember to take your medications?

12 responses



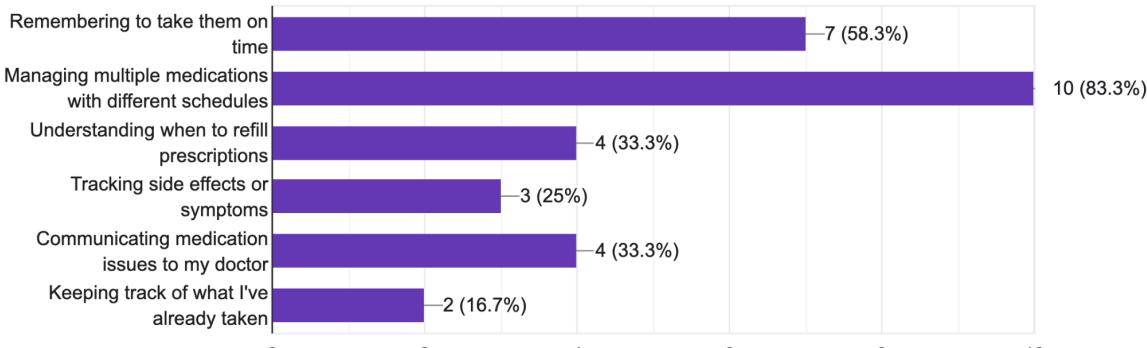
How often do you forget or miss taking your medication?

12 responses



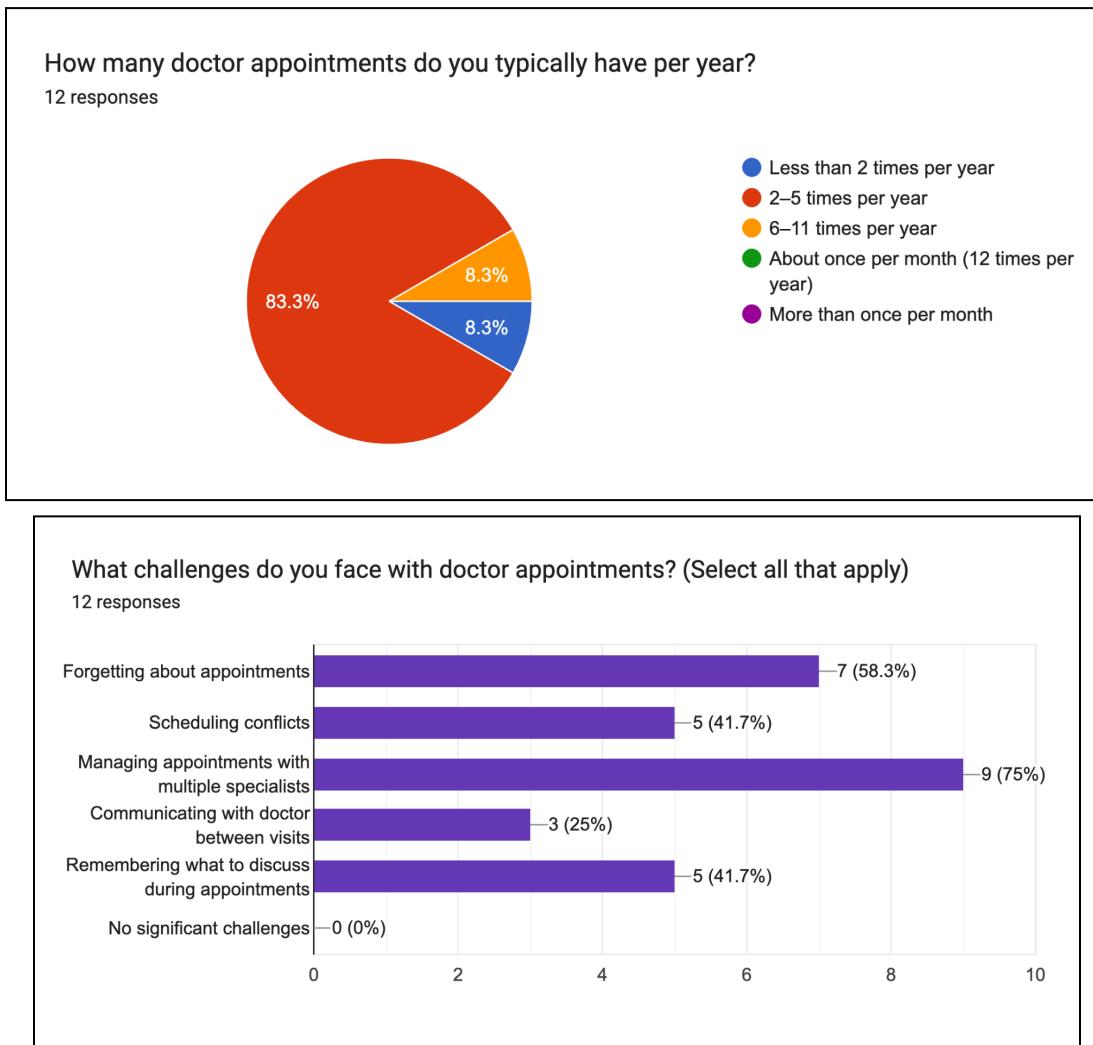
What challenges do you face with medication management? (Select all that apply)

12 responses



Appointment Management

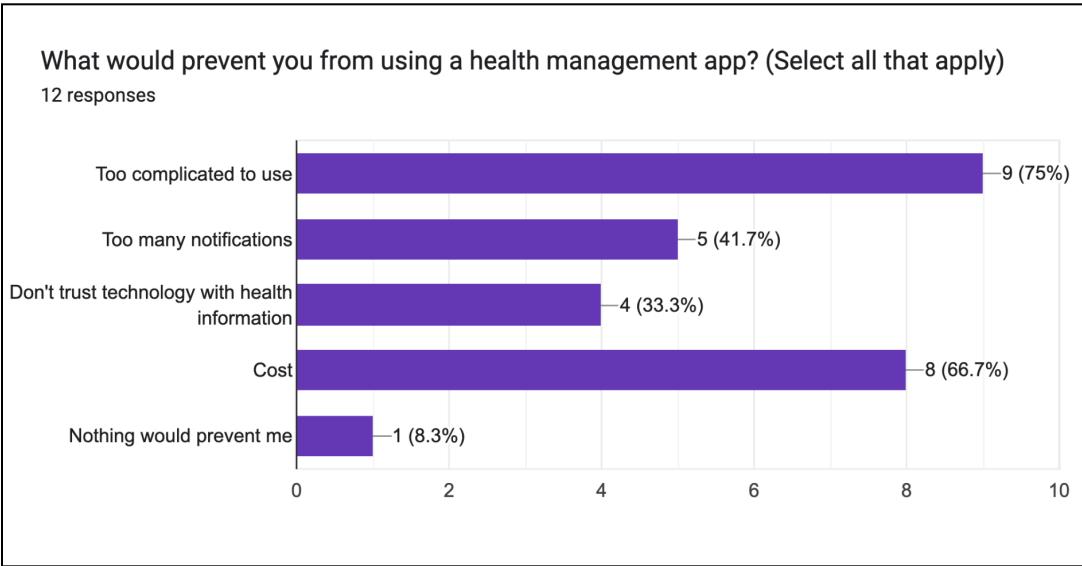
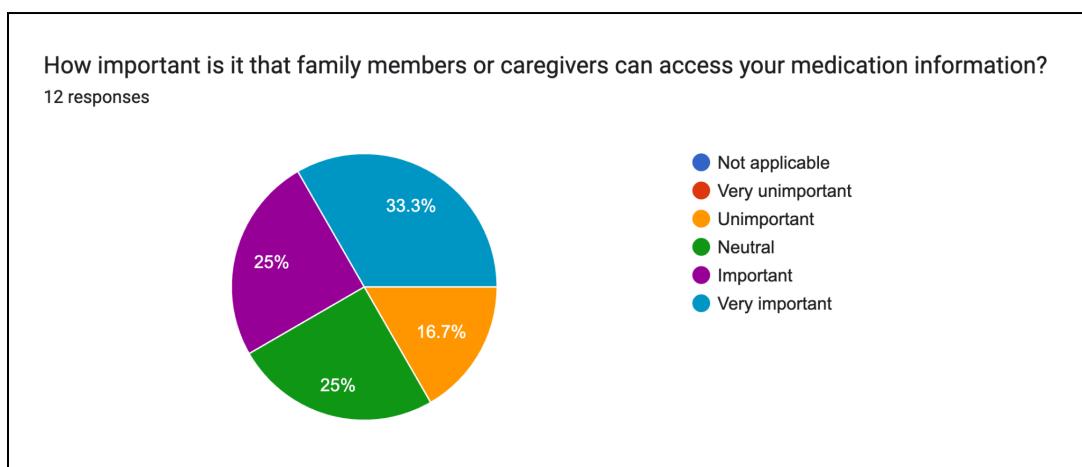
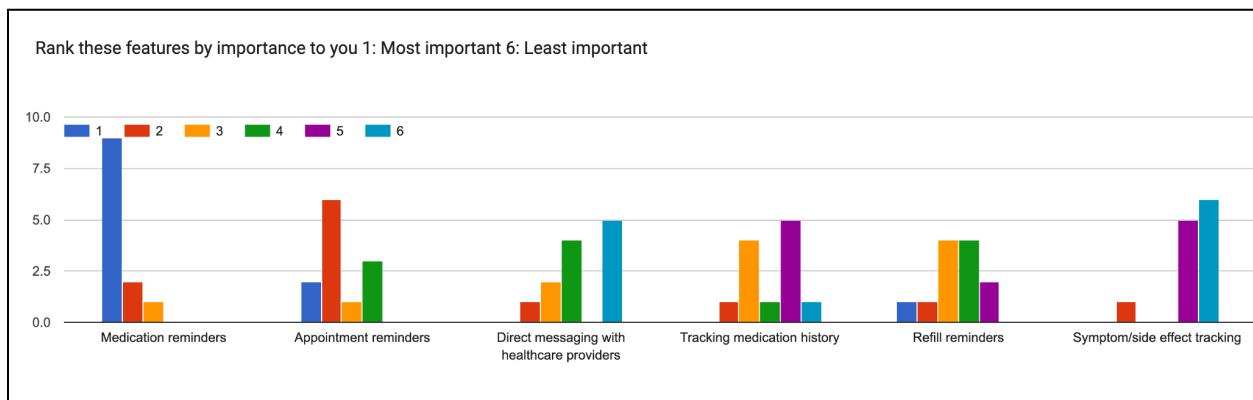
83.3% of respondents have 2-5 doctors appointments per year, reflecting regular but not overwhelming healthcare management across the board of surveyees. The most cited challenge was managing appointments with multiple specialists (75%), followed by forgetting about appointments (58.3%), scheduling conflicts (41.7%) and remembering what to discuss (41.7%). Notably, no respondents reported having no issues managing doctors appointments.



