

# Low-fi Prototyping

✿ Understanding Voice-First Daily Companion



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Min Jung

# Introduction

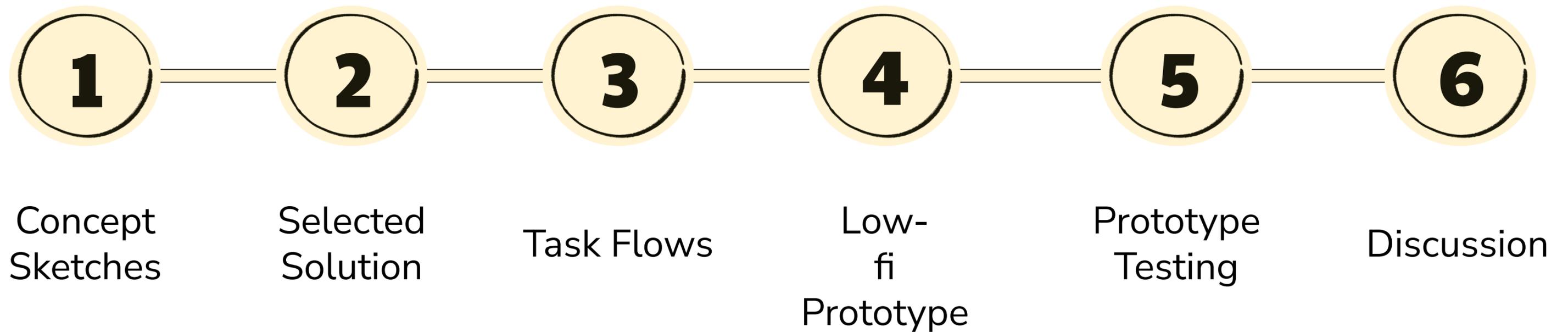


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# Value Proposition

*Make medication social, not solo.*

Pill Pal transforms medication tracking into a shared, encouraging experience through voice reminders and community support.

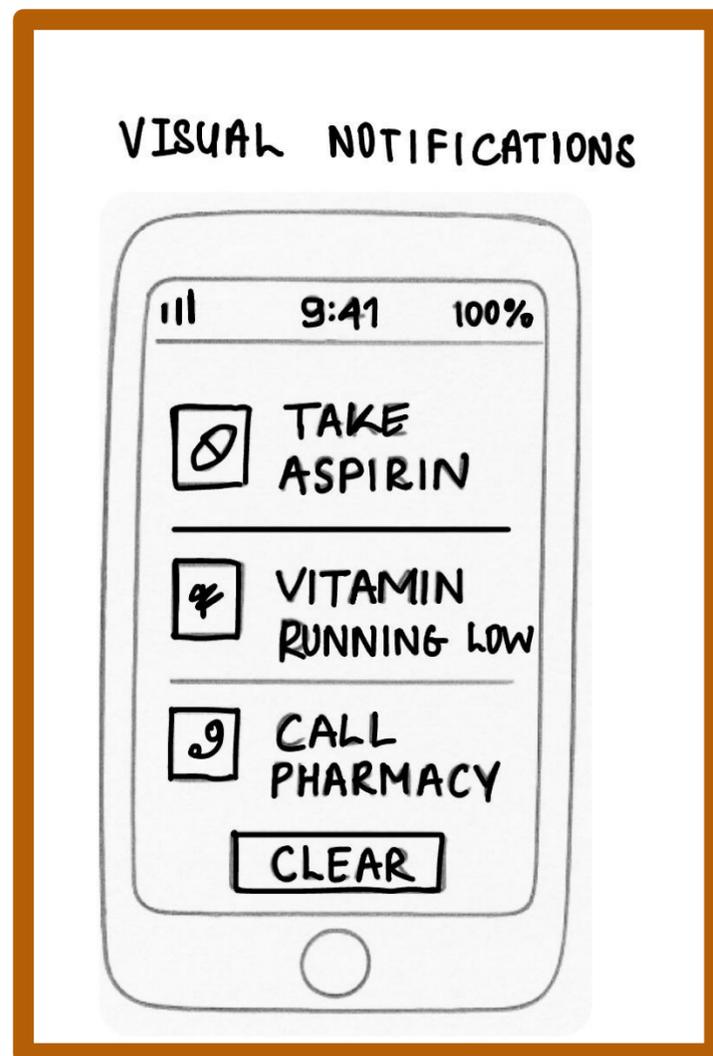




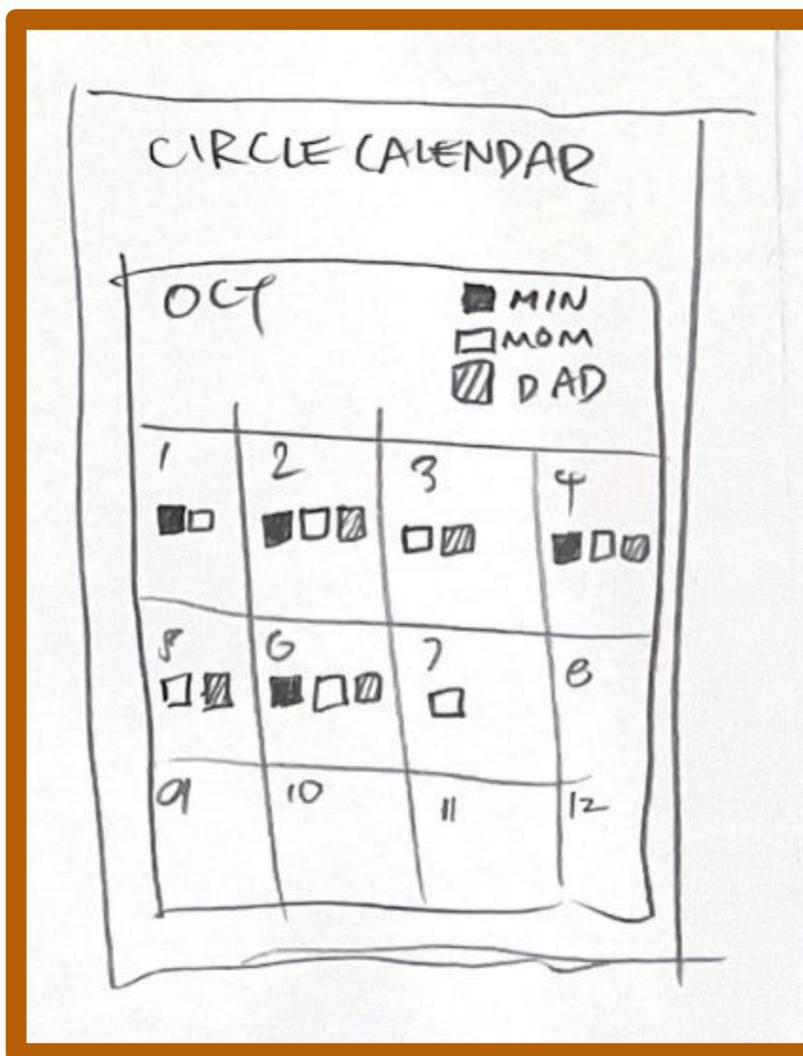
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# Concept Sketches

