

A2: POV, HMW, EP's

Studio 1, Team Candy Crush

Lianne C, Ethan B, Em H, Clare C



Team Members



Ethan B

Class of 2025
Major in Computer Science and
Digital Health

Lianne C

Class of 2026
Major in Computer Science

Em H

Class of 2025
Major in Computer Science



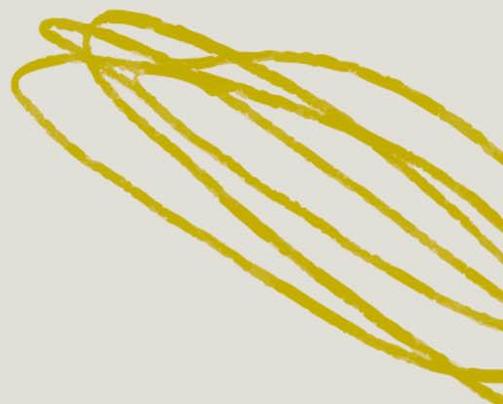
Clare C

Class of 2024
Major in SymSys
Coterm in CS



Dementia Prevention





Interviews

Participants

Sean

Late 80-year old grandpa
in SF

Ellie

22-year old new college
grad

Note: all names have been changed to protect interviewee privacy



Quotes

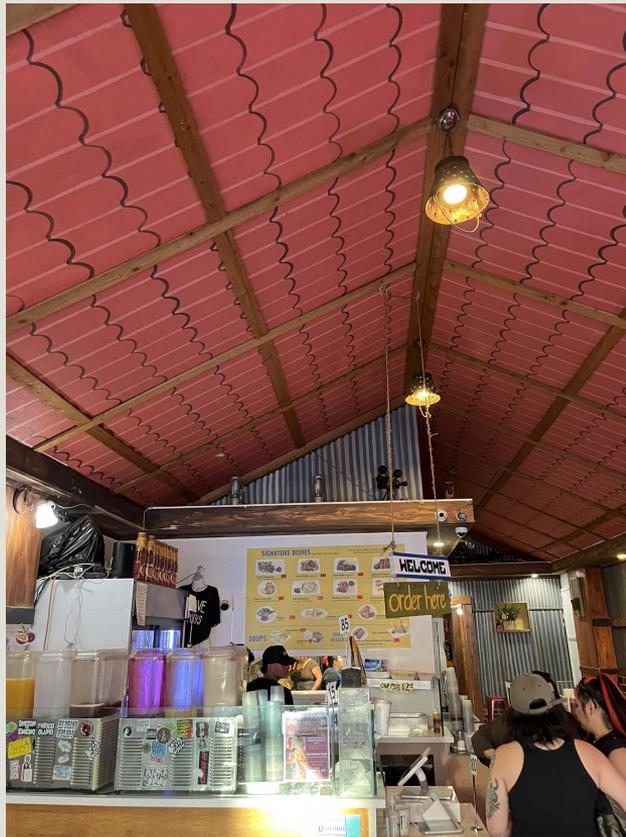
“I had to sit out in the living room 24/7 to **make sure she wouldn't escape** through the back door”
- Ellie

“It was like **dealing with a child** in the body of an 80 year old”
- Ellie

“It was always arguments because she denied what she did. **Her reality wasn't aligned with the truth**”
- Sean

“**All her things would disappear all the time.** Except for the things in her purse, those were always together”
- Sean





Empathy Map

1. Experience with grandmother was incredibly frustrating
2. Parents dealt with some of it but largely she bore the brunt of care and keeping an eye on her grandma
3. Grandma would take any chance possible to escape as she felt very urgently that she had to go retrieve money from the bank
4. Grandma would ignore any notes that tried to explain what she'd previously tried to do/why she should not leave the house
5. Grandma had the cognitive ability to try and sneak out, either quietly through the front door or from the side door in the backyard
6. It was like dealing with a young child/teenager who wouldn't listen/almost wanted to disobey but needed to balance with respect towards elders and their stubbornness
7. Caretaking was a more than one person job and required also cultural literacy around parent-child vs. parent-in-law dynamics
8. She would have to sit out in the living room to do her work so that her grandmother would not escape
9. Her experience towards the end with her grandmother kind of overwrote prior memories and experiences with her grandmother - worst parts of her personality became amplified in a childlike manner
10. Caretaking was incredibly frustrating and stressful and 24/7, was glad her grandmother could be in the care of another relative's family

SAYS

Observations: What did this person SAY that surprised you?

1. Her grandmother's transfer to another family was a very positive development for her
2. Interacting with someone suffering dementia was a burden and affected their daily life greatly
3. Thinks that while this was a family obligation/responsibility, it should not have fallen all on her (for reasons regarding age)
4. The primary caretaker role fell on her largely due to circumstances that were unavoidable
5. Thinks of her grandmother as regressing to a childlike figure but with incredible headstrong tendencies
6. Does not think her mother is necessarily at fault but rather that her father should have been at home more often to handle the situation with his mother
7. Believes that her quality of life was drastically affected by her grandmother's dementia, especially given their normal relationship for many years living together prior
8. Views the situation as one where you just had to push through indefinitely, rather than one where you could seek aid
9. Culturally sees it as an internal family matter/issue
10. Knows that she may have to go through the caretaking process again with her parents

THINKS

Inferences: Based on what they SAY and DO, what might they be THINKING?

Ellie, 22 year old new college grad

DOES

Observations: What did this person DO that surprised you?

1. She held no guilt and was very open about treating her grandmother almost like a misbehaving child
2. Spoke with relatively little empathy around how her grandmother felt and rather prioritized how the grandmother was acting in very unsafe manners
3. Became very agitated when recounting her experiences
4. Would occasionally swear when talking about especially alarming memories
5. Largely blamed her father and circumstances for her difficult experiences
6. Did not reminisce or hold in high regard the experiences she had with her grandmother pre-dementia as they had been largely overshadowed by her caretaking experience
7. Relied largely on doctor and family advice as opposed to internet advice
8. Has no desire to see her grandmother/interact with her grandmother until likely her passing
9. Lived with grandmother for many years prior to her grandmother staying with a different relative
10. Did not speak much about her older brother/expectations for her older brother in the caretaking role, even after he moved home during that period

OUR USER

Describe your user here.



FEELS

Inferences: Based on what they SAY and DO, what might they be FEELING?

1. Feels that the dementia condition is incredibly burdensome - she would rather not live to that age than be a burden like that to her family.
2. Feels vague guilt around being happy that her grandmother is in another relative's care but more than that, she is relieved as she was heading off to college
3. Not particularly remorseful around reprimanding or treating her grandmother harshly/arguing with her grandmother
4. Feels justified in implementing strict measures for her grandmother to not leave the house unaccompanied
5. A little sad about how little agency her grandmother had in her life after getting dementia
6. Incredibly stressed about having to go through the same process potentially with her parents
7. Some anticipatory grief around her grandmother's future passing, but resolved by how difficult the caretaking process was
8. Annoyed that the caretaking process took such a large toll on her life
9. Sad about the deterioration of her grandma, especially given that they lived together for many years prior
10. Frustrated with her father for not stepping up to talk to his mother about her behavior

OBSERVATIONS | INFERENCE

Takeaways

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Dementia overshadows all other family memories

Family tensions due to keeping grandmom her at home

A cycle: her parents are next

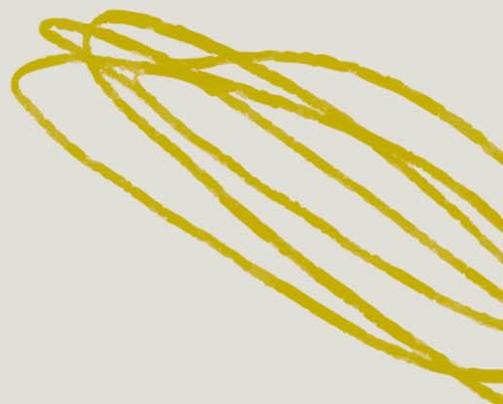
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OBSERVATIONS | INFERENCE



POV & HMW



POV 1: Ellie

POV 1:

We met... a young 22 year old who took care of her grandmother with dementia throughout her teenage years.

We were surprised to notice... **she felt that her relationship** with her grandmother and also her parents **became extremely damaged** especially because of her parents' refusal to send the grandmother to a care home despite having the financial resources and ability to do so.

We wonder if this means... she experienced a **large cultural split** around filial piety/duty regarding the general upkeep of traditional cultural family practices outside of the environment of the homeland which was especially burdensome.

It would be game changing to... **have a resource to consult for advice** in balancing cultural expectations of elder care and her own capacity/environmental resources.



HMW 1: Ellie

How might we...

1. **HMW create positive experiences between caretaker and patient?**
2. HMW change traditional values to be accepting of healthcare institutions?
3. HMW reframe caