POVs, HMWs, Experience Prototypes

Understanding Voice-First Daily Companion

Malisha Lutchmeea

Min Jung

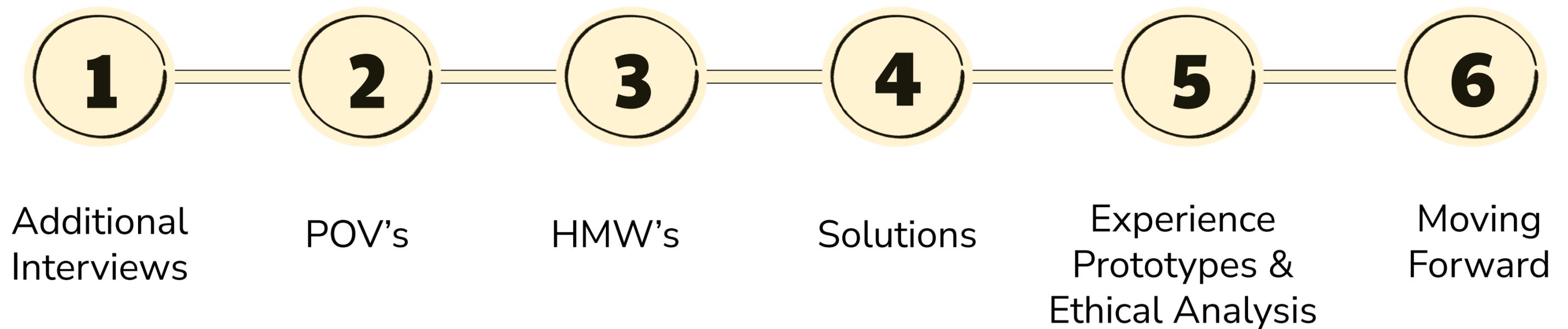# Introduction

Malisha L.
CS (AI & HCI)
Mauritius

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Additional Needfinding Interviews

Original Problem Domain

〰️ **Problem**

- 50% of Americans on prescription medications **don't take them correctly ->** 125,000 preventable deaths and over $100 billion in healthcare costs annually

〰️ **Why is this important ?**

- Patients face daily anxiety not knowing if they've already taken their medication, leading to **skipped doses or double-dosing**
- **Gap**: existing solutions like pill organizers and basic reminder apps don't address this confusion

〰️ **Proposed Solution**

- **Voice-enabled medication tracking companion** with proactive support
- Uses **conversational AI for quick queries**
- **Voice + visual notifications** guide patients through complex schedules

College student Hannah S.

- 20 years old
- Female
- Student leave on absence to **support her family financially**
- Works two **part-time jobs** every weekday

Red notes (row 1):

"So busy... can't even check the time, nor go to the bathroom, and got stress-induced gastritis [at work]"
minj050403@gmail.com

Her boss at the bar is "super sensitive" and gives her "so much stress over little stuff"
minj050403@gmail.com

She never forgets her dermatitis/atopy medication because if she doesn't it gives her immediate pain the day after (extreme dryness and itchiness)
minj050403@gmail.com

Takes her birth control pills every day at the same time, 4:50pm
minj050403@gmail.com

Links birth control pills to a separate, conscious action or event to prevent confusion
minj050403@gmail.com

"I do a memorable action before taking it... for example, applying hand cream after taking it"
minj050403@gmail.com

"Only when there's a slightly special or unplanned event, I forget to take pills"
minj050403@gmail.com

"As long as my personal information is safe, I'm okay with health tech"
minj050403@gmail.com

"Taking one birth control pill every day is okay because it's only one compared to multiple vitamins I want to take"
minj050403@gmail.com

Runs 5km once or twice a week (when not too busy with work)
minj050403@gmail.com

Green notes:

Reducing mental load for running the cafe in the morning would help managing her main stressor
minj050403@gmail.com

Physical tiredness after working all day is a major inhibitor of creating healthy habits (running, going to the gym, drinking lots of water)
minj050403@gmail.com

Her core identity as of now is being a responsible and capable caregiver
minj050403@gmail.com

Self-care routines should be essential daily rituals that one doesn't have to think about every day
minj050403@gmail.com

Anchoring the action of taking pills to a specific action or event prevents a lot of confusion
minj050403@gmail.com

Technology should empower those of who are minorities; voice AI assistants can be a solution for her non-tech-savvy mother's health questions/medication
minj050403@gmail.com

It's bad for her or too much to wish for education at the moment given her familial situation
minj050403@gmail.com

When her family is financially stable again she will go back to school and continue her studies on economics
minj050403@gmail.com

Her core routine is solid; but still needs to be receptive to unpredictability of life
minj050403@gmail.com

Expects digital companion or AI to be highly accurate most of the time
minj050403@gmail.com

Blue notes:

is on a leave of absence from her college in Korea, working two part-time jobs; in the morning through afternoon as a barista and evening through night at a bar as a bartendar
minj050403@gmail.com

Focuses on work-related inventory checks before the start of the cafe shift
minj050403@gmail.com

Applies her dermatitis cream every night after showering before going to bed on her legs, arms, and face
minj050403@gmail.com

Takes her birth control pills in between the transition period between her first and second job (4:30-5pm)
minj050403@gmail.com

Takes her birth control at a fixed time (9 PM) for hormonal regulation.
minj050403@gmail.com

First time she missed her birth control pill she immediately searched up online if it was okay that she missed it
minj050403@gmail.com

Manages her own schedule as well as her mother's diabetes & high blood pressure medication by sending her a text alert when she taks her own birth control pills
minj050403@gmail.com

Writes down the pill end date on a large monthly calendar to manage refill timing
minj050403@gmail.com

Misses taking her new vitamins because she's too tired after work to take the extra step of handling them.
minj050403@gmail.com

Uses the basic iPhone alarm app that goes off at 4:50pm for her birth control pills
minj050403@gmail.com

Tries to ingest new habits at night (vitamins after returning home)
minj050403@gmail.com

Yellow notes:

Overwhelmed and physically pained by her work schedule (gastritis and leg pain)
minj050403@gmail.com

Exhausted at times that she had to leave school to support her family, which seems like is something everyone else naturally gets to enjoy
minj050403@gmail.com

Hassled by the intensity of her work schedule and how its negatively affecting her physical health
minj050403@gmail.com

Responsible for her mother's chronic health diseases, especially after her father passed away
minj050403@gmail.com

Extremely anxious after missing the birth control pill for the first time
minj050403@gmail.com

Annoyed for having to manually keep track of recurring, low-level inventory, including her own pill stock as well as her cafe's ingredients
minj050403@gmail.com

Slightly disappointed in herself for forgetting new yet low-priority vitamins due to tiredness after work
minj050403@gmail.com

Necessary but repetitive tasks help her feel grounded and stable but also frustrating
minj050403@gmail.com

Happy for being able to provide her work money to support her family as well as some of her own money to her younger sisters
minj050403@gmail.com

Depressed thinking about her mother's health concerns as she thinks she might pass away so abruptly like her father did
minj050403@gmail.com

"So busy... can't even check the time, nor go to the bathroom, and got stress-induced gastritis [at work]"

She never forgets her dermatitis/atopy medication because if she doesn't it gives her immediate pain the day after (extreme dryness and itchiness)

Links birth control pills to a separate, conscious action or event to prevent confusion

"Only when there's a slightly special or unplanned event, I forget to take pills"

"Taking one birth control pill every day is okay because it's only one compared to multiple vitamins I want to take"

Reducing mental load for running the cafe in the morning would help managing her main stressor

Her core identity as of now is being a responsible and capable caregiver

Technology should empower those of who are minorities; voice AI assistants can be a solution for her non-tech-savvy mother's health questions/

It's bad for her or too much to wish for education at the moment given her familial situation

Her core routine is solid; but still needs to be receptive to unpredictability of life

Her boss at the bar is "super sensitive" and gives her "so much stress over little stuff"

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"I do a memorable action before taking it... for

Takes her birth control pills ev[...] day at the sa[me] time, 4:50pm

Physical tiredness after working all day is a major inhibitor

Self-care routines should be essential daily rituals that one doesn't have to [...] ev[...]

When her family [is] financially [st]able again she [wi]ll go back to [s]chool and [co]ntinue her [st]udies on [e]conomics

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She never forgets her dermatitis/atopy medication because if she doesn't it gives her immediate pain the day after (extreme dryness and itchiness)

Manages her own schedule as well as her mother's diabetes & high blood pressure medication by sending her a text alert when she taks her own birth control pills

Anchoring the action of taking pills to a specific action or event prevents a lot of confusion

Annoyed for having to manually keep track of recurring, low-level inventory, including her own pill stock as well as her cafe's ingredients

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Exhausted at times that she had to leave school to support her family, which seems like is something everyone else naturally gets to enjoy

Responsible for her mother's chronic health diseases, especially after her father passed away

[ma]nually keep track of recurring, low-level inventory, including her own pill stock as well as her cafe's ingredients

Necessary but repetitive tasks help her feel grounded and stable but also frustrating

Depressed thinking about her mother's health concerns as she thinks she might pass away so abruptly like her father did

Reflection

Key Insights

- It is **unpredictability** rather than business in her life that triggers missing dosage
- Her most reliable routine (skin medication) is driven by the **immediate, severe pain avoidance**
- She developed **personalized strategy** that is more reliable than digital reminder
- Because she already has a system, the immediate need is not for singular, complex pill **but for new, low-stakes vitamins**

Key Needs

- A system that...
  - target her **post-work fatigue** window to prompt her for new habits
  - has its strength in its quick access to professionally proven **medical knowledge**
  - allow the user to **link one reminder to another** person's reminder
  - **automates inventory tracking** for both work and personal items

Retired Doctor Geeta M.

- 80-year old
- Female
- Blind and lives in a retirement facility
- Former pediatrician who is tech-savvy

SAYS

She would find a tool that's capable of talking with her and providing instructions very helpful.

Malisha Devi Lutchmeea

"When I was a doctor, I kept track of hundreds of medications a day. Now I can't even confirm my own."

Malisha Devi Lutchmeea

She use a lot of tools such as Google Assistant, the Meta Ray-Ban, ChatGPT, and all her Apple products to talk to her.