# 3 Realizations Chosen



Helps users stay consistent through simple reminders



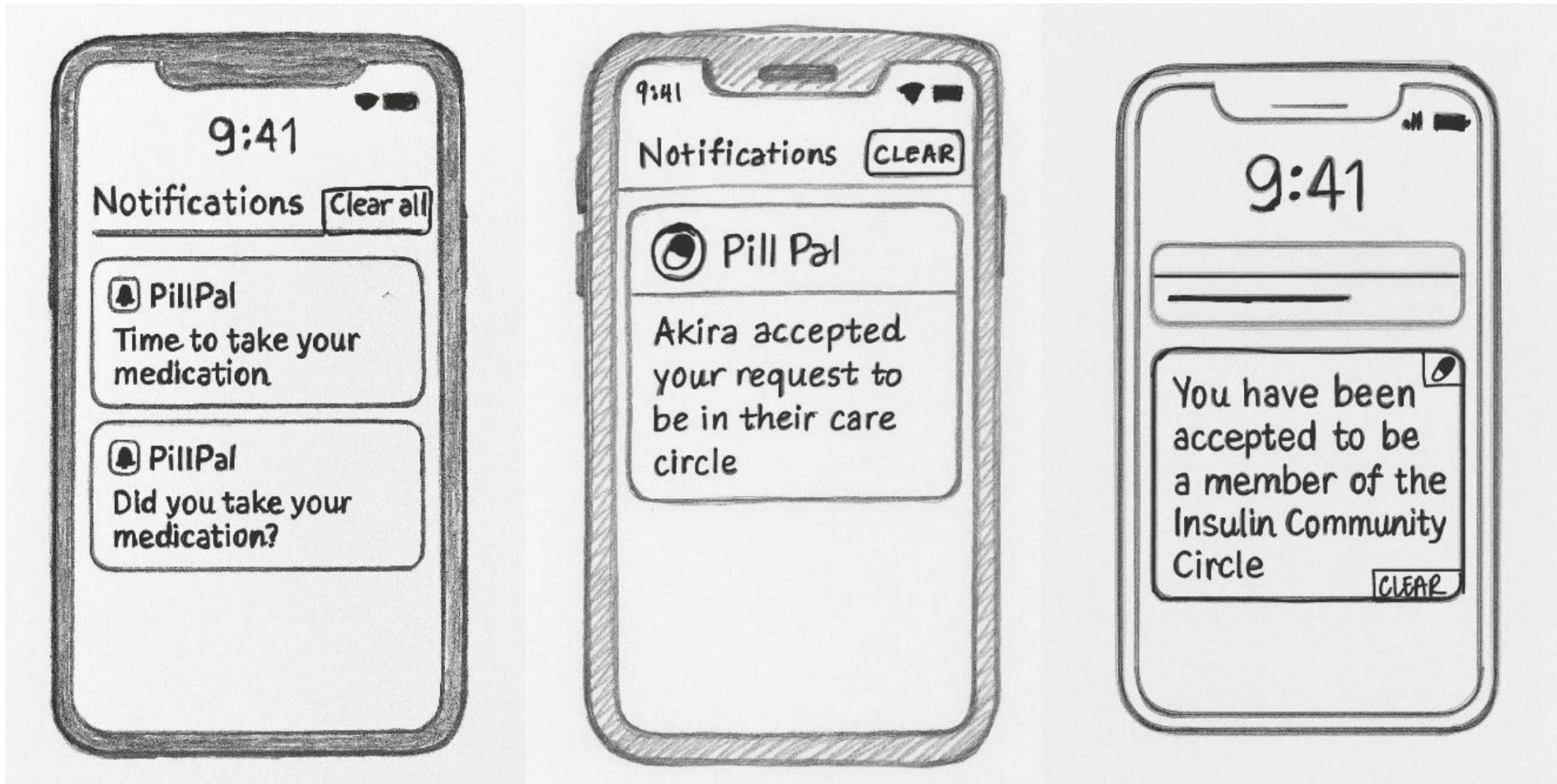
Builds shared accountability by showing progress across the care circle



Encourages habit reinforcement with accessible, on-the-go notifications

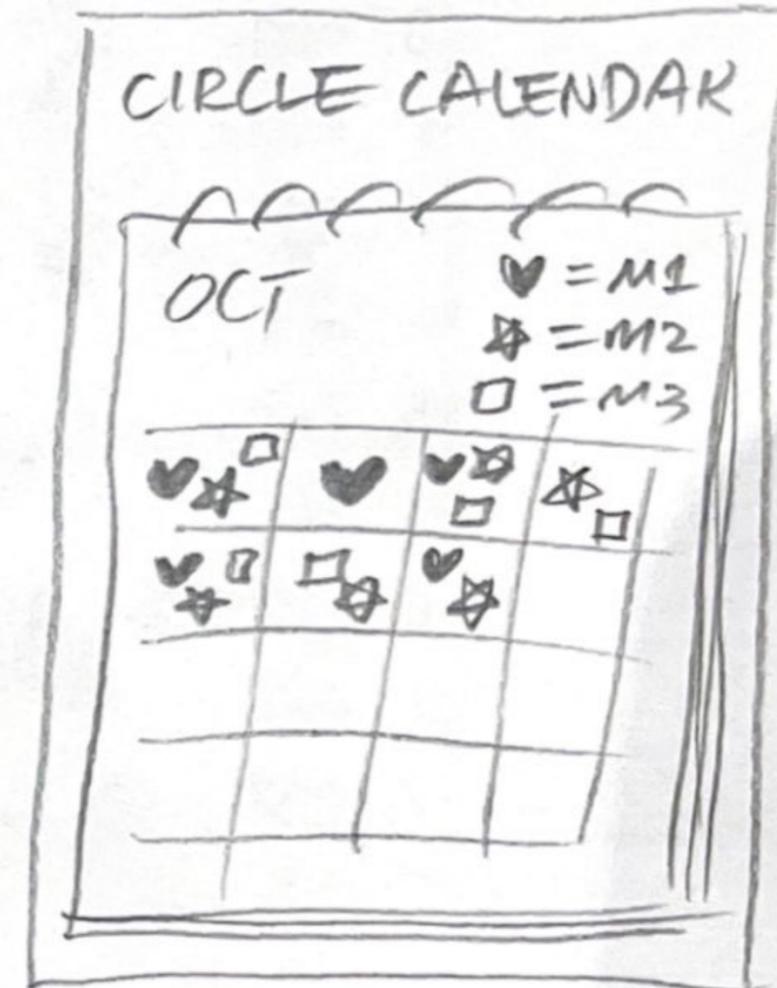
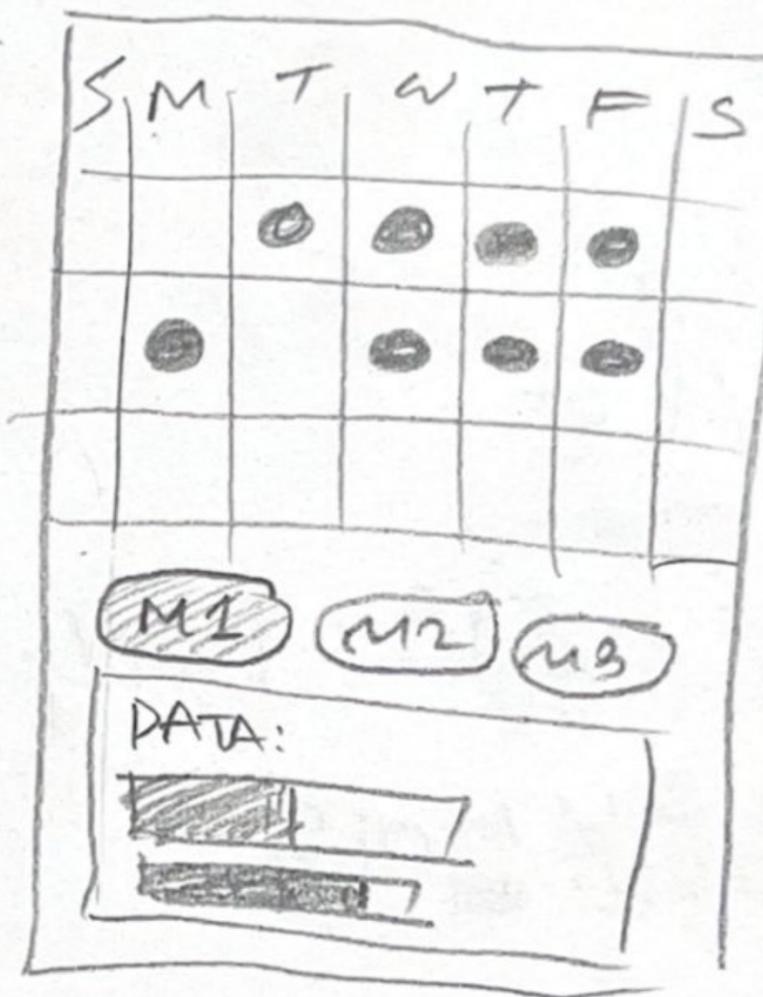
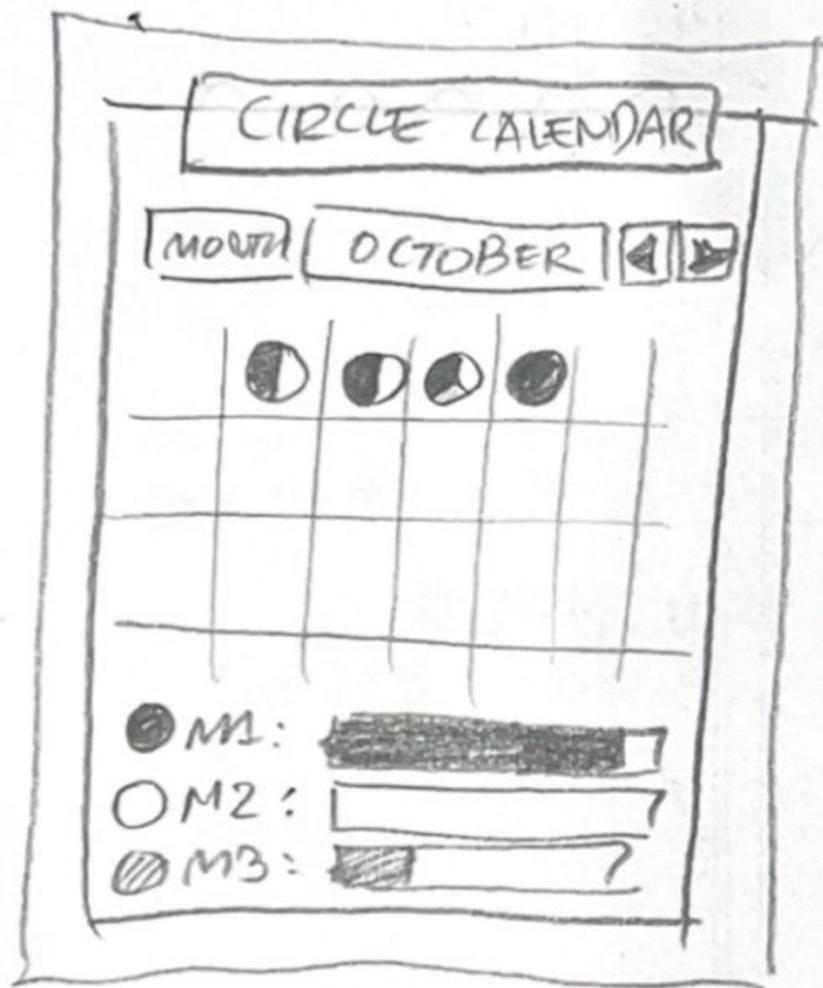
# #1 Realization Concept Sketches