App needs and attributes

None of the 12 respondents reported using a medication or health management app, speaking to a potential gap in the market. When ranking features by importance, medication reminders were most consistently ranked first, followed by appointment reminders. Tracking medication reminders and refill reminders were somewhat consistently middle of the pack in terms of feature importance. When it comes to caregiver access to medication information, it was considered important to very important by 50% of respondents while 16.7% found it unimportant and 33.3% found it not applicable. This split points towards the inclusion of caregiver features without making them entirely central to the application. The most significant barriers to adoption

were complexity (75%), cost (66.7%), and notification overload (41.7%) followed by distrust of technology with information (33.3%).



Survey limitations

The sample was recruited through personal networks, meaning respondents were primarily extended family members, friends and friends-of-friends of myself, the survey creator. The convenience sampling approach introduces some notable biases. First, participants may share

backgrounds, cultures and attitudes towards healthcare applications. This can significantly limit the perspectives captured. Second, people within a social network may feel implicitly motivated to respond positively or helpfully, limiting critical feedback. Third, recruiting through personal connections may have skewed the results towards people comfortable being approached about this sort of technology, which may underrepresent the most tech-averse chronic illness patients. Future research with a larger and more randomly distributed sample would be needed to validate the findings at scale.

Market Research

To understand the current landscape, two popular health management applications are analyzed : MediSafe and MyTherapy. Both apps appear to be used primarily for medication management by their users.

MediSafe



Description

One of the most popular medicine tracking applications. It is designed to help users have an organised medicine calendar, stay informed on their medication and its interactions. It also prompts users to contact family when they miss a dose. Lastly, users can better communicate their adherence to medical plans to doctors via reporting.

Key pages

- Daily medication overview
- Detailed reminders
- Track adherence progress
- MediFriend alerts
- Information about medication + its interactions
- Appointment manager and calendar

Ratings & price

- App Store : 4.6/5 (12k reviews)
 - Free : Limited feature access
 - 5.99\$/month or 59.99\$/year : Premium, unlocking all features
- Google Play (mobile) : 2.2/5 (248k reviews)
 - Free : Limited feature access
 - 5.99\$/month or 59.99\$/year : Premium, unlocking all features

User likes

"Great app for tracking meds! Very easy to use and customize. The reminders are so helpful, including the ability to "skip" or "snooze" a dose and prompts to state a reason behind those"

actions for future reference. I also appreciate the refill reminders." - Amberly T (original comment, Google Play)

- **Comprehensive Reminder System:** Keeps users on top of their medications
- **Family Involvement:** Helps caregivers particularly and people who require more engaged reminders to get into new medicine habits
- **Simple Visuals:** Easy to understand at a glance, not overwhelming
- **Safety Features:** Catching potential medical interactions
- **Adherence Tracking:** Ability to communicate adherence to doctors

User Dislikes

"Can't use even the basic tracking and reminders now because it's now an absurdly expensive subscription service. Definitely not worth the price just for simple daily and refill reminders, which is all I need. Too bad." - Amberly T (Edit to original comment, Google Play)

- **Aggressive Monetization:** Sudden pricing shifts have alienated many established users and rendered the free version useless to anyone needing multiple medication reminders
- **Notification Overload:** Too many notifications for some, not enough control to adapt them to user needs.
- **Complex Setup:** The comprehensive feature set creates a lengthy onboarding process that frustrates users, especially those less comfortable with technology.
- **Inflexible Scheduling:** The rigid scheduling system doesn't accommodate variable medication needs common in chronic illness management such as take as needed medications.

Sources

- MediSafe website : <https://www.medisafe.com/>
- App Store: <https://apps.apple.com/us/app/medisafe-medication-management/id573916946>
- Google Play: https://play.google.com/store/apps/details?id=com.medisafe.android.client&hl=en_CA

MyTherapy



Description

MyTherapy emphasizes simplicity and comprehensive health tracking. Developed in Germany and particularly popular in Europe, it has gained traction among chronic disease patients who appreciate its straightforward design and completely free model. Along with medication reminders, the application can act as a health diary showable to doctors and users can benefit from reminders to track health information such as weight, measure your blood pressure or blood oxygen.

Key pages

- Daily medications overview
- Pill and refill reminders
- Health monitoring reports (blood pressure, weight, etc.)
- Symptom and mood journal
- Streaks (medication adherence tracking)
- Data exporter

Ratings & price

- App Store : 4.8/5 (7.8k reviews)
 - Free: All features!
 - Various pricings for various durations → 59.99\$ for lifetime
- Google Play : 4.6/5 (221k reviews)
 - Free: All features!
 - Various pricings for various durations → 59.99\$ for lifetime

User likes

“Probably the best medication reminder out there, especially if you're looking for persistent reminders. It's pretty easy to use and has a bunch of options to specify how you take your meds, even including tracking inventory (which I'm not always keeping up with but still appreciate). They only included a version of "premium" recently and it's only to remove ads (which are non-intrusive, mostly small banners), which I'm not even mad at because they are providing a great service for free.” -Loss Swiecicka (Google Play)

- **Clean Design:** The minimalist approach makes the app accessible to users of all ages and technical abilities, with particular appeal to older adults.
- **Completely Free:** The absence of paywalls builds trust and loyalty among users who appreciate transparent, accessible healthcare tools.
- **Comprehensive Tracking:** The holistic approach helps users understand connections between medications, symptoms, and lifestyle factors.
- **Flexibility:** Better accommodates the reality of chronic illness management with varying schedules and "as needed" medications (via direct control over pill counters, as needed medication entering/tracking, etc.)
- **Doctor-Friendly Reports:** Professional PDF exports support productive healthcare conversations.
- **Accessibility:** Built-in accessibility features make it usable for people with various limitations without requiring special settings (Notably, large text and contrast helpful for people with vision difficulties)

User dislikes

“This app has steadily gone downhill. Reminders are hours late. I've followed all the tips to work around the shortcomings of the app but I don't want an app I have to compensate for. I have a 3rd party alarm app that works flawlessly. I will use that instead of this one” - Chris Marshall (Google Play)

- **Learning Curve:** There is a learning curve to using the app and finding where everything is located. Does not hinder the functioning, but ideally could be more intuitive.
- **Limited Family Features:** Better family monitoring features are frequently requested by both patients and caregivers who want to stay connected without constant check-ins.
- **Basic Appointment Management:** Appointment features feel like an afterthought rather than a core function.
- **Reliability Issues:** Reliability concerns are particularly problematic for medication management where consistency is critical.

Sources

- Their website: <https://www.mytherapyapp.com/>
- App Store: <https://apps.apple.com/us/app/meds-pill-reminder-mytherapy/id662170995>
- Google Play:
https://play.google.com/store/apps/details?id=eu.smartpatient.mytherapy&hl=en_CA

Conclusion/Results for our app

The survey results paint a picture: people are managing their medical complexities with inadequate tools, relying on memory and physical pill organizers rather than digital solutions. The primary barriers to adoption are not skepticism about the concept, but more practical concerns : complexity, cost, notification overload. This directly informs design priorities. The application interface must be immediately intuitive, free to very low cost, with a granular user-controlled notification system.

The survey also helped identify some key emerging patterns among the potential users. For starters, ages ranged across the board, as did comfort with technology. Also notably is the significance attributed to caregiver support features. And the combination of

Personas

Three personas have been created, representing emerging patterns of users :

1. Olivia Jean

A medically complex, independent user who needs assistance managing her medical needs in order to remain independent and keep her quality of life. She is representative of older users, people who have less technological skill and individuals with many medications. She needs a solution that will help her stay on top of things without involving other people to set up or manage it.

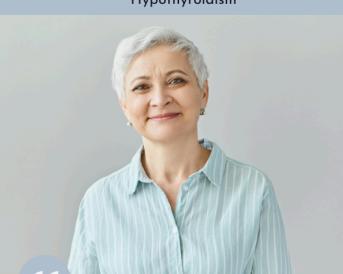
2. Michael Johnson

A caregiver managing his mothers medical care which has caused him much stress. He represents users who are caregivers for other people and people with high levels of tech skills. He also represents young adult users. He needs an application that will allow him to manage his and especially his mother's medical needs.

3. Dominique Desroches

A busy professional who has difficulties with scheduling appointments during business hours. She is representative of users who are busy, frustrated with notification overloads and of intermediate technical skill. She needs control over her notification management, without it being too complex.

Olivia Jean - Medically Complex Independent

PROFILE		BIOGRAPHY	PERSONALITY
Gender	Female	Olivia is a retired Disney animator living alone in Los Angeles. She manages many chronic conditions with 14 daily medications, each with different timing and food requirements. Her three adult children live out of state and worry about her complex medication regimen. While tech-hesitant, she uses an iPad to video call grandchildren but struggles with small text due to arthritis and aging eyesight. She's been hospitalized twice in the past year for medication errors.	Introvert
Age	81		Extrovert
Education	High School		Thinking
Occupation	Traditional animator		Feeling
Location	Los Angeles, California		Judging
Health conditions	Type 2 Diabetes, Chronic Kidney Disease, Atrial Fibrillation, Osteoarthritis, Hypertension, Hypothyroidism		Perceiving
		MOTIVATIONS	Sensing
		<ul style="list-style-type: none">Maintain independence & avoid assisted living/nursing homesShow her children she can manage her complex health needsAvoid hospitalizations (she's been hospitalized twice in the past year for medication errors)Keep her daily artistic hobbies and maintain quality of life	Intuition
		GOALS	TECHNOLOGY
		<ul style="list-style-type: none">Manage 14+ medications with different schedulesTrack blood sugar levels, blood pressure, and weight dailyRemember which medications interact with foodKeep track of multiple specialist appointmentsCommunicate symptoms and readings to multiple doctorsKnow when to refill prescriptions before running out	Software
		FRUSTRATIONS	Social Media
		<ul style="list-style-type: none">Forgetting whether she already took her morning insulinCan't remember which medication to take at which time of dayKeeping paper logs of blood sugar, blood pressure, etc. for drsJuggling cards & sticky notes for many different appointmentsRunning out of meds because she didn't realize refills were neededApps with tiny buttons, small text and confusing menusTaking meds at the wrong time relative to mealsRepeating her entire med list to every new doctor/nurse	Mobile App
<p>“</p> <p>I take 14 different pills a day. I need help keeping track, but I won't give up my independence.</p>		BRANDS	Apple (iPad), Medline (medical supplies), CVS Pharmacy, Kaiser Permanente, AARP, Lantus (insulin), Warfarin/Coumadin, Medtronic (glucose monitor), Omron (blood pressure monitor), GlowCaps (smart pill bottles)

Michael Johnson - The Devoted Caregiver

PROFILE

Gender	Male
Age	28
Education	Bachelor's degree
Occupation	Caregiver
Location	Arlington, Texas
Health conditions	Stress-related high blood pressure



I need to know Mom took her meds, even when I can't be there. Her health is my responsibility.

BIOGRAPHY

Michael left his computer science career and is now a full-time caregiver for his 72-year-old mother. He manages her complex medication schedules while also monitoring his own stress-induced health issues. He's tech-savvy but overwhelmed by juggling multiple health apps.

MOTIVATIONS

- Ensure his mother's safety and medication adherence
- Reduce anxiety about being away from home
- Coordinate with his mother's healthcare team efficiently
- Maintain his own health while caregiving
- Eventually return to work with systems in place

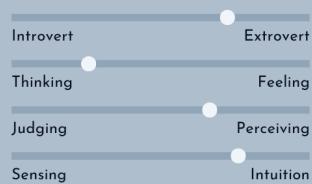
GOALS

- Monitor his mother's medication intake remotely
- Share health data with doctors and siblings
- Track multiple people's medications in one place
- Get alerts if his mother misses a dose

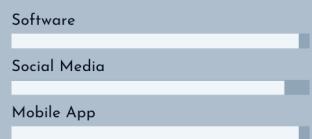
FRUSTRATIONS

- Apps designed for single users only
- Lack of caregiver-specific features
- Missing important doctor appointments while managing daily care

PERSONALITY



TECHNOLOGY



BRANDS

Caring.com, Google Calendar, Ring (home monitoring), Walgreens, MyChart, Samsung (smartphone), Medisafe

Dominique Desroches - The Busy Professional

PROFILE

Gender	Female
Age	46
Education	Master's degree
Occupation	Finance
Location	Boston, Massachusetts
Health conditions	Rheumatoid Arthritis Hypothyroidism



Between meetings and travel, I need my health management to be as efficient as my calendar.

BIOGRAPHY

Dominique is a finance director with two chronic conditions, managing a team of 12. Her demanding schedule includes frequent business travel and back-to-back meetings. Since her diagnosis of rheumatoid arthritis three years ago she has developed a medication regimen with specific timings. She's highly organized but struggles when her routine is disrupted by travel or urgent work demands.

MOTIVATIONS

- Maintain career momentum despite health challenges
- Never miss medications that prevent flare-ups
- Minimize work disruptions from health appointments
- Integrate health management seamlessly into busy life

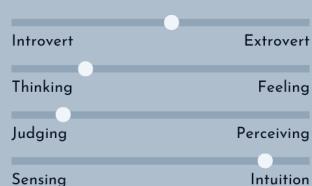
GOALS

- Schedule doctor appointments during non-peak work hours
- Have virtual consultations when possible
- Manage regimen with non-obtrusive reminders
- Get medication reminders that adapt to different time zones

FRUSTRATIONS

- Having to call during business hours for appointments
- Apps that send too many notifications during meetings
- Forgetting doses when routine is disrupted
- Medication schedules that don't account for travel

PERSONALITY



TECHNOLOGY



BRANDS

Apple (iPhone, Apple Watch), Outlook Calendar, CVS Caremark, Partners HealthCare, Humira, Slack, Delta Airlines, Hilton Hotels, OneNote

2. User Journey Mapping

Three user-journey maps were made, one tailored to each created persona.

User Journey Map - Olivia											
	STAGE 1 : DISCOVERY		STAGE 2: ONBOARDING		STAGE 3: DAILY USE		STAGE 4: MANAGING COMPLEXITY		STAGE 5: BUILDING TRUST		
ACTIONS	HEARS ABOUT APP	DOWLOADS APP	ACCOUNT SETUP	ADD MEDICATIONS	MORNING ROUTINE	MEDICATION REMINDERS	APPOINTMENT SCHEDULING	APPOINTMENT MANAGEMENT	REFILL ALERTS	FAMILY SHARING	CONTINUED USE
THINKS	"Will this really help me?" "I'm not good with technology." "My daughter thinks I need help." "Maybe this could work."	"Maybe this could work." "Why does this mean?" "I should write this down." "Maybe I should ask for help?" "I hope I don't break something!"	"What does this mean?" "I should write this down." "Maybe I should ask for help?" "This will take forever!" "I have so many medications!" "What if I enter something wrong?" "When do I take the Warfarin again?"	"Entering all 14+ medications into the system"	"Using app for morning medication routine"	"Responding to afternoon medication alert"	"Add upcoming doctors appointment"	"Managing upcoming doctor appointments"	"Handling low medication warning"	"Connecting with family through app"	"Establishing daily app routine"
DOES	• Listens to daughter's suggestion • Opens App Store • Reads app description • Checks reviews	• Starts app and downloading the app from App Store and opens for the first time	• Creating account and initial setup	• Entering all 14+ medications into the system	• Using app for morning medication routine	• Responding to afternoon medication alert	• Add upcoming doctors appointment	• Managing upcoming doctor appointments	• Handling low medication warning	• Connecting with family through app	• Establishing daily app routine
FEELS	⌚️ Skeptical ↳ Hoping "Maybe this could work!"	⌚️ Nervous ↳ Hopeful	⌚️ Overwhelmed ↳ Frustrated "Too much at once!"	⌚️ Exhausted ↳ Anxious ⌚️ Stressed "This is a lot of work!"	⌚️ Peasantly surprised ↳ Relieved ⌚️ Capable "I can do this!"	⌚️ Anxious ⌚️ Worried ⌚️ Relaxed ⌚️ Organized ⌚️ Capable "The app knows what to do!"	⌚️ Confused ⌚️ Satisfied ⌚️ Organized ⌚️ Capable "I trust myself to keep track of this!"	⌚️ Confused ⌚️ Satisfied ⌚️ Organized ⌚️ Capable "Everything's in one place!"	⌚️ Relaxed ⌚️ Defensive ⌚️ Cautious ⌚️ Proud ⌚️ Grateful "Good thing it warned me!" "I'm managing well!"	⌚️ Relaxed ⌚️ Defensive ⌚️ Cautious ⌚️ Proud ⌚️ Grateful "I'm managing well!"	⌚️ Confident ⌚️ Empowered ⌚️ Accomplished ⌚️ Independent!