Malisha Devi Lutchmeea

"I ask Siri what time it is, but it cannot tell me which medication I've already taken."

Malisha Devi Lutchmeea

"The reminders would be fine, but I want something that would also know me and not just what time my alarm should go off."

Malisha Devi Lutchmeea

She doesn't like bothering the caregivers for small things. She tries being independent for the most part but she would also prefer to have a system that reassures her she's doing the right thing.

Malisha Devi Lutchmeea

"Sometimes I forget if I actually took my medication, or if I just thought about it"

Malisha Devi Lutchmeea

"I recently started using the Meta Ray-Ban and it's very helpful to be know what's near me and using the voice commands to interact with my surroundings"

Malisha Devi Lutchmeea

She would appreciate a tool that would actually understand her routine

Malisha Devi Lutchmeea

Her daughter set up all her gadgets but she finds herself mainly using the ones that she can talk to & interact with easily

Malisha Devi Lutchmeea

THINKS

"I want to be able to manage my routine by myself without depending too much on others"

Malisha Devi Lutchmeea

She believes that technology should adapt to her limitations and all the tools she uses has been helping a lot.

Malisha Devi Lutchmeea

"My mind is still sharp. I just cannot see"

Malisha Devi Lutchmeea

She worries that one day she might forget important stuff if there's no one around to remind her of it.

Malisha Devi Lutchmeea

She mainly uses technology to stay connected to the world, read the news and stay in touch with her family.

Malisha Devi Lutchmeea

"If something could help me stay independent while keeping my daughter informed, that would be the perfect balance."

Malisha Devi Lutchmeea

She treats her technological devices as a companion.

Malisha Devi Lutchmeea

She wishes that some conversational tools understood varying tones so it would understand the difference between her thinking aloud vs actually asking a question

Malisha Devi Lutchmeea

She thinks that it would be helpful if she doesn't even have to ask for help in the first place.

Malisha Devi Lutchmeea

"It's not been too hard for me to pick up new skills even at this age. I do have people around to ask for help if I get confused or need any assistance for."

Malisha Devi Lutchmeea

DOES

She keeps her medications organized in a box but still double-checks by touch before taking them.

Malisha Devi Lutchmeea

She uses Siri and Alexa mainly for setting alarms, checking time, and calling family members.

Malisha Devi Lutchmeea

She records short audio notes to remind herself of what she has already taken that day.

Malisha Devi Lutchmeea

She's been using her Meta Ray-Ban to describe her surroundings and identify her medications by color or shape.

Malisha Devi Lutchmeea

She is pretty active online and chats frequently in her group chats using the speech-to-text feature.

Malisha Devi Lutchmeea

She prefers to talk to Siri to confirm reminders instead of opening any visual apps but it doesn't always work.

Malisha Devi Lutchmeea

She has been building routines around some predictable cues (like medicines after meals or before bedtime) so she can rely less on alarms and more on habit memory.

Malisha Devi Lutchmeea

She likes using the recording feature on her phone to track important details she might otherwise forget.

Malisha Devi Lutchmeea

She often asks her daughter to review her reminder setup once a week to make sure everything is still synced correctly.

Malisha Devi Lutchmeea

She occasionally skips a reminder when she's tired or distracted but immediately feels anxious and checks with her caregiver afterward.

Malisha Devi Lutchmeea

FEELS

She feels proud when she's able to manage her medications without asking for help and it helps her feel more independent.

Malisha Devi Lutchmeea

She often feels frustrated when voice assistants misunderstand her or fail to respond clearly.

Malisha Devi Lutchmeea

She feels comforted when technology talks back gently or uses a friendly tone.

Malisha Devi Lutchmeea

She sometimes feels embarrassed asking caregivers for help with simple tech issues she used to handle on her own before.

Malisha Devi Lutchmeea

She compared the usage of voice-based tools to the way she would guide her young patients through different routines.

Malisha Devi Lutchmeea

She tends to feel anxious when she can't remember if she's taken her medicine and no system can confirm it for her.

Malisha Devi Lutchmeea

She feels grateful for her daughter's support but wishes she didn't have to rely on her so frequently.

Malisha Devi Lutchmeea

She feels more connected and emotionally stable when she can use technology to talk to her family or hear their voices.

Malisha Devi Lutchmeea

She feels isolated when she is not able to use her devices when they stop working or run into issues

Malisha Devi Lutchmeea

She's hopeful that as technology continues to improve, the voice-based tools she uses will better understand her tone and habits

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She would find a tool that's capable of talking with her and providing instructions very helpful.

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Malisha Devi Lutchmeea

Reflection

Key Insights

- **Independence** drives her behavior; she hopes to avoid burdening others
- She has built **a multi-device audio ecosystem** (Siri, Alexa, Meta Ray-Ban, ChatGPT) to support her daily routine
- Her core challenge is **not remembering to take her medications but confirming that she actually did,** without any external reassurance

Key Needs

- A system that...
  - targets her moments of uncertainty by offering **calm, conversational confirmation** when she's unsure.
  - allows her to **check her medication status** through a **human-like voice exchange rather** than visual confirmation.
  - strengthens her confidence and **sense of independence** without depending on caregivers

2

POV's

POV #1: Hannah

We met..