## Visual Notifications



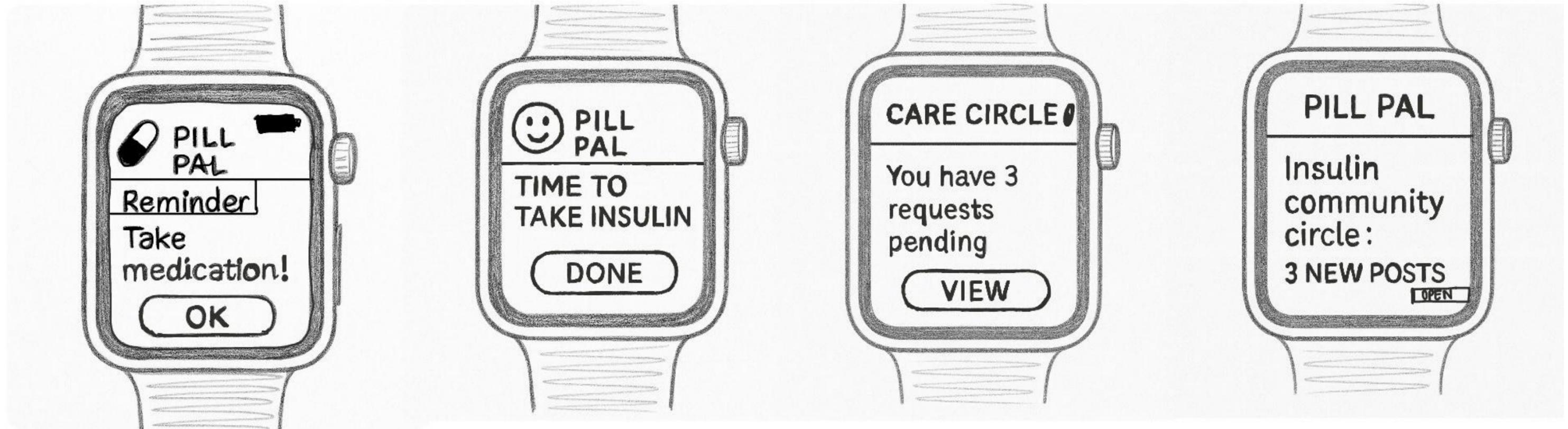
# #2 Realization Concept Sketches

## Care Circle Calendar

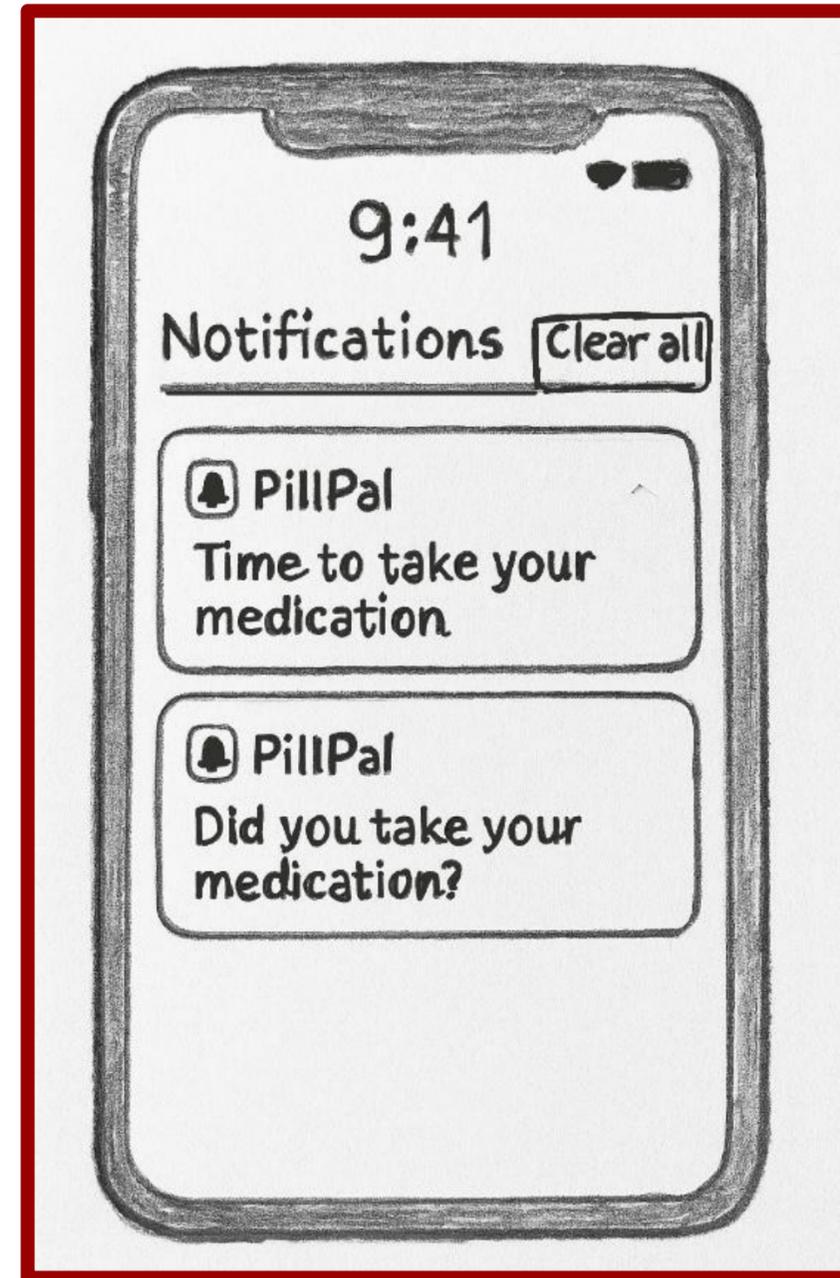


# #3 Realization Concept Sketches

Wearable/Watch

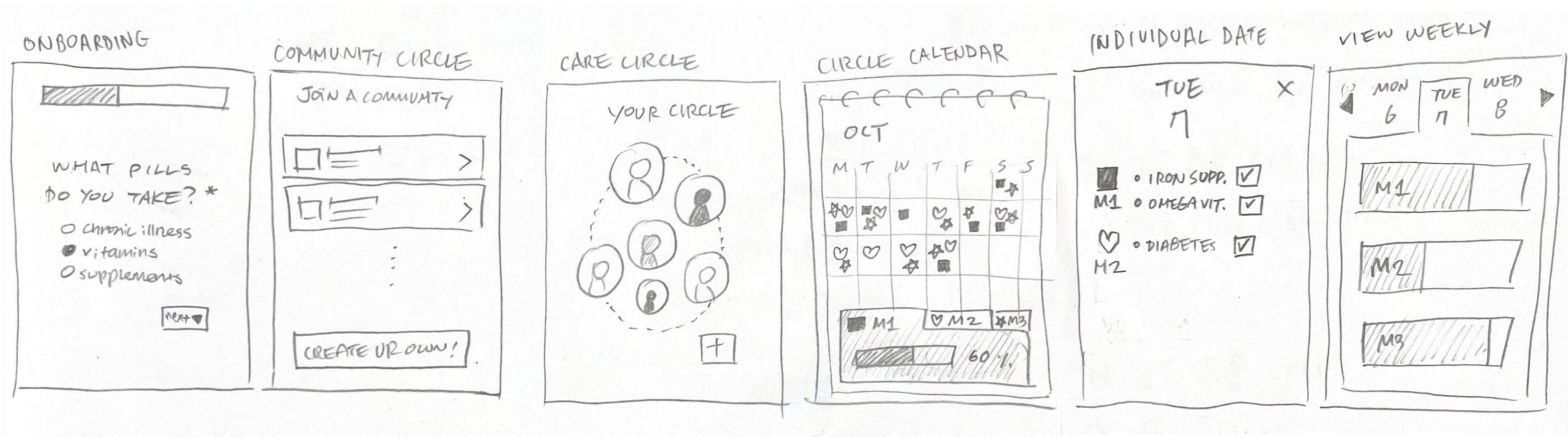


# We chose...



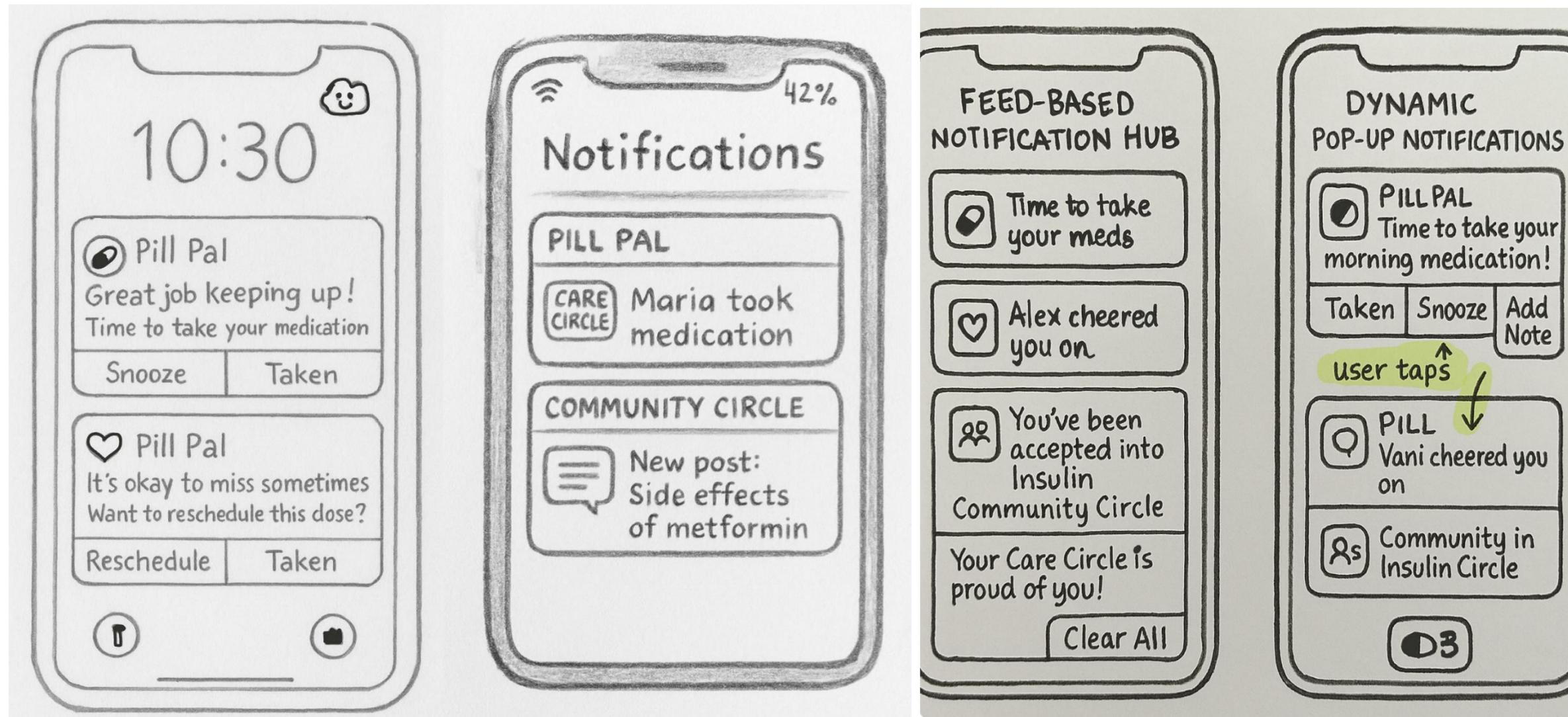
# #1 Realization Key Screens

Care Circle Calendar fleshed out



# #2 Realization Key Screens

Visual Notifications fleshed out





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## **Selected Solution**

# Deciding on an Interface for Pill Pal



**OR**



# #1 Realization: Mobile App

## Pros

- **Supports complex features:** users can easily view discussions & share posts within circles on larger screens
- **Better Voice AI Capabilities:** Mobile microphones and processing allow clearer voice interactions for medication logging or scheduling
- **Ideal for Onboarding & Moderation :** Adding personal contacts, setting permissions & editing complex medication schedules

## Cons

- **Interrupts clinical workflow:** asking pharmacists or doctors to use their phones during work breaks their routine flow