User Journey Map - Michael											STAGE 6: SUSTAINABLE CARE	
	STAGE 1: DISCOVERY		STAGE 2: ONBOARDING		STAGE 3: CAREGIVING SETUP		STAGE 4: DAILY MONITORING		STAGE 5: CRISIS MANAGEMENT		STAGE 6: SUSTAINABLE CARE	
ACTIONS	SEARCHING FOR HELP	DOWLOADS APP	HIS ACCOUNT SETUP	CREATES MOM'S ACCOUNT	LINKS ACCOUNTS	ADDING MOM'S MEDS	TESTING SYSTEM	REMOTE MONITORING	CALLING TO CONFIRM	MISSING DOSE ALERT	EMERGENCY RESPONSE	LONG-TERM ROUTINE
THINKS	"I can't be there 24/7" "What if Mom forgets again?" "I need to know she's safe" "There has to be a better way"	"Does this actually work for caregivers?" "Can I monitor remotely?" "Should I be the main contact?" "I'm responsible for this"	"I need to get this up right!" "What if I mess up?" "Should I be the main contact?" "I'm responsible for this"	"Mom won't do this herself!" "How does she control her account?" "How much access should I give her?" "Will she still be independent?" "Is this invading her privacy?"	"How does this connection work?" "When does she take the blood pressure reading?" "Did Dr. Chen change the dosage?" "What if I tell something"	"I need to get this exactly right!" "How does she take the blood pressure reading?" "Should I call every time?" "What if I tell something"	"Running through test notifications with Mom on phone"	"Checking app during work breaks to monitor Mom"	"Receiving notification, calling Mom to remind her"	"Getting alert that Mom missed evening dose"	"Rushing to check on Mom"	"Managing both his and Mom's health through app"
DOES	⌚️ Confused ⌚️ Helpless ⌚️ Overwhelmed ⌚️ Desperate ⌚️ Terrified ⌚️ Hopeless ⌚️ Overwhelmed ⌚️ Determined ⌚️ "This has to work!"	⌚️ Downloads at 2am, reading caregiver features	⌚️ Creating his own account as caregiver	⌚️ Setting up mother's profile and account	⌚️ Connecting his account to mother's as primary caregiver	⌚️ Entering all of mother's 8+ medications into system	⌚️ Running through test notifications with Mom on phone	⌚️ Checking app during work breaks to monitor Mom	⌚️ Receiving notification, calling Mom to remind her	⌚️ Getting alert that Mom missed evening dose	⌚️ Rushing to check on Mom	⌚️ This is working! ⌚️ I can manage my mom's care. ⌚️ Mom is safer. ⌚️ I'm less anxious. ⌚️ We found our system!
FEELS	⌚️ Terrified ⌚️ Helpless ⌚️ Overwhelmed ⌚️ Determined ⌚️ "This has to work!"	⌚️ Desperate hope ⌚️ Enabled ⌚️ Determined ⌚️ "I need to do this right!"	⌚️ Anxious ⌚️ Focused ⌚️ Protective ⌚️ "She needs me to do this!"	⌚️ Uncertain ⌚️ Conflicted ⌚️ Protective ⌚️ "She needs me to do this!"	⌚️ Relieved ⌚️ Relaxed ⌚️ Protective ⌚️ "We're connected now!"	⌚️ Stressed ⌚️ Protective ⌚️ Worried ⌚️ "Every small matters!"	⌚️ Relaxed ⌚️ Protective ⌚️ Capable ⌚️ "It works!"	⌚️ Awkward ⌚️ Fearing ⌚️ Protective ⌚️ "I can see she's safe"	⌚️ Relaxed ⌚️ Protective ⌚️ Capable ⌚️ "I hate being the pill police!"	⌚️ Relaxed ⌚️ Protective ⌚️ Capable ⌚️ "Please be okay!"	⌚️ Confident ⌚️ Less anxious ⌚️ Balanced ⌚️ "We're managing together!"	

User Journey Map - Dominique											
	STAGE 1: DISCOVERY		STAGE 2: QUICK SETUP		STAGE 3: INTEGRATION		STAGE 4: TRAVEL COMPLEXITY		STAGE 5: MASTERY		
ACTIONS	AIRPORT DOWNLOAD	PLANE SETUP	MEDICATION ENTRY	CALENDAR SYNC	FIRST MORNING	MEETING CONFLICT	PRE-TRAVEL PREP	CROSS-TIMEZONE USE	FLARE-UP MANAGEMENT	DAILY EFFICIENCY	
THINKS	"I need something professional!" "Can't afford to be interrupting meetings!" "Must handle travel!" "30 minutes until boarding!"	"Keep this minimal!" "Me add details later!" "Just the essentials!" "This better be worth it!"	"Only 4 medications, quick!" "Morning arthritis meds with food!" "Thyroid on empty stomach!" "Timing is critical for meetings!"	"One calendar for everything!" "Block time for doctor visits!" "No red alerts during presentations!" "This should be seamless!"	"6:30am, quick check!" "Take meds, done!" "7:15am team call!" "This is efficient!"	"Not now, I'm presenting!" "Vibrate, really?" "This is after this session!" "Need smarter notifications!"	"London is 5 hours ahead!" "When do I take evening doses?" "Conference runs all day!" "This could get messy!"	"It adjusted automatically?" "Take at 10pm London time?" "This is brilliant!" "Actually works for my life!"	"Arthritis is flaring!" "Need to track this!" "Show data to Dr. Martinez!" "Might need dosage adjustment!"	"Part of my routine now!" "Doesn't slow me down!" "Actually saves time!"	
DOES	⌚️ Curious ⌚️ Efficient ⌚️ Time-conscious ⌚️ "Let's see if this works!"	⌚️ Pleased ⌚️ Impatient ⌚️ Multitasking ⌚️ "Quick and simple, good!"	⌚️ Satisfied ⌚️ Professional ⌚️ Precise ⌚️ "This is straightforward!"	⌚️ Impressed ⌚️ Relieved ⌚️ Organized ⌚️ "Finally, true integration!"	⌚️ Calm ⌚️ Efficient ⌚️ In control ⌚️ "Barely noticed it!"	⌚️ Frustrated ⌚️ Annoyed ⌚️ "Wrong timing!"	⌚️ Thoughtful ⌚️ Concerned ⌚️ Preparing ⌚️ "Time zones are tricky!"	⌚️ Amazed ⌚️ Delighted ⌚️ Impressed ⌚️ "This is genius!"	⌚️ In pain → ⌚️ Proactive ⌚️ Analytical ⌚️ "Data will help!"	⌚️ Confident ⌚️ Efficient ⌚️ "Can't imagine working without it!"	
FEELS	⌚️ Curious ⌚️ Efficient ⌚️ Time-conscious ⌚️ "Let's see if this works!"	⌚️ Pleased ⌚️ Impatient ⌚️ Multitasking ⌚️ "Quick and simple, good!"	⌚️ Satisfied ⌚️ Professional ⌚️ Precise ⌚️ "This is straightforward!"	⌚️ Impressed ⌚️ Relieved ⌚️ Organized ⌚️ "Finally, true integration!"	⌚️ Calm ⌚️ Efficient ⌚️ In control ⌚️ "Barely noticed it!"	⌚️ Frustrated ⌚️ Annoyed ⌚️ "Wrong timing!"	⌚️ Thoughtful ⌚️ Concerned ⌚️ Preparing ⌚️ "Time zones are tricky!"	⌚️ Amazed ⌚️ Delighted ⌚️ Impressed ⌚️ "This is genius!"	⌚️ In pain → ⌚️ Proactive ⌚️ Analytical ⌚️ "Data will help!"	⌚️ Confident ⌚️ Efficient ⌚️ "Can't imagine working without it!"	