Hannah, a 20-year-old student currently **on leave** and working two emotionally and physically demanding jobs back-to-back, struggling to maintain her medication & physical wellbeing while managing her **mother's chronic illness** medication schedule

We were surprised to notice...

she is less worried about forgetting her critical, time-sensitive medication as she uses a highly reliable **behavioral anchor**, but she frequently forgets her new, lower-priority nutritional supplements simply because she is **too exhausted after work**.

We wonder if this means..

she **cannot integrate new habits** unless they are tied to an immediate, high-stakes consequence or already embedded in her pre-existing routine

It would be game-changing..

to make integrating new healthy habits easier during her post-work exhaustion period without overwhelming her

POV #2: Geeta

We met...

Geeta, an 80-year-old retired pediatrician, living in a Virginia **retirement facility** who **lost her eyesight** five years ago. Despite her visual impairment, she manages her routine using a **mix of voice assistants and tactile cues.**

We were surprise to notice...

that her biggest challenge is not remembering to take her medication but **trusting that she already has,** a doubt that causes ongoing anxiety.

We wonder if this means...

that **independence,** rather than convenience, motivates her behavior. Existing technology **lacks the empathetic feedback and memory confirmation** she seeks in her daily routine

It would be game-changing if ...

she had access to a **conversational system** that would **confirm her medication status** through natural dialogue, offering reliability.

POV #3: Linda

We met..

Linda, 42-year old pharmacist at Vaden Health Center, who **dispenses about 50-80 prescriptions daily** and provide **brief medication counseling** at the pick-up counter that typically lasts 2-3 mins.

We were surprised to realize...

she clearly sees on some patients' faces that they have **"tuned out"** as she starts explaining how to take medications, confirming that the rush at the pickup counter creates an **unavoidable mental barrier** to learning crucial adherence habits.

We wonder if this means...

she believes that the fundamental problem isn't the quality of her advice, but the **timing and delivery** as patients are mentally maxed out at the moment of pickup and feels rushed.

It would be game-changing...

if she could provide **personalized support** to every patient without requiring any more of her physical time while **meeting her dispensing demands.**

3

HMW's

HMW #1: Hannah

HMW make Hannah's home environment feel more recharging? Maybe make it to automatically handles her routines?

minj050403@gmail.com

HMW use her rigid schedule of two jobs as a template to automatically plan and execute her routines?

minj050403@gmail.com

HMW ensure skipping her new vitamins is as immediately noticeable as the pain of skipping her skin cream?

minj050403@gmail.com

HMW allow her to manage cafe inventory checklist while she's still on her way to work?

minj050403@gmail.com

HMW provide her with instant reminder or reassurance the moment she realizes she missed a dose?

minj050403@gmail.com

HMW make her 4:50 PM transition time feel like a productive "health pit stop" instead of a hectic rush?

minj050403@gmail.com

HMW make unpredictability of her life feel like an adventure rather than a disruption to her routine?

minj050403@gmail.com

HMW make the act of taking a new vitamin so effortless and dopamine-inducing that she can do it while exhausted?

minj050403@gmail.com

HMW make skipping a pose feel more difficult than taking it?

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HMW allow Hannah to manage her mother's meds so it happens without her needing to touch a phone?

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HMW #2: Geeta

HMW help Geeta confirm whether she has taken her medication without needing visual confirmation?

Malisha Devi Lutchmeea

HMW create a sense of trust in voice-based systems so she feels confident relying on them for health tasks?

Malisha Devi Lutchmeea

HMW allow Geeta to manage complex medication schedules using natural dialogue instead of manual tracking?

Malisha Devi Lutchmeea

HMW transform routine medication check-ins into supportive, human-like conversations that ease anxiety?

Malisha Devi Lutchmeea

HMW reassure her through proactive feedback when the system detects missed or duplicate medication doses?

Malisha Devi Lutchmeea

HMW design a conversational companion that offers reassurance and guidance when she feels uncertain about her routine?

Malisha Devi Lutchmeea

HMW reduce her dependence on family or caregiver support ?

Malisha Devi Lutchmeea

HMW make voice interactions more adaptive to her daily patterns and emotional state?

Malisha Devi Lutchmeea

HMW use familiar voice interfaces to bridge her existing ecosystem (Siri, Alexa, ChatGPT, Ray-Ban) into a single reliable experience?

Malisha Devi Lutchmeea

HMW design technology that helps her feel in control, rather than dependent on reminders or family validation?

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HMW #3: Linda

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minj050403@gmail.com

HMW let pharmacists to have more time at the pick-up counter

minj050403@gmail.com

HMW make patients learning about medication consumption less stressful and more motivating

minj050403@gmail.com

HMW give Linda data of all her patients' adherence data that she can review in less than 15 minutes at the end of the day?

minj050403@gmail.com

HMW make pick-up counter a relaxing place for both pharmacists and patients

minj050403@gmail.com

HMW leverage the patient's downtime at home or during their commute to gradually dispense Linda's essential information?

minj050403@gmail.com

HMW warn patients the side-effects of incorrect medication adherence

minj050403@gmail.com

HMW make pharmacists to assist patients in long-term medication support

minj050403@gmail.com

HMW make skipping a pose feel more difficult than taking it?