- **Reminders can be ignored:** notifications are less persistent and can be easily swiped away from lock screen, making this less effective for critical reminders
- **Not always accessible:** when phone is out of reach, users lose immediate, hands-free interaction

# #2 Realization: Apple Watch

## Pros

- **Seamless Reminders:** haptic feedback and always-worn nature make reminders very hard to miss
- **Hands-free AI interaction:** perfect for quick, voice-based interactions without interrupting user's routine
- **Accessible for visually-impaired users:** Proximity and tactile cues make it reliable for users who relies on audio feedback

## Cons

- **Limited for complex tasks:** tiny screen while viewing lengthy threads, sharing updates, or moderating discussions
- **Hard to add text:** Adding detailed notes or editing medication schedules is extremely challenging
- **Cost barrier:** high price of smartwatches creates a significant barrier that excludes lower-income individuals or older adults who do not already own one

# Moving forward with...

# Mobile App!

- ◆ for its flexibility, accessibility, and ability to foster richer community support.



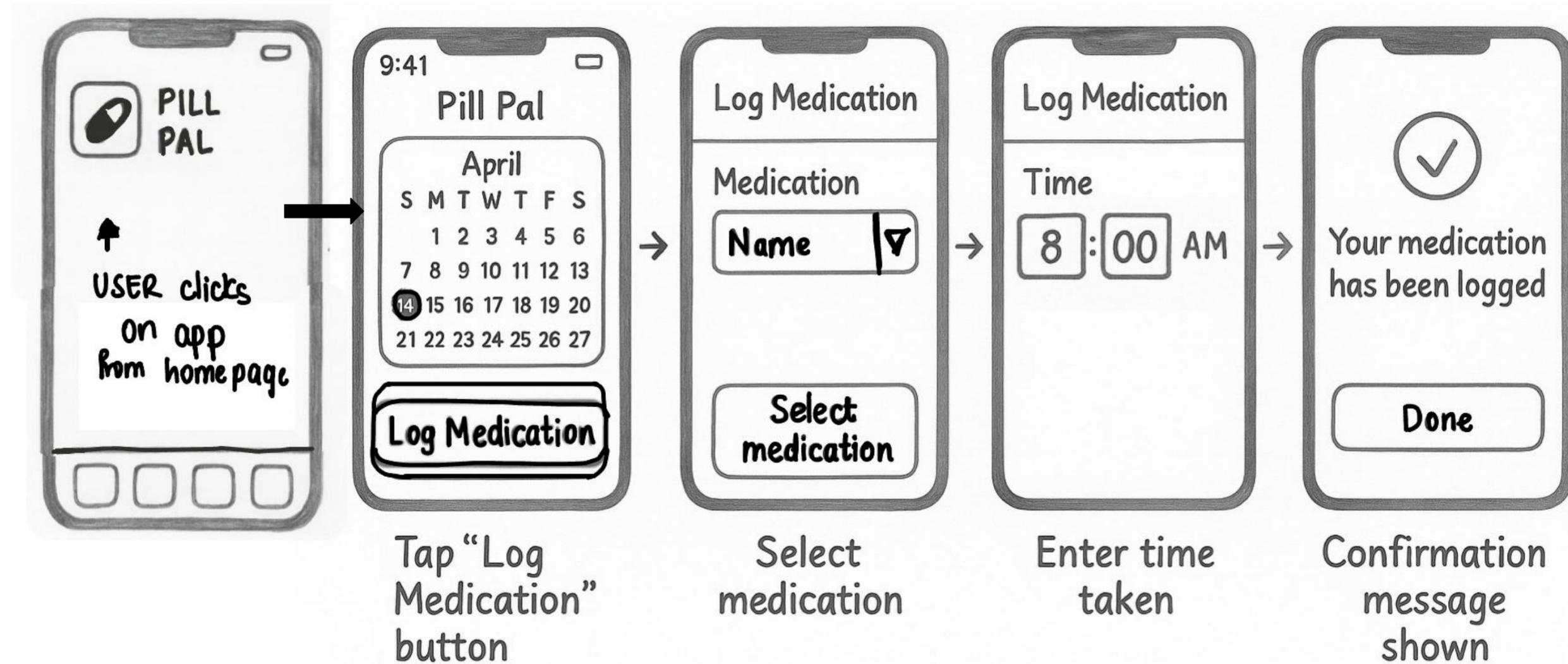
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# Task Flows



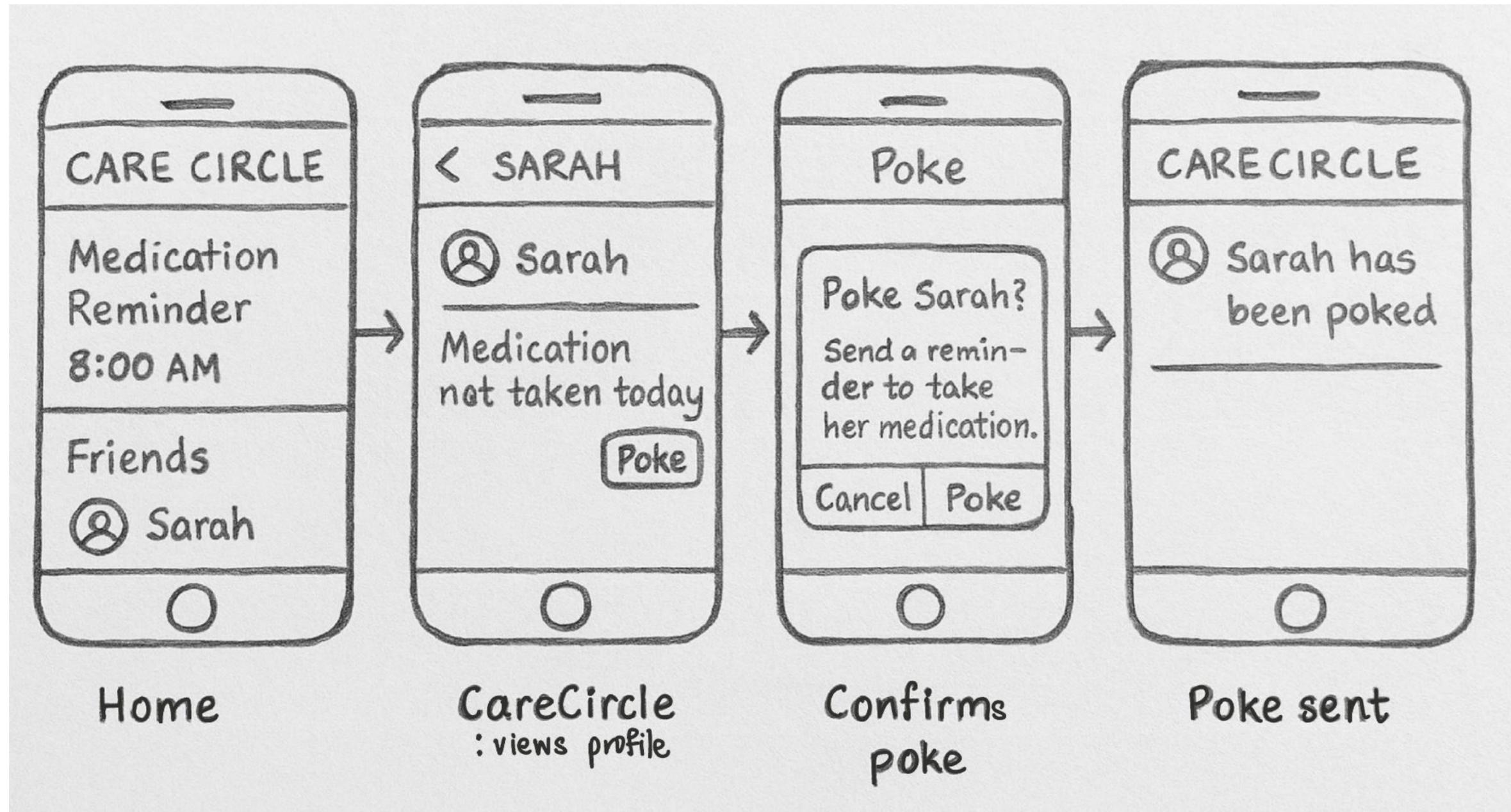
# Simple Task

## Logging Medication



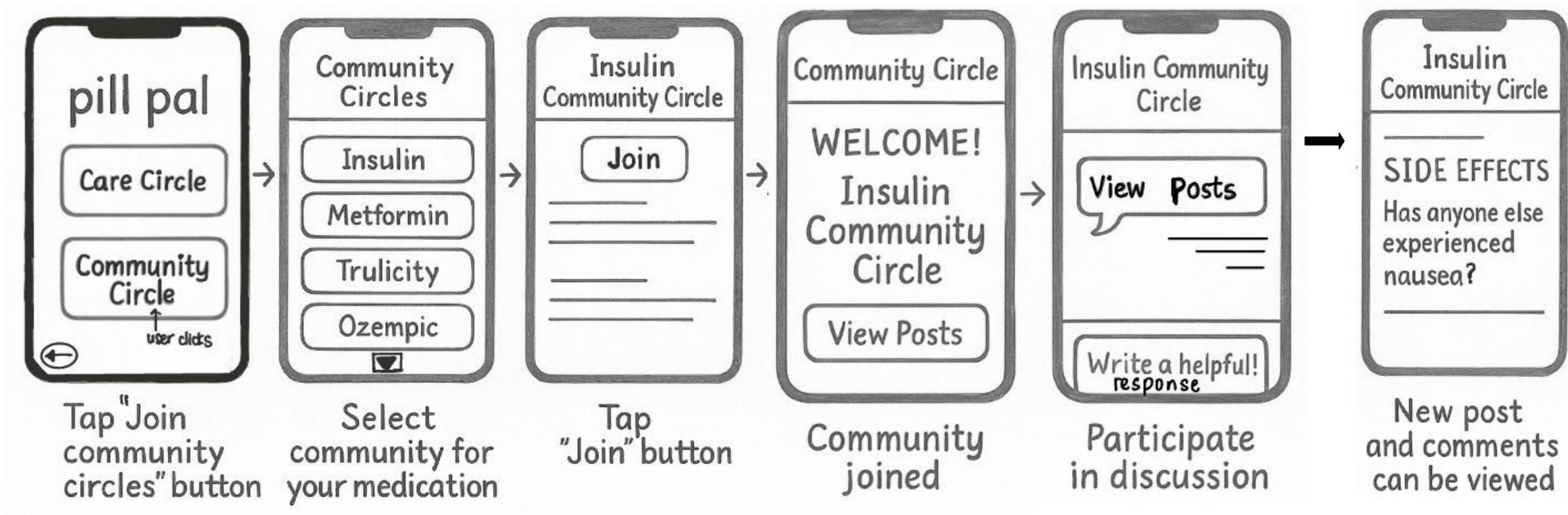
# Moderate Task

Reminding (“Poking”) someone to take their medication



# Complex Task

## Joining and Participating in a community

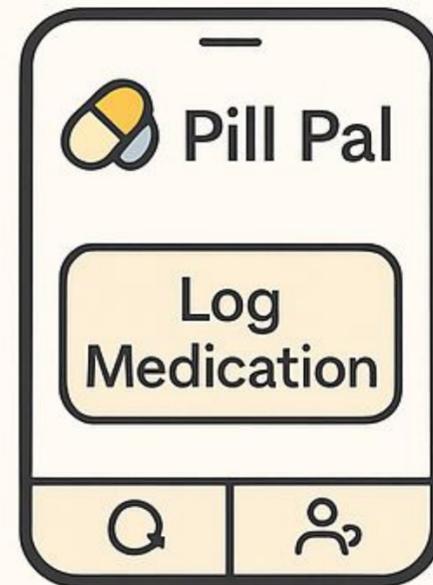




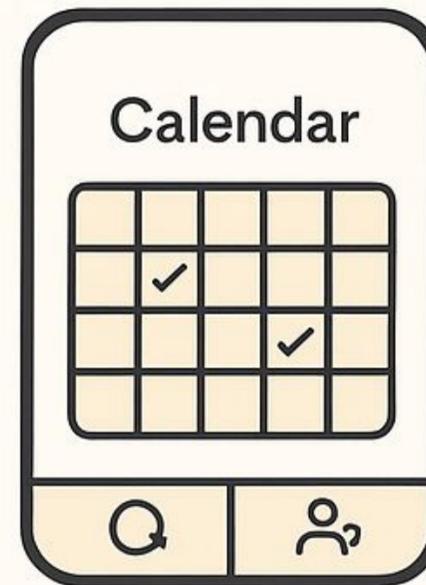
# Low-fi Prototype



# Features Overview



Log Medication



Calendar



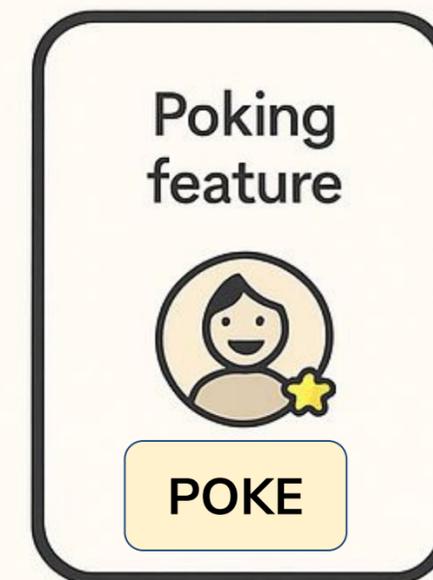
Care Circle



Community Circle



Join Community



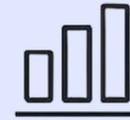
Poking feature

# Pre-testing Preparation



## Usability Goals

1. Ensure users can log medications easily without confusion or errors.
2. Evaluate how comfortable and natural the voice interaction feels for reminders.
3. Test whether users can join and navigate community circles intuitively.
4. Assess if the design fosters encouragement and social motivation after completing a task



## Environment

- Handed participant **printed script**
- Took turns being a facilitator and note taker role
- Emphasized thinking out loud
- **Measurement:** Post-Test Survey  
<https://forms.gle/dHGuN7BpnGRqdByr8>

# Goals and Measurements



## Ease of Logging

Measure how **easily** users can log their medications without any confusion



## Navigation Clarity

Assess how **confidently** users move between Home, Calendar, Care Circles & Community Circles



## Social Understanding

Track whether users **intuitively** understand the purpose and flow between Care Circles & Community Circles

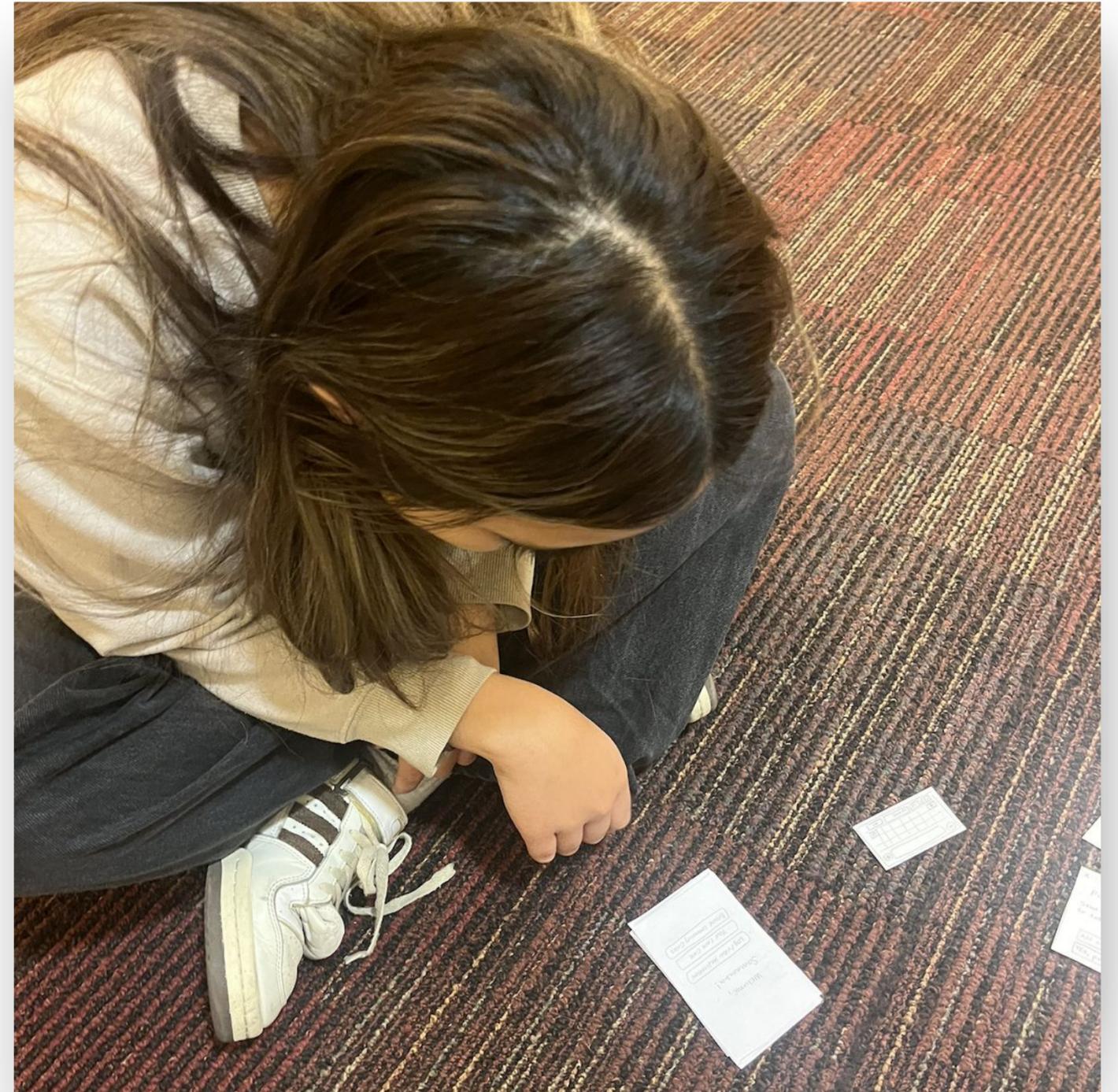
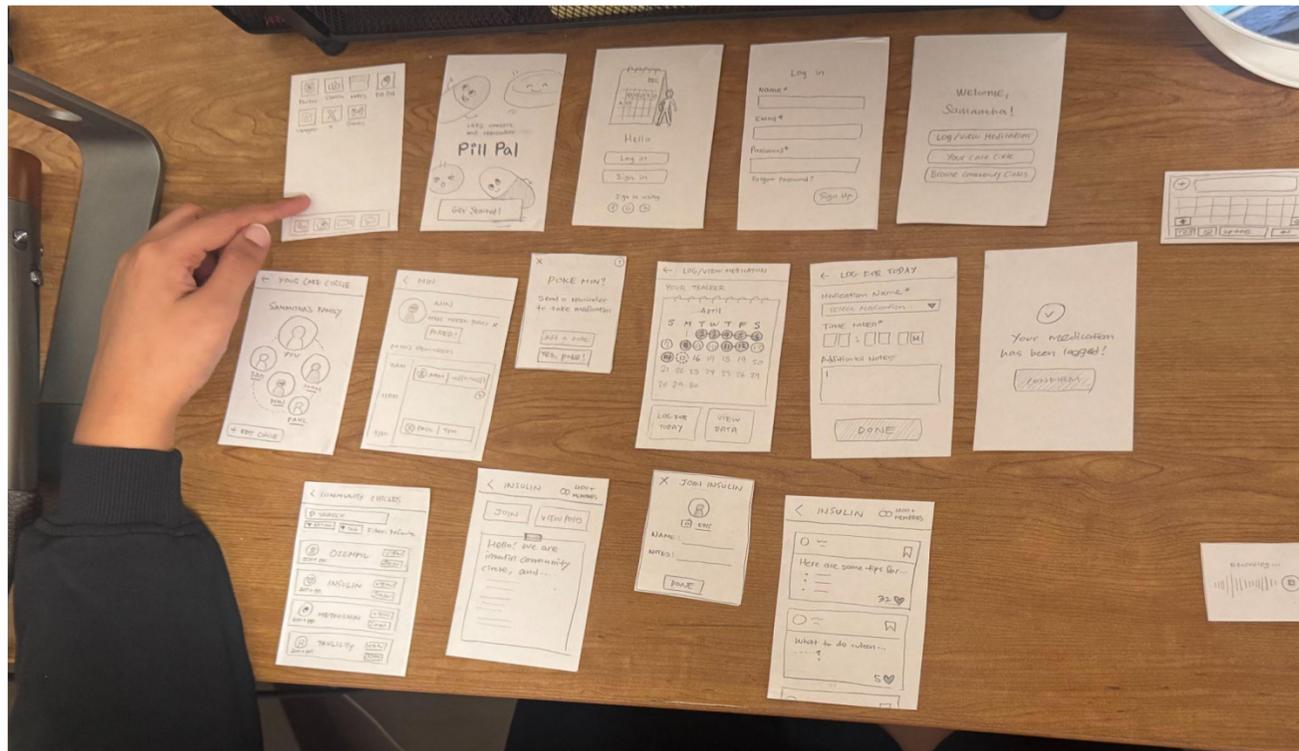
# In-test Procedure

## Participant # 1:

- Kaycee N.
- Stanford student
- Compensated with an on-call drink

## Participant # 2:

- Riya S.
- sets 2 alarms to remember taking her meds
- Compensated with an Amazon gift card

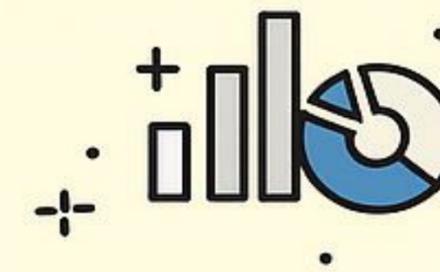




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# Discussion

# Testing Results: Process Data



## Concept Overview

- Both participants found the Pill Pal concept **intuitive** and relatable.
- The design reminded them of **other habit-tracking** or period-tracking apps, which made the structure feel familiar.
- They found the **user flow accessible** and liked the idea of sharing progress with others in their “circle.”

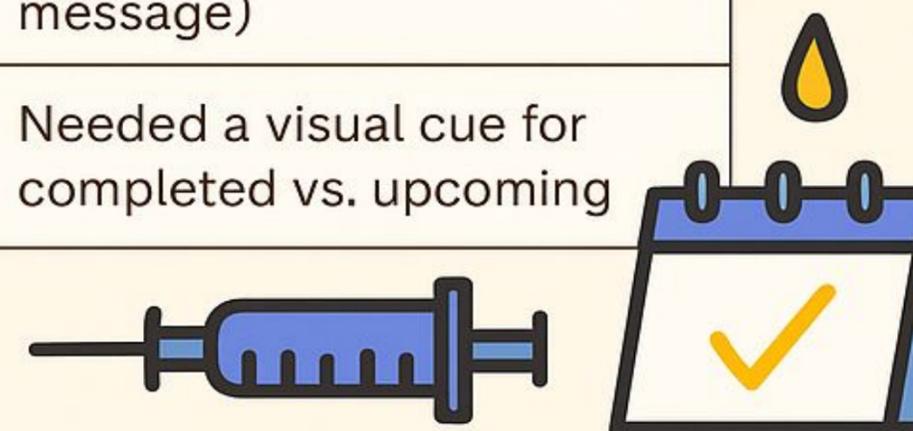
## Features Overview

- Participant #1 appreciated the **community circles** but suggested **adding clearer indicators** for different notifications.
- Participant #2 noted that the **home screen** felt too “**crowded**” and recommended making it solely focused on logging medications upon opening the app for the first time.