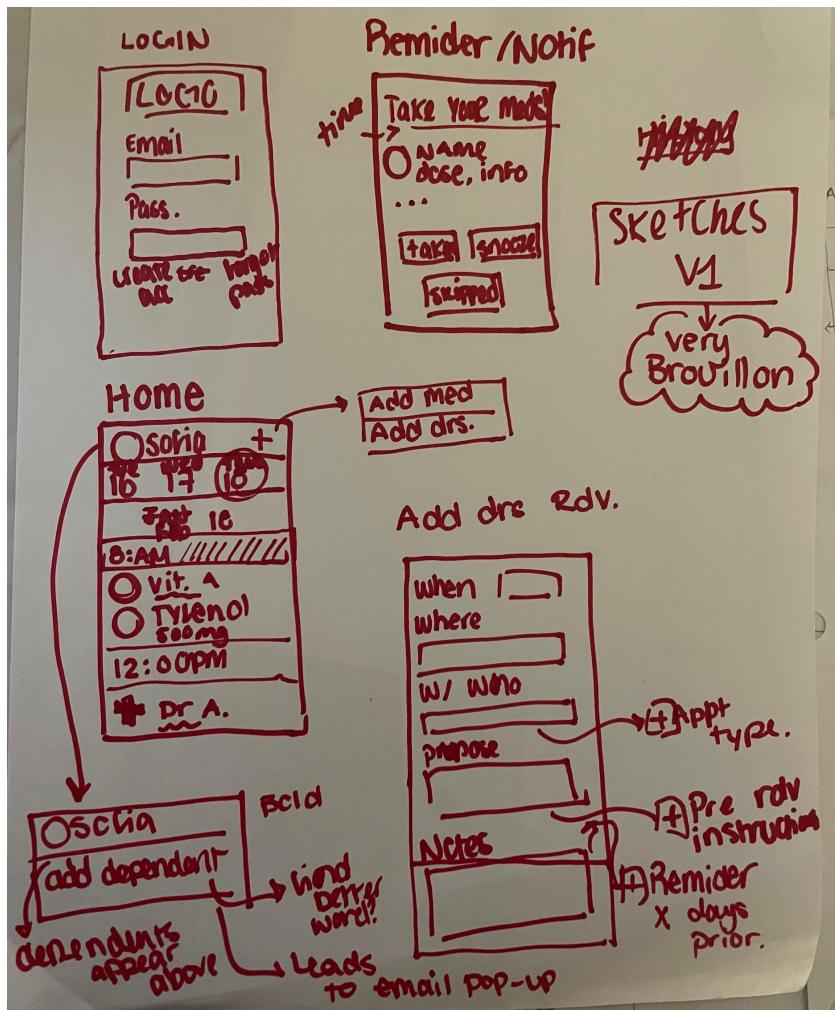
3. Wireframing and Prototype Design:

With a clear understanding of user needs and personas established, the design process moves into the prototyping phase. Following an iterative approach the design evolved through rough sketches, detailed wireframes and a high-fidelity clickable prototype. Each stage informed the next, with decisions grounded in research findings : the need for simplicity, legibility, intuitiveness, low cognitive overhead and ease of complex management.

Sketches

The first sketches were intentionally rough, serving as low commitment space to explore key pages, layouts and identifying essential screens: login, home, reminders/notifications and adding medications/appointments. Key decisions at this stage explored how to surface the day's medication at a glance and how to structure the add-appointment form. Version 2 refined these ideas and introduced the history page where users can see medication adherence summarized, notifications as a distinct tab and pop up/opening page.

Version 1:



Version 2:

Add dr rdv

Split into key info ~~and add. info?~~ or scroll

HISTORY

LOG IN

NOTIFICATION

Home

NOTIF TAB

Wireframes

The wireframes translated the sketch concepts into structured, annotated, layouts. Produced digitally, they define placement of all key UI elements without committing to visual style, keeping focus on functionality and information hierarchy. The wireframes set covers : Login, Home, Caregiver view, Notifications, History (as medication/health tabs), Add Medication, Add appointment and their respective consultation/edit pages. Navigation notes clarify the 3-tab structure, button and menu options.

LOGIN PAGE

LOGO SPACE

Email

Password

Log in

Create account

Forgot password

HOME PAGE

Sofia

Wed, 18 February 2026

Pic of med

8:00 AM

Medication Name
Dose, Special Instruction

Medication Name
Dose, Special Instruction

1:00 PM

Appointment Name
End time, Location

Calendar Date Selector

(triangle ! for snoozed dose)

CAREGIVER PAGE

Peter

Wed, 18 February 2026

8:00 AM

Medication Name
Dose, Special Instruction

Medication Name
Dose, Special Instruction

1:00 PM

Appointment Name
End time, Location

Caregiver menu

- Share the care accounts w/ listed accs
- Settings

NOTIFICATION

Sofia

Time to take your meds

8:00 AM

Medication Name
Dose, Special Instruction

Medication Name
Dose, Special Instruction

Taken Skip Snooze

Taken Skip Snooze

Take All Skip All Snooze All

NOTIFICATION PAGE

Sofia

Take your meds!!!

8:00 AM

Medication Name
Dose, Special Instruction

Medication Name
Dose, Special Instruction

Taken Skip Snooze

Taken Skip Snooze

Take All Skip All Snooze All

HISTORY PAGE - meds

Sofia

Wed, 18 February 2026

meds health

Medication, dose

Mon	Tue	Wed	Thu	Fri	Sat	Sun
✓	✓	✓	✓	✓	✓	✓

< 01/01/26 - 07/01/26 >

Medication, dose

Mon	Tue	Wed	Thu	Fri	Sat	Sun
✓	✓	✓	✓	✓	✓	✓

< 01/01/26 - 07/01/26 >

HISTORY PAGE - health

Sofia

Wed, 18 February 2026

meds health

Type : Average

Graph showing fluctuating values over time

Type : Average

Graph showing fluctuating values over time

+

- Menu for
 - adding new diagrams
 - entering values

ADD DOCTOR RDV PAGE

Sofia 

Appointment name

Doctor
name

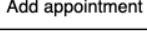
Specialty 

Time/Location
location
MM DD YYYY
8:00AM until 9:00AM

Reason for appointment

Notes

Reminders
 option 1
 option 2
 option 3



ADD MED PAGE

Sofia 

Medication
name 
brand 

Dosage
dosage 
frequency 

Start date
MM DD YYYY

End date
MM DD YYYY

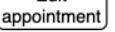
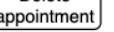
Reason for appointment

Prescribing doctor
name

Specialty 

Purpose

Reminders
 option 1
 option 2
 option 3

CONSULT DOCTOR RDV PAGE

Sofia 

Appointment name

Doctor
name

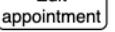
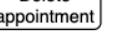
Specialty 

Time/Location
location
MM DD YYYY
8:00AM until 9:00AM

Reason for appointment

Notes

Reminders
 option 1
 option 2
 option 3

CONSULT MED PAGE

Sofia 

Medication
name 
brand 

Dosage
dosage 
frequency 

Start date
MM DD YYYY

End date
MM DD YYYY

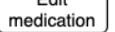
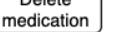
Reason for appointment