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HMW allow Linda to set up long-term support while the patient is simply signing a receipt (or in any short-term period)?

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HMW allow Linda to set up long-term support while the patient is simply signing a receipt (or in any short-term period)?

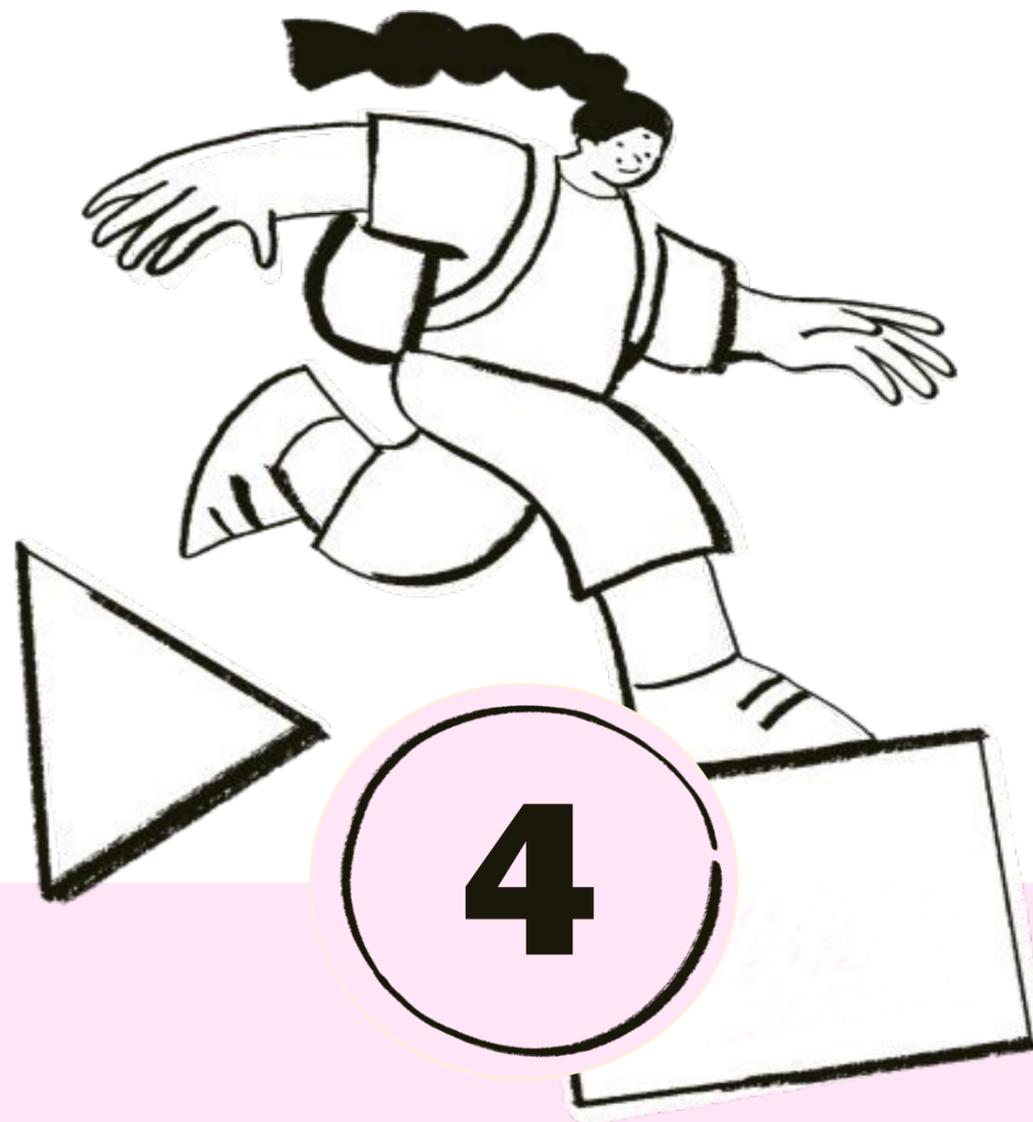minj050403@gmail.com

Final HMWs

1

HMW make the act of taking a new vitamin so effortless and dopamine-inducing that she can do it while being physically exhausted?

2

HMW allow managing medications using conversations instead of manual tracking?

3

HMW make pharmacists to assist patients in long-term medication support

4

Solutions

#1: HMW make the act of taking a new vitamin so effortless and dopamine-inducing that she can do it while being physically exhausted?