# Testing Results: Bottom-line Data

Location / Feature	Severity	Participant	Description
Home Page Layout	2 – moderate	2	Wanted a clearer primary action (logging meds should be the first screen)
Navigation Tabs	1 – minor	1	Slight confusion when switching between “Circle” and “Community” sections
Voice Logging Flow	0 – cosmetic	1, 2	Appreciated the concept but wanted confirmation feedback (e.g. “Dose logged!” message)
Calendar View	1 – minor	1	Needed a visual cue for completed vs. upcoming



# Did We Hit Our Usability Goals?

## In some ways...

- ◆ Participants quickly understood how to log and review medications without any instructions given.
- ◆ They found the concept motivating and emotionally supportive, saying it felt “encouraging.”

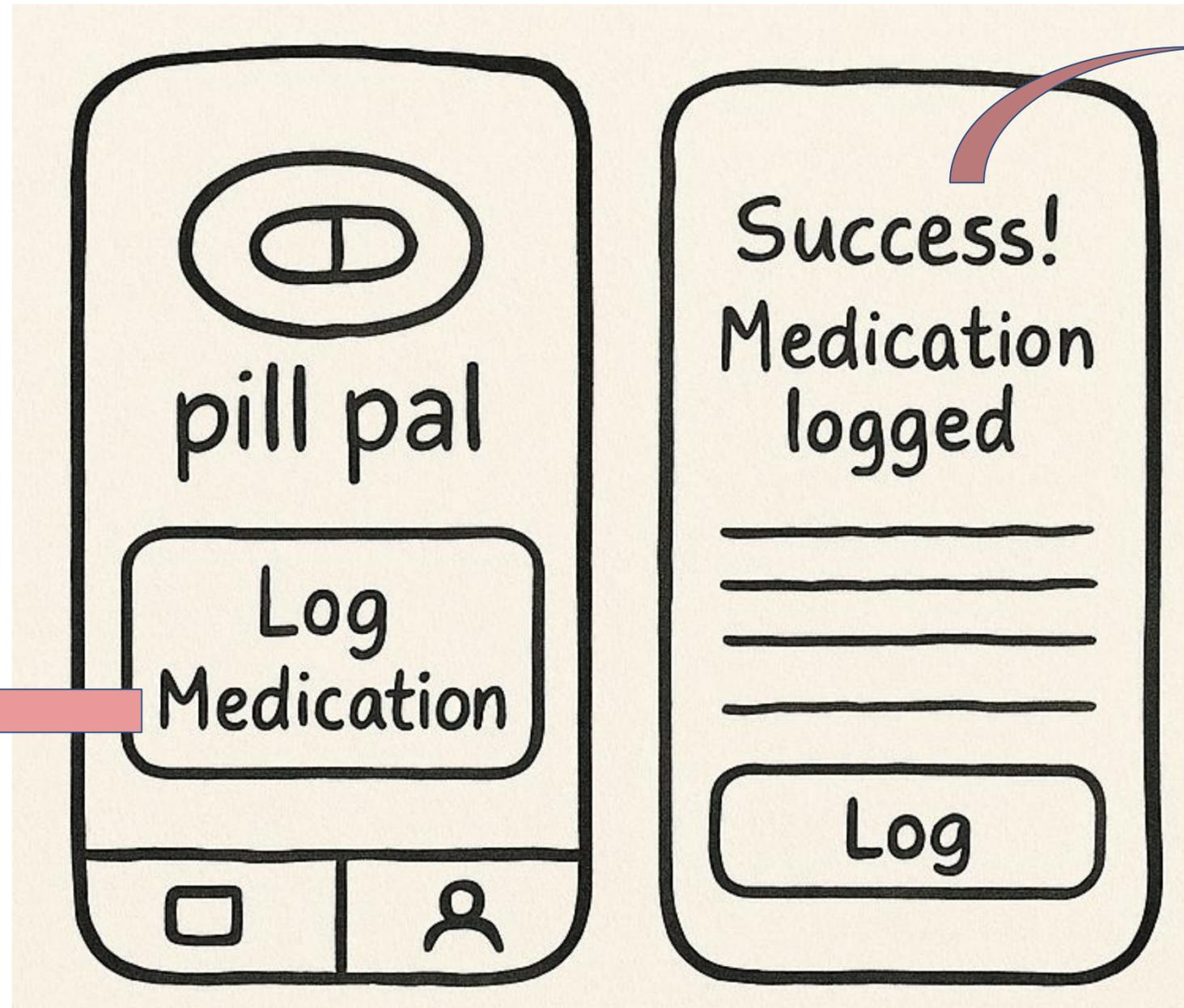


## But not in others...

- ◆ The home page purpose was confusing — users expected it to start with a “Log Medication”.
- ◆ Navigation between Circle and Calendar views sometimes required verbal clarification from facilitators.



# Proposed UI Changes



Make home page clear

Visual cues to mark action

# Discussion



## Implications

- 1) Participants found the interface **intuitive** and easy to understand, comparing it to **other tracking apps** they already use.
- 2) Community feature was appealing but left users unsure about who was posting, showing a need for **clearer social context**.



## Changes Going Forward

- 1) Make “Log Medication” **primary action** on main page.
- 2) Add **friendly confirmation cues** (“Medication logged!”).
- 3) Include **voice dictation** to make posts.
- 4) **Automatically fill in** medication logging times.
- 5) Make community posts **anonymous** so shared content isn’t linked to individual profiles



## Not Revealed in Testing

- 1) Handling of **multiple medications** and overlapping reminders on interface.
- 2) Whether social **encouragement features** (likes, comments) remain motivating **long-term**.
- 3) How **accessibility needs** (font size, speech-to-text, color contrast) should adapt for **older users**.

# Thank you for listening!



# Appendix



# Problem/Solution

## Problem

Unkept medication routines are often due to individuals feeling isolated and internalizing their health struggle without seeking help.

## Solution

Pill Pal is an app that builds a sense of community and social motivation around consistent medication routines.



# Values Behind Design Choice



## Nurturing Medication Recall Habits

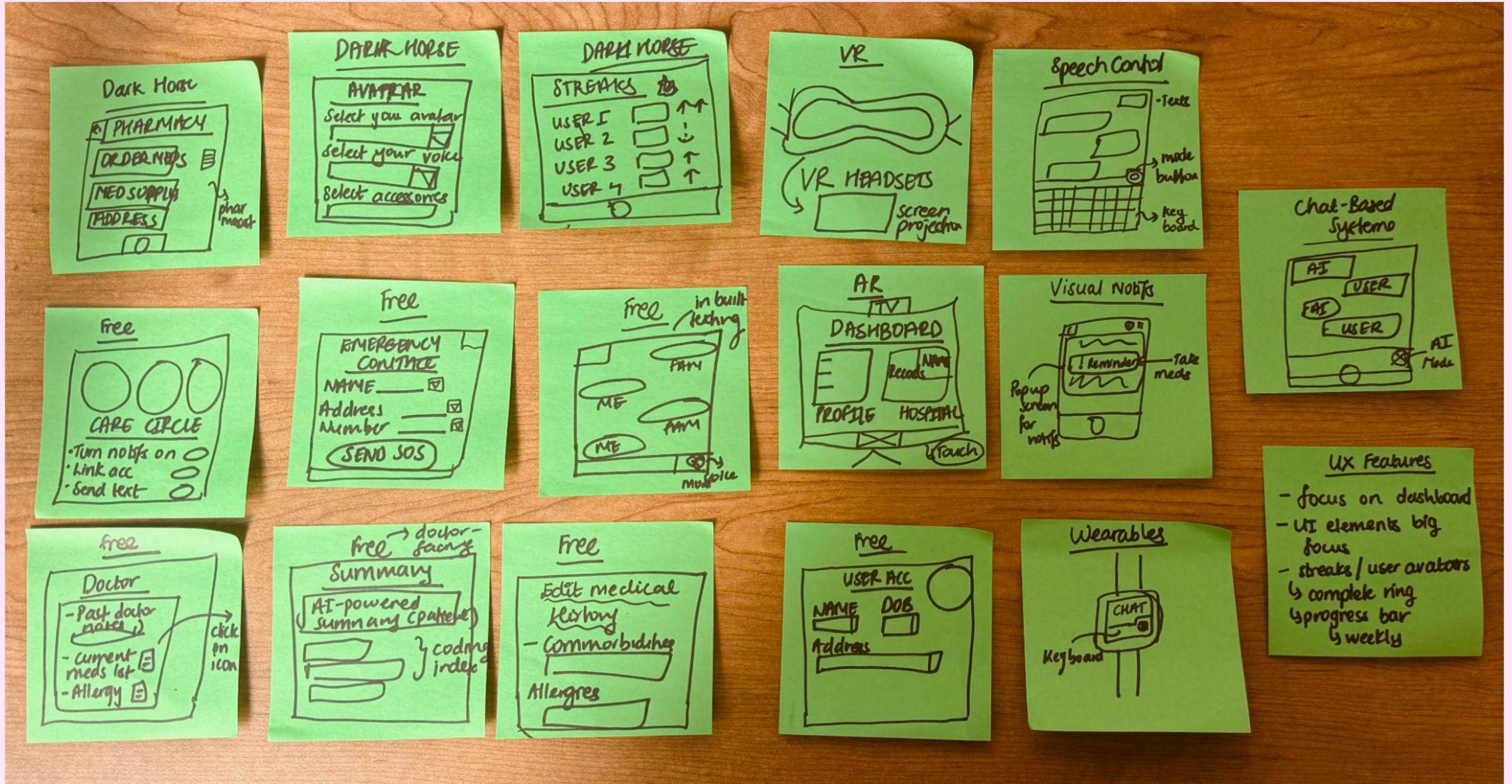
Many older adults struggle to consistently **remember their medication schedules,** resulting in missed doses



## Building Consistent Behavior

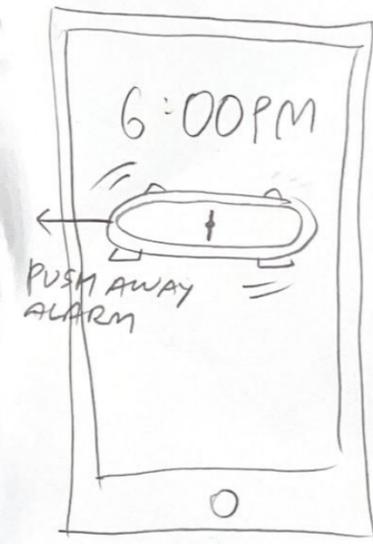
Features like lightweight reminders and Care Circle check-ins help our users **build a regular routine.**

# Solution Ideas

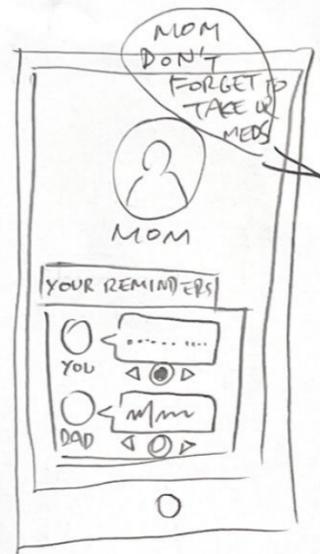


# Solution Ideas

## VISUAL NOTIFS



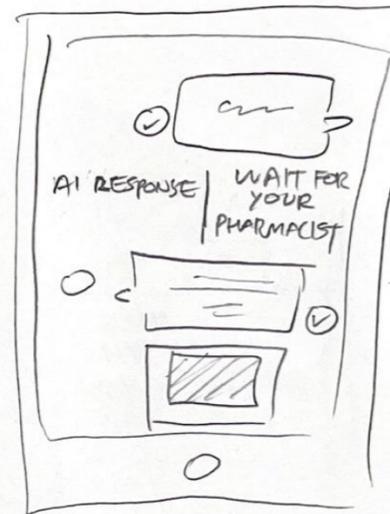
## SPEECH CONTROL



## WEARABLES



## CHAT BASED



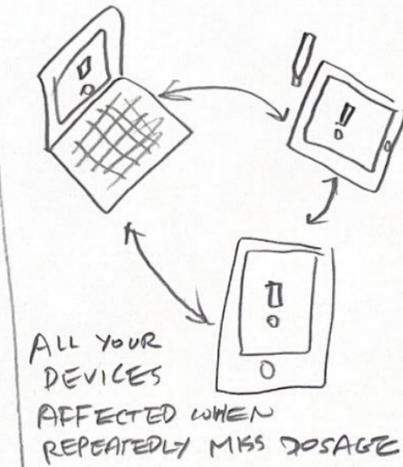
## AR



## VR



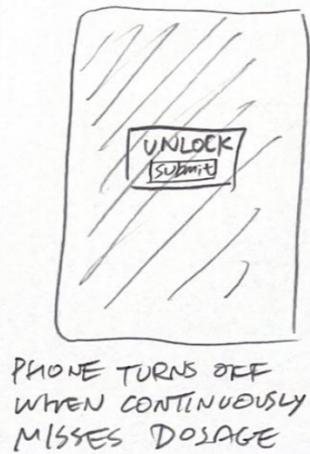
## DARK HORSE



## DARK HORSE



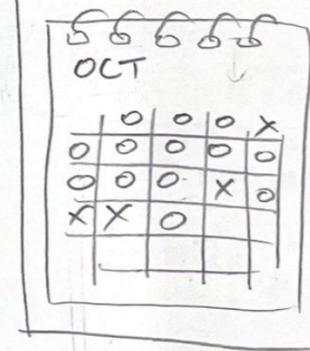
## DARK HORSE



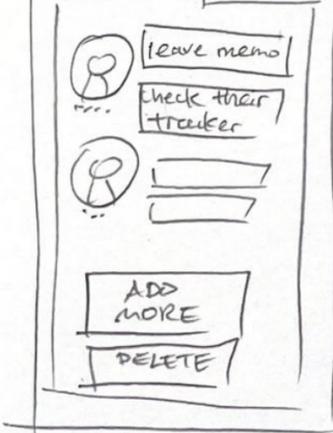
## MIN'S FAM



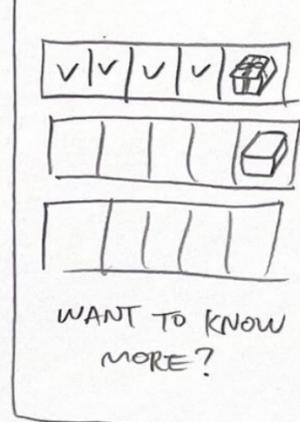
## YOUR TRACKER



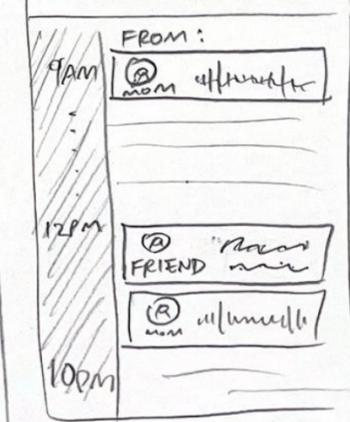
## YOUR CIRCLE



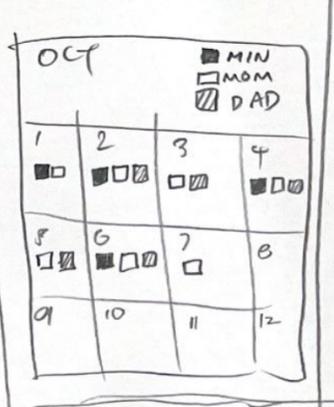
## STREAK STATUS



## UPCOMING REMINDERS



## CIRCLE CALENDAR



# Testing: Environment & Apparatus



**1**

- Participants given no instructions, except for printed test script
- Asked them to think aloud during the process & took notes

**2**

Test Script:

[https://docs.google.com/document/d/1n9ZASstZnnf\\_7h1939aRzUDTzysBTQqDsBNvooVoDRqE/edit?usp=sharing](https://docs.google.com/document/d/1n9ZASstZnnf_7h1939aRzUDTzysBTQqDsBNvooVoDRqE/edit?usp=sharing)

**3**

Post-Test Survey Form:

<https://forms.gle/dHGuN7BpnGRqdByr8>



# Insights

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Key takeaways from our low-fi testing sessions with two participants

“Understanding how users interpret the home screen clarified how we should center the logging flow as the app main action.”



# Testing Results

## Participant #1

- Found onboarding intuitive and said navigation felt “similar to Reddit.”
- Could easily switch between community tabs and join interest groups.
- Expected a back button on each tab and found returning to the home screen unintuitive.
- Unsure who authored posts in community circles : wanted more clarity on contributors.
- Found voice memo logging useful but was uncertain how to re-record or edit entries.
- Expected the app to automatically log medications after confirming reminders.

## Participant #2

- Understood onboarding steps quickly and recognized the community circle concept.
- Commented that **feed layout felt familiar**, like other social apps.
- Tried to tap icons expecting quick actions (e.g., “Remind me later”) and suggested clearer button labeling.  
Appreciated clean design but suggested adding brief **in-app hints** for first-time users.
- Expressed concern about privacy & anonymity within the Community Circle



# Testing Results – Other Observations

## 1 Home clarity matters most.

- Both testers emphasized that the home screen should focus entirely on medication logging to feel purposeful and easy to use

## 2 Paper prototype limitations

- Some hesitation came from the low-fi nature of the prototype – participants said they'd expect smoother transitions in digital version

## 3 Positive familiarity

- Users described the interaction patterns as “similar to health or period tracking apps,” validating our design direction for older adults