Prescribing doctor
name

Specialty 

Purpose

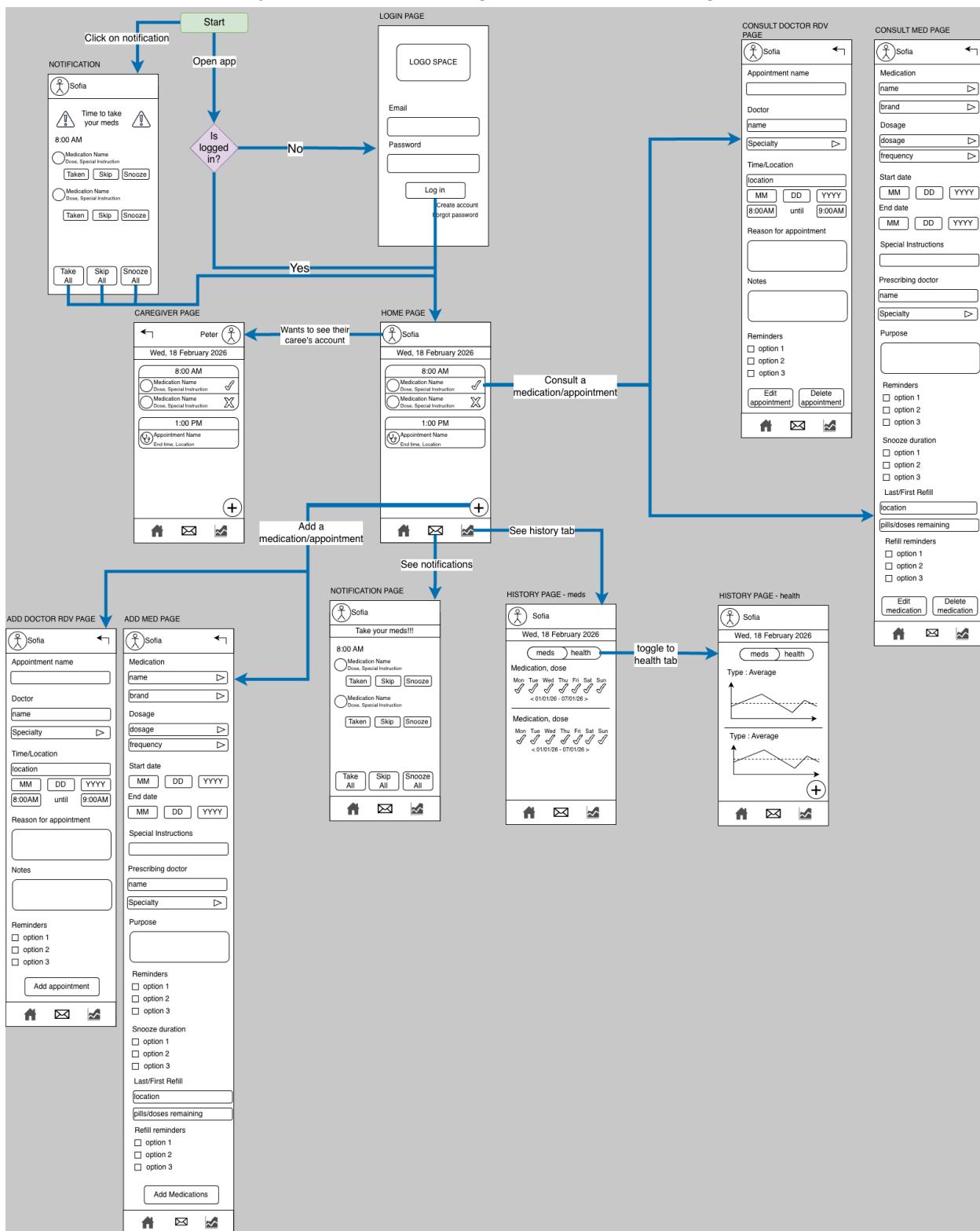
Reminders
 option 1
 option 2
 option 3

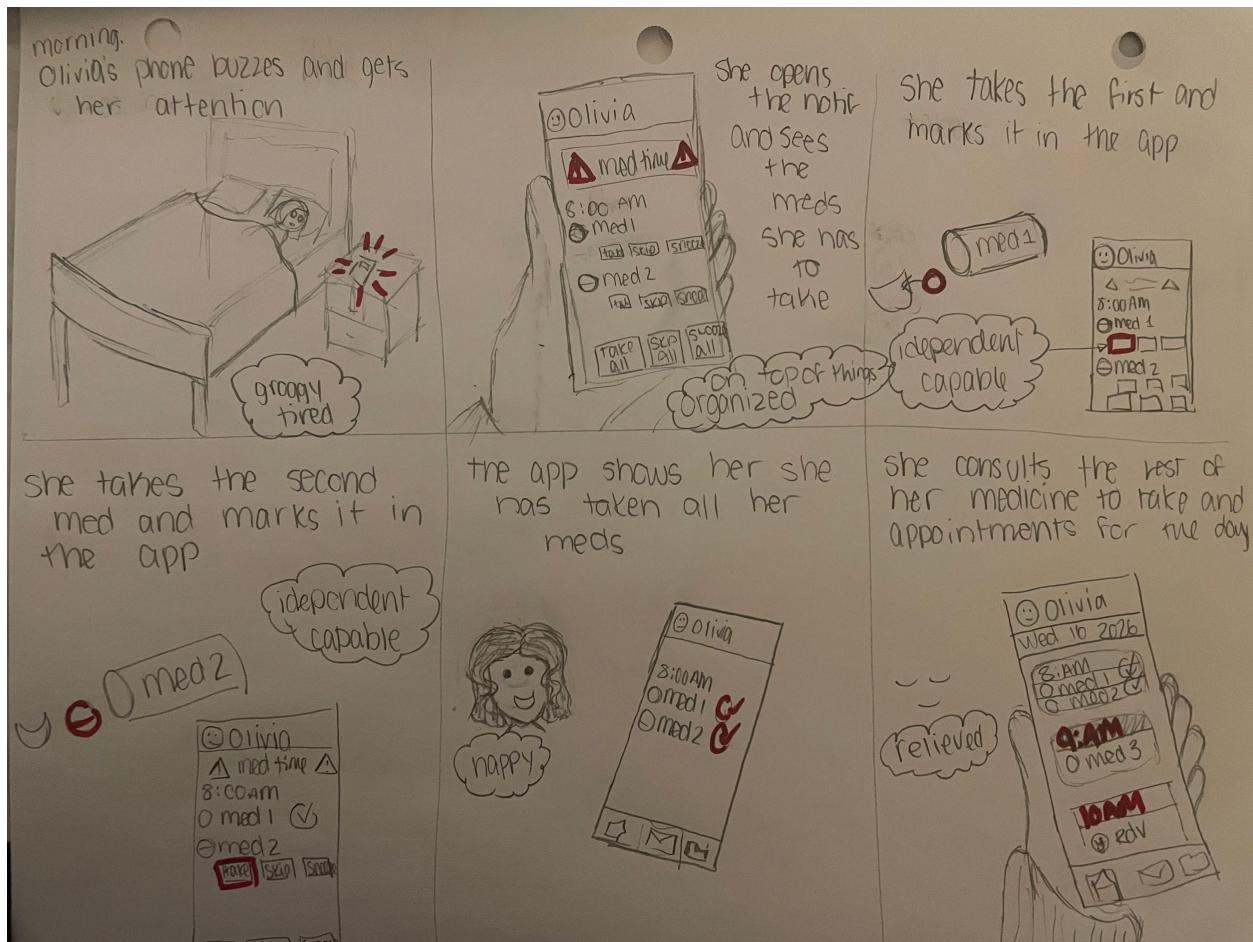
User Flow Chart

Note that for overall clarity, the actions returning to previous/home pages were not included.



Storyboard

A storyboard was made for user Olivia, during her typical morning medication routine. It begins with her receiving a push notification at 8:00 AM, navigating to the notification screen, marking her morning medications as taken one by one, and returning to the home screen to see her next scheduled appointment. The sequence illustrates how CareWell reduces friction at each step with large text, minimal taps, and clear confirmatory feedback ensure that even a user with arthritis and limited tech confidence can complete the task with confidence.



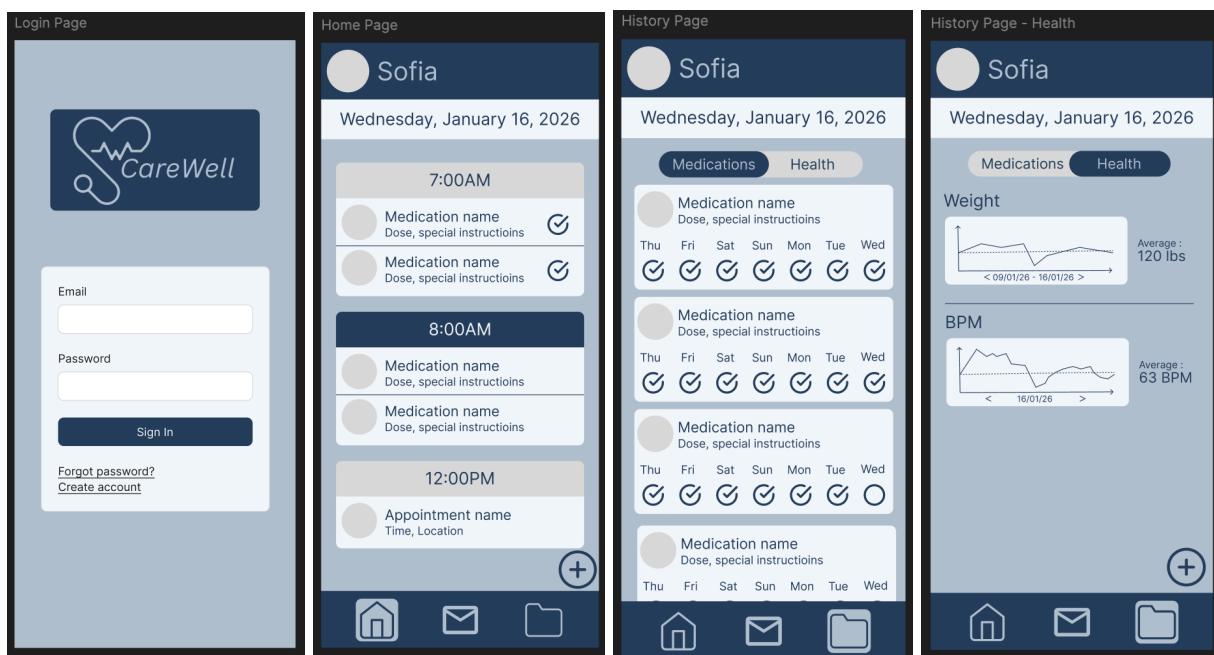
Prototype

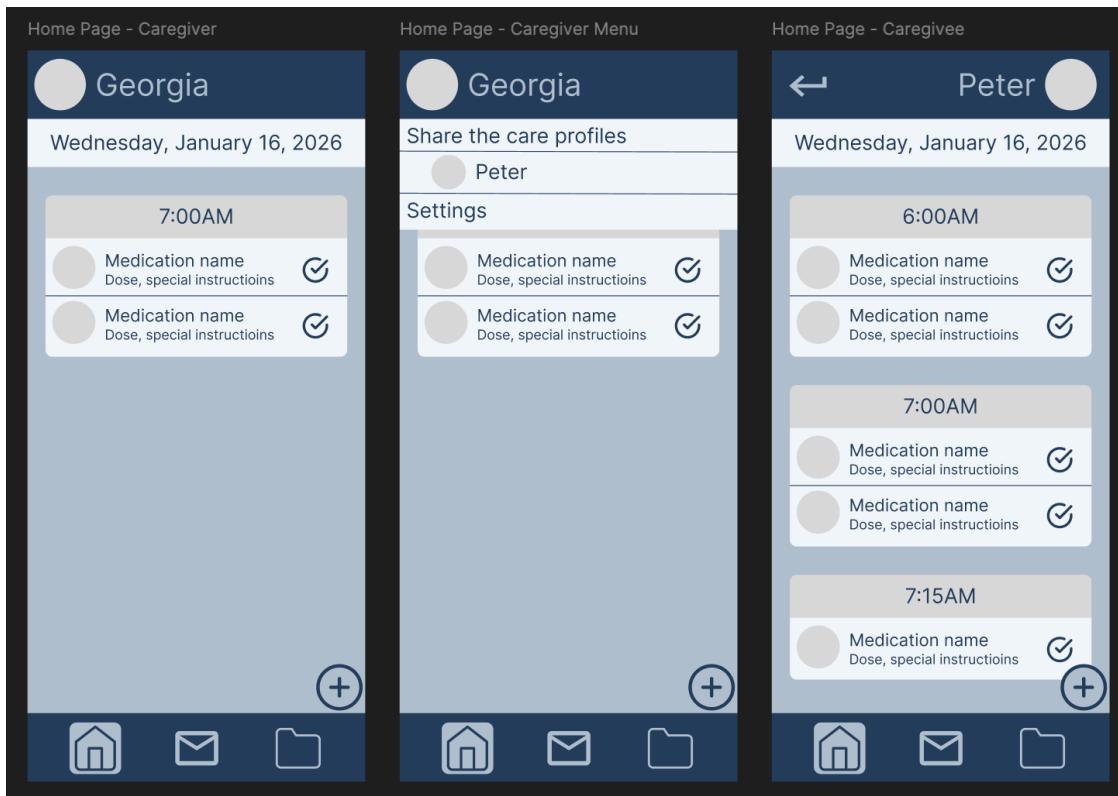
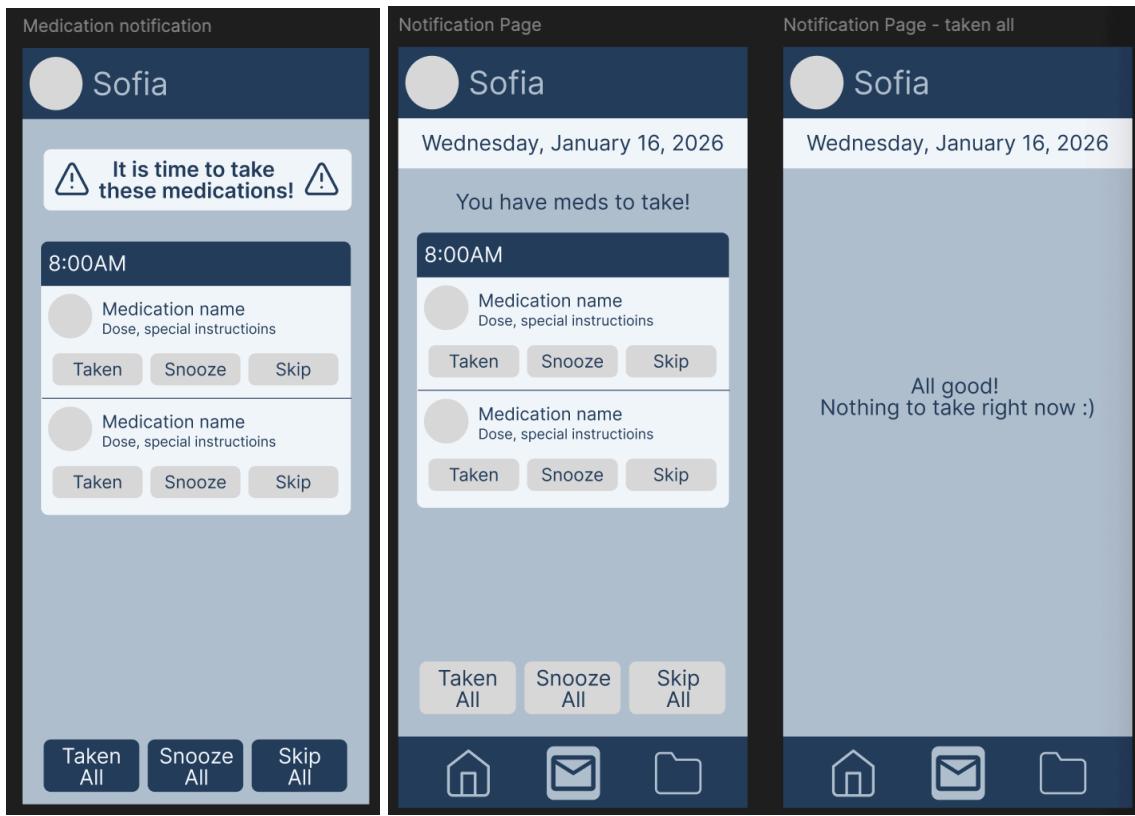
Following the wireframes, a high-fidelity clickable and navigable prototype was developed in figma to reflect a near final version of nearly all components of the application. The prototype captures the app's, CareWell's, visual identity: calm blue and navy palette with high contrast large text to accommodate users with varying levels of vision acuity and limit cognitive overload. The font choice also supports these goals.

The prototype ([figma design](#)) demonstrates four main user flows :

- Flow 1: from login, typical use (consulting home/notifications/history, taking/snoozing/skipping meds, adding/deleting medications/appointments)
- Flow 2: skip login (already logged in), typical use (consulting home/notifications/history, taking/snoozing/skipping meds, adding/deleting medications/appointments)
- Flow 3: app opened directly from a push notification
- Flow 4: caregiver profile swapping

Note: For recommended viewing of the design is with no device frame (Iphone 16 → Advanced settings → disable show device frame)





Choice of Style, Colour, Animation, and Fonts

The visual design of CareWell was driven by desired feelings for the app: the app should feel calm and trustworthy before it feels modern or striking. Medication management is inherently stressful, users are confronting chronic illness, complex schedules, and the real consequences of errors. The design therefore deliberately avoids visual noise, opting instead for an aesthetic that inspires confidence and reduces cognitive load. Why add more stress to the medication management process?

The primary colour palette centres on deep navy blue, paired with light grey and almost white for content areas. Navy was chosen for its associations with reliability and calm, qualities that feel appropriate for a health context, while remaining high-contrast enough to serve users with reduced vision acuity. No aggressive reds or alarming colour choices are used for interactions, reserving stronger visual signals in the form of symbols. For time-sensitive alerts, limited navigability, minimal but clear text and large symbols are the approach used.

Typography follows the same logic. a clean, rounded sans-serif font family is used throughout, selected for its legibility at large sizes and its neutral, non-clinical feel. Font sizes are intentionally generous across the interface, with medication names and times displayed prominently so that users do not need to squint or zoom. Where possible, icons supplement text labels rather than replacing them entirely, acknowledging that icon-only interfaces can be confusing to less tech-savvy users like Olivia.

Animations and transitions are minimal by design. Simple fade transitions between pages avoids the disorientation that more dramatic motion can cause, particularly for older users or those accessing the app under stress.

The image displays two side-by-side screenshots of the CareWell mobile application's user interface. Both screens are titled with the user's name, "Sofia".

The left screenshot is titled "Add Appointment". It contains the following fields:

- Appointment name: "Enter appointment name"
- Doctor: "Enter doctor's name"
- Specialty: A dropdown menu showing "Specialty" with an arrow pointing right.
- Time/Location:
 - Enter location: "Enter location"
 - Date and time pickers: DD MM YYYY, 8:45 AM until 9:45 AM
- Reason for visit: "Enter reason for visit"
- Notes: "Notes"
- Reminders: A list of checkboxes for time intervals (1 month before, 2 weeks before, etc.) and a "Custom" field with a dropdown for "Number Min/Hour/Day".

A blue button at the bottom right says "Add appointment". Below the button are three icons: a house (Home), an envelope (Mail), and a folder (File).

The right screenshot is titled "Add Med". It contains the following fields:

- Medication: "Enter medication name" with a search icon.
- Brand: "Brand" with a search icon.
- Dosage: "Dosage" with a dropdown arrow.
- Frequency: "Frequency" with a dropdown arrow.
- Start date: Date and time pickers for DD MM YYYY.
- End date: Date and time pickers for DD MM YYYY.
- Special instructions: "Special instructions".
- Prescribing doctor: "Enter doctor's name".
- Specialty: A dropdown menu showing "Specialty" with an arrow pointing right.
- Purpose: "Enter purpose of medication".
- Notification reminders: A list of checkboxes for time intervals (1 hour before, 15 min before, etc.) and a "custom" field with a dropdown for "Number Min/Hour".
- Snooze duration: A list of checkboxes for time intervals (10 min, 30 min, 1 hour) and a "Custom" field with a dropdown for "Number Hour/Day".
- Refill information: "Refill location" and "Number of pills/doses remaining".
- Refill reminders: A list of checkboxes for time intervals (1 week before, 3 days before, etc.) and a "custom" field with a dropdown for "Hour/Day".

A blue button at the bottom right says "Add medication". Below the button are three icons: a house (Home), an envelope (Mail), and a folder (File).

Website and App Navigation

CareWell's navigation is built around three core tabs accessible at all times, except when opening a notification, via a persistent bottom navigation bar: Home, Notifications, and History. This structure was chosen deliberately over more complex navigation patterns, drawer menus, nested tabs, or gesture-based navigation, because it makes the app's entire feature set visible and reachable within one tap from anywhere. Given that a primary barrier to adoption identified in the survey was complexity, ensuring that no important feature is more than two taps away was a foundational design constraint.

The Home tab serves as the daily command centre. It displays the current date and a chronological list of the day's medications and appointments, grouped by time block. A floating action button in the bottom right opens a contextual menu to add either a medication or an appointment, keeping the home screen itself uncluttered. Tapping any medication or appointment entry navigates to its detail and edit view, following a consistent pattern across the app.

Caregiver functionality is surfaced through the user profile area at the top of the Home screen rather than as a separate tab. Tapping the profile opens a dropdown with the option to switch to a linked caree's account, immediately replacing the home view with that person's schedule. A clear back arrow and the caree's name displayed in the header right-justified (instead of left-justified as on account owner's profile) ensure that caregivers always know whose data they are viewing and can return to their own account instantly. This approach keeps the caregiver feature accessible without making it intrusive for users who do not need it.

Notifications behave differently depending on how it is accessed. When opened normally from the nav bar, it displays pending medication alerts in a list format with individual and batch Taken, Snooze, and Skip options. When the app is launched directly from a push notification, the navigation bar is hidden entirely, placing the user immediately into an action-focused view with no distractions, a deliberate choice to reduce the friction between receiving an alert and acting on it. Once all medications in a block are addressed, the navigation bar reappears and the user can continue using the app normally.

The History tab is divided into two sub-views toggled by a simple pill selector at the top: Medications and Health. The Medications view shows a weekly adherence grid for each medication, paginated by date range. The Health view displays user-logged biometric data such as weight and blood pressure in simple line graphs, which can be added to or edited via a + action button in the corner, much like medications/appointments on the home page.

4. Usability Testing:

The usability testing plan for CareWell has a two staged approach: expert-based evaluation and then user-based testing of the figma prototype. Conducting both ensures that obvious design problems are caught early through expert review, improved on, before real users are ever involved, maximizing the quality of feedback at each stage.

The first stage is a heuristic evaluation, conducted by 3 evaluators independently inspecting the prototype against Nielsen's ten usability heuristics before any user testing takes place.

Evaluators would work alone to avoid bias, then compare findings afterwards. In general, issues identified by multiple evaluations would be flagged as high priority for correction before user testing. Given the research on target population and their needs, particular attention will be directed at these heuristics:

- #8. Aesthetic and minimalist design, since complexity was the most cited barrier to adoption.
- #1. Visibility of system status, to ensure confirmations and notification feedback is unambiguous.
- #5. Error prevention, especially when it comes to destructive actions like deleting a medication (as much as possible in a non-backend prototype).
- #7. Flexibility and efficiency of use, to validate the app serves all tech levels of users, from the Olivia's to the Michael's.

A cognitive walkthrough would also be performed on the flows most likely to present difficulties: adding medications (due to the long form) and switching to a caregiver account (less intuitive process). For each step in these flows, the following questions will be asked:

1. Will users understand how to start the task?
2. Will the relevant control be visible?
3. Will users recognize that the control produces the effect they want?
4. And will the feedback after the action confirm that they can proceed with confidence?

This is especially relevant given all survey respondents, and all personas, have never previously utilized any health management applications and may be unfamiliar with the available tools.

The second stage is user-based testing, conducted with a minimum of 5 participants, recruited to reflect the 3 personas : at least one older, lower-tech-literacy participant, one caregiver, and one busy professional. Sessions would be one-on-one with a moderator, lasting 35-45min and conducted either in person or virtually via screen-sharing. Participants will be asked to think aloud throughout, narrating expectations, reactions and general thoughts as they navigate, providing a stream of continuous qualitative data. The moderator will be present but instructed not to intervene unless a participant is fully blocked.

Each participant would complete a set of scenario-based tasks, framed as situations rather than direct instructions to avoid leading responses:

- "It's 8:00 AM. Open the app and find out what you need to take this morning."
- "You just received a notification. Show me what you would do."

- "You realize you haven't eaten yet and need to delay a dose by 30 minutes. What would you do?"
- "Your cardiologist's office just called with an appointment next Thursday at 2:00 PM. Add it and set a reminder for the day before."
- "Your doctor prescribed Metformin, 500mg, twice daily with meals. Add it to your profile."
- "You have a doctor's appointment tomorrow and want to show them your medication adherence over the past two weeks. Find that information."
- (Caregiver participants only) "You want to check whether your mother took her morning medications today. Show me how you would do that."

After each task, the moderator would ask brief follow-up questions including but not necessarily limited to: "Was anything confusing?" and "Did the app behave the way you expected?" After all tasks, participants would complete a short post-test questionnaire based on a System Usability Scale, rating statements such as "I found the app unnecessarily complex" and "I felt confident using this app" on a 5 point scale. This combination of observational and query-based data collection provides both qualitative insight and a quantitative measure that can be compared across participants.

Analysis would focus on recurring patterns. Any task where two or more participants struggle or fail to complete would be flagged as priority redesign. Based on research and design work completed, the flows most likely to cause friction at this time are the add medication form, due to its length and detail, and the caregiver account switching, which introduces a less conventional pattern. Identified issues would be addressed through targeted iteration before the design is ready for development handoff.

5. Reflection:

The UX design process for CareWell was a valuable exercise in understanding how much distance exists between a designer's assumptions and a user's actual needs. Beginning with research before touching any design tools forced a discipline : identify issues before being biased by existing design work. Many design decisions are then directly made as a result of survey responses and market research, actualized in personas.

The survey was one of the most instructive parts of the process, and also one of the most difficult. Lack of access and reach limits the quantity of responses and their likely socio-cultural-economic similarities limit potential variety in responses. It was also a humbling experience, as none of the respondents, even those with multiple medications to manage, use a health management application. This reframed the design challenge as the process went from building on existing digital habits to building something that can help establish them in the first place. This directly impacted aesthetics, colour choice and general visual identity of the application, framed to build trust, calm nerves and inspire confidence in users.

The persona creation phase clarified what features mean to different users, and how they might be prioritized differently. For Olivia medication reminders are a way to stay independent, for

Michael it's about peace of mind about his mother and for Dominique they represent a method to structure her schedule and live her life more efficiently.

The sketches and wireframes phase proved to be where the tension between simplicity and completeness was felt most acutely. Translating research findings into concrete layouts revealed that features which seemed straightforward in theory. For example, adding a medication required far more fields and decisions than anticipated, raising real questions about how to present that complexity without overwhelming users like Olivia on first encounter. The move from rough sketches to structured wireframes was where the three-tab navigation structure solidified as the right choice, as it forced every feature to justify its place within a minimal, always-visible architecture rather than being buried in menus.

The most persistent challenge throughout the process was designing for a user base with genuinely wide variance in technological comfort. Design decisions that serve Olivia: large tap targets, minimal navigation depth, abundant confirmatory feedback which risks feeling patronizing or inefficient to Dominique and Michael. The resolution was to design for the least confident user as the baseline, then ensure that the resulting interface did not actively slow down more experienced users. This principle, borrowed implicitly from the heuristic of flexibility and efficiency of use, held up well across the wireframe and prototype stages and is something that would be explicitly validated in usability testing.

If the process were to be repeated, two things would be done differently. The survey would be distributed more broadly and through more varied channels to reduce the convenience sampling bias that skewed respondents toward a particular social network. And a round of informal paper prototype testing would have been conducted earlier, likely showing Version 2 sketches to even two or three people would likely have surfaced issues (such as lack of actual "Log in" button on log in page) before it carried forward into the wireframes. Both are reminders that the design process described in theory, with its clean sequential phases, is messier and more iterative in practice, and that the earlier a problem is caught, the cheaper and less disruptive it is to fix.