A voice AI that verifies user's location when they walk in and reads out their post-work checklist

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An app that allows users to link vitamin reminder feature to an existing, non-health app like the reminder won't clear until user's phone detects they opened a streaming app or diary app

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A game-like interface and features (reward system, animation, customizing personal account) to make users "addicted" to taking pills

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After the person takes their vitamin, the AI says something encouraging like, "Nice work!", using different tones or sounds making the process rewarding

malisha

After confirming intake from the user, the AI provides quick, personalized feedback ("That's three days in a row! ")

malisha

The AI transforms each vitamin moment into a mindful pause, guiding her to take a deep breath or share one good thing about her day before confirming intake.

malisha

A simple floating button on phone's screen that users can log their dosage/vitamin intake with a single tap → then shows a quick checkmark-ish animation

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An app that generates a color-coded diagram that helps sorting out new medications/vitamins every week

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An app that links her mother's daily text reminder to her own pill reminder; she must confirm her vitamin intake first to unlock the "Send Mom's Reminder" button

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The app turns each vitamin check-in into part of a gentle story, where a digital plant grows a little each day she logs her progress.

malisha

The AI turns each vitamin reminder into a brief "wellness check-in," asking how she feels and responding with a short reflection.

malisha

#2: HMW allow an elderly to manage complex medication schedules using natural dialogue instead of manual tracking?

A voice AI that allows Geeta to say like "hey, I'm out of my blue pill" then automatically checks the remaining pills and schedules a refill reminder or places the order online

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A system that checks if a food she's having can be eaten with her active medications list and alerts immediately if it shouldn't be

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A game-like interface and features (reward system, animation, customizing personal account) to make users "addicted" to taking pills

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The app engages Geeta in short daily conversations where it gently confirms her medication status while offering friendly reassurance if she feels unsure.

malisha

The AI remembers past interactions and uses them to anticipate her needs, saying things like "It's around your usual time for the pink tablet, would you like me to check?"

malisha

The app listens to how she speaks and starts using the same words and tone in its reminders so it is more familiar for an elderly person.

malisha

A feature that tags her key symptoms, time, and context for review by her doctor when she tells it her health condition

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A system that allows inventory check if verbally asked by Geeta

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A conversational log automatically summarizes her daily medication confirmations into a simple audio report that she can share with her doctor or caregiver.

malisha

The app's voice companion offers gentle positive feedback after each confirmation, helping her feel in control of her routine.

malisha

#3: HMW make pharmacists to assist patients in long-term medication support

A system that auto-generates personalized follow-up messages using templates

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An voice AI that guides the patient through immediate, pharmacist-approved steps when a dose is missed. Those steps can be pre-loaded advice from their pharmacist

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A system that detects adherence patterns and automatically sends a text message

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A dashboard that predicts which patients are most at risk of missing medications and prompts pharmacists to reach out.

malisha

A voice companion that lets pharmacists record short, personalized reminders which play on the patient's app or phone screen at the scheduled medicine time

malisha

A system that converts patient conversations into brief summaries that help pharmacists quickly understand concerns and adjust care accordingly.

malisha

A digital dashboard for Linda that provides an adherence score for her high-risk patients

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A system that allows pharmacists to tag prescriptions as short voice clips or text bubbles on side-effect warning or a refill reminder on the patient's app

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A system that spots recurring patient struggles in chat transcripts and drafts personalized guidance for each situation.

malisha

A conversational tool that provides real-time answers to medication questions and notifies the pharmacist when personalized guidance or follow-up is required.

malisha

Final Solutions

1

A game-like interface and features (reward system, animation, customizing personal account) to make users "addicted" to taking pills

2

An app engages Geeta in short daily conversations where it gently confirms her medication status while offering friendly reassurance if she feels unsure.

3

A feature on the patient's app that allows pharmacists to tag prescriptions as short voice clips or text bubbles on side-effect warning or a refill reminder

5

Experience Prototypes

Solution #1 Experience Prototype

Key Assumption

Solution #1: game-like interface to make users "addicted" to taking pills

We assume that **users are motivated by immediate, digital reward to initiate a low-priority physical task**

Test Description & Setup

- We asked the user to pretend like they had a long, **exhausting workday**.
- We acted as the **voice AI assistant** and delivered personalized prompts to the user to take the pill and **earn "points."**
  - Upon successful intake, the user is immediately given a paper "self-care points" in their "reward basket," which **allows them to customize their character.**
- At the end, we discussed whether the promise of earning these points was **compelling enough** to overcome their fatigue and initiate new habit.

Testing Insights

Participant Info

- Samantha K.
- student who takes vitamins & medications
- this would "reduce mental burden and taking pills almost recreational/motivating"

What worked

- The immediate transfer of "points" created a **sense of accomplishment** validating our assumption that the user was motivated to complete her task.

What didn't work

- Showed more curiosity about **the streak status** than the points total
- Abstract rewards "points" **deemed irrelevant in the moment of exhaustion;** "I just want the reminder to stop so I can rest."
- "How do you confirm the user took the pills for sure?"

Learning & Going Forward

- Feature a massive, persistent **visual streak tracker**
- Prioritize rewarding the user with **rest and silence**
- Need a way we can **verify** the user's intake of pills

Ethical Considerations

Any communities designed for?

- Younger, digitally savvy users who are motivated by streaks and aesthetics.
- Users seeking to establish non-critical wellness habits

Any communities left out or inaccessible to?

- Older adults or those with low digital literacy who may not be motivated by gamified reward systems

Additional Ethical Implications

- Risk of prioritizing the game over health, which could lead to ignoring physical symptoms or side effects

Solution #2 Experience Prototype

Key Assumptions

Solution #2: Short, daily conversations confirming medication status through friendly dialogue

We assume that short check-ins will **increase** her **consistency and comfort in managing her medication independently.**

Test Description & Setup

- We simulated the AI assistant using ChatGPT's conversational mode to generate dialogue for a **2-minute daily medication check-in** conducted over **Zoom**.
- The facilitator mirrored how **an AI companion would personalize its interactions**.
  (e.g., "Good morning! Did you remember taking your 9am pill?")
- The test explored how **tone, phrasing, and timing** shaped her comfort and confidence in managing her medication schedule.

Testing Insights

Participant Info

- Geeta M.
- 80-year-old blind retiree
  Relies on **voice assistants** and **smart glasses**

> 🔊 **Hi Geeta,**
> you've already taken your 2 PM medication — great job!

What worked

- **Conversational tone** and consistent auditory cues helped Geeta feel **supported in managing her routine independently.**

What didn't work

- Repetitive reminders and fixed timing made the interaction feel **robotic**.
- She wanted the system to sound more intuitive and **recognize when she'd already completed a task.**
- The **lack of natural pauses** or small talk decreased her sense of connection.

Learning & Going Forward

- AI tool that has :
  - **Context-aware intelligence** : Remember completed tasks and no redundant questions
  - **Human-like interaction** : Match her tone, celebrate wins, and include natural conversational pauses

Ethical Considerations

Any communities designed for?

- **Older adults comfortable with voice assistants** who prefer conversational reminders over alarms
- **Independent seniors** managing medications who value autonomy

Any communities left out or inaccessible to?

- **Hearing-impaired users**
- **Those with critical medications** requiring strict medical monitoring, not AI check-ins

Additional Ethical Implications

- Users must trust the AI with sensitive health information, requiring HIPAA-level security standards

Solution #3 Experience Prototype

Key Assumptions

Solution #3: Pharmacists add **personalized voice messages or text notes** to prescription labels that patients can access via their phone

We assume that voice messages would **increase trust & understanding** compared to printed labels

Test Description & Setup

- Two prescription bottles : one with a **QR code linking to pharmacist voice message** v/s one with **printed label only**
- Had participants use both versions, tell us which felt **more helpful and trustworthy**, and which one they would **integrate in their routine**
- We tested if **voice guidance improves understanding** compared to printed labels, and if **QR scanning is practical and accessible** for daily use

Testing Insights

Participant Info ✓

- Linda
- 42-year old **pharmacist** at Vaden Health Center
- Manages patients' prescriptions
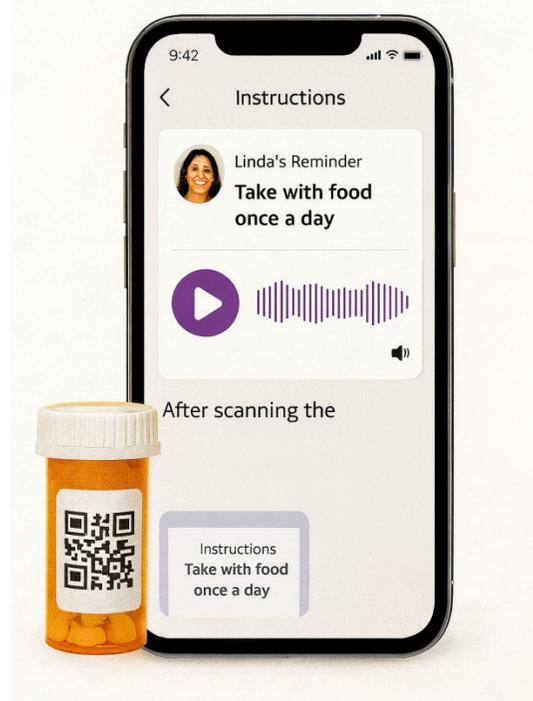
What worked

- **Voice notes can solve a problem she sees daily**
- ➤ Patients misunderstand printed labels and she spends significant time on follow-up calls for clarification

What didn't work

- **Scanning QR codes felt clunky** when handling multiple bottles: "Why would I need my phone just to know how to take my meds?"
- Can be inaccessible for patients with **no easy access to a device** that can scan the QR code (ex. phone with no battery)

Learning & Going Forward

- **Design for flexibility and accessibility** ensuring the tool works even without internet connection
- **Enable quick, voice-based interactions** that fit into pharmacists' routines without breaking their workflow.

Ethical Considerations

Any communities designed for?

- **Tech-capable patients** who own smartphones
- Patients who frequent a regular pharmacy and would prefer **personalized guidance from their pharmacist**

Any communities left out or inaccessible to?

- Patients **without smartphones or reliable internet connection** who cannot access QR code content
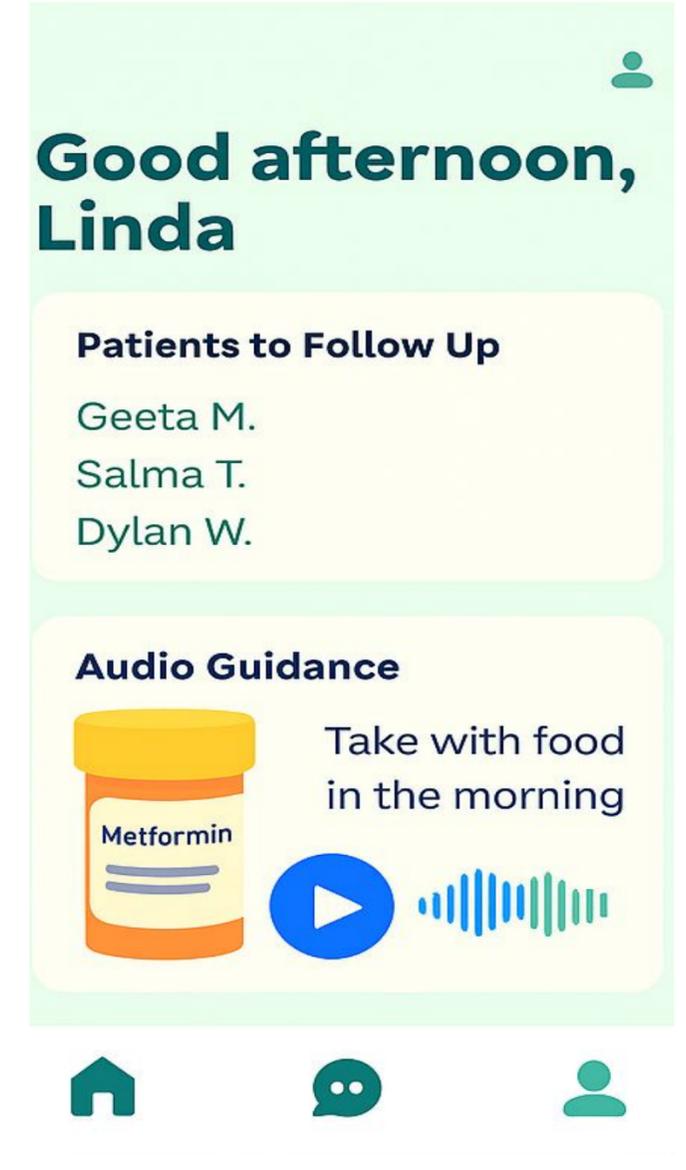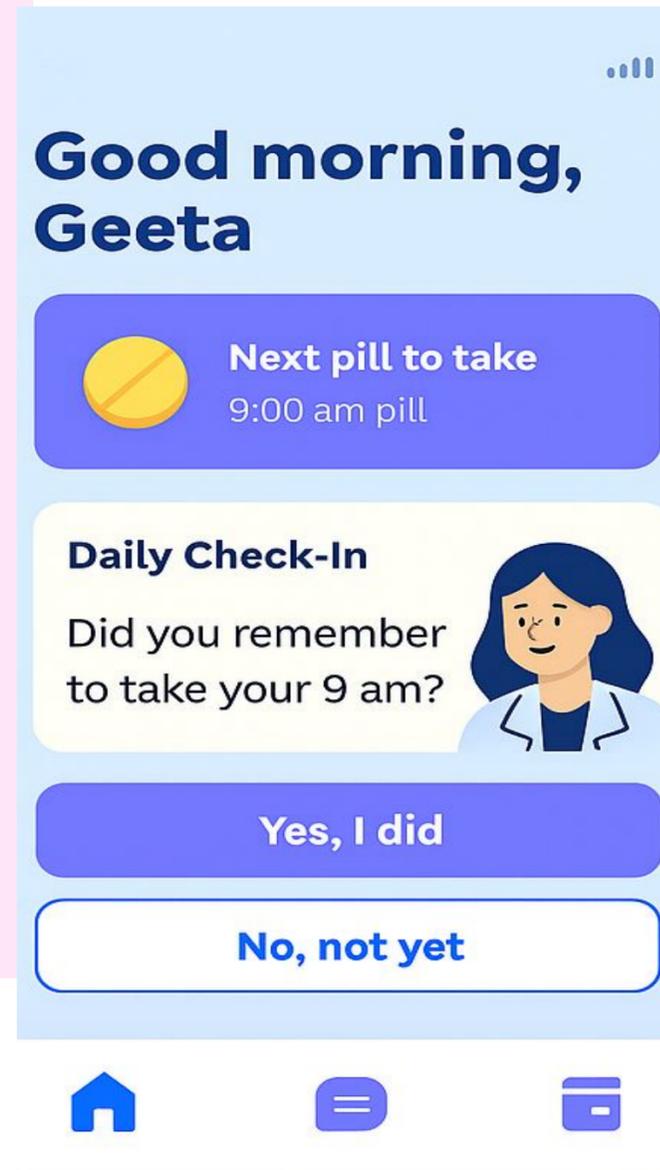
Additional Ethical Implications

- Recording **personalized messages** for every patient may be **unsustainable without significant time and compensation**

Moving Forward

Building upon insights from the three prototypes, we want to create **a voice AI assisted companion** that...

- **converts tasks** into effortless, rewarding voice interactions
- prioritizes supporting exhausted users with **rest and visual feedback**
- integrates pharmacists' **counseling and adherence data** for seamless long-term care.

Thank you for listening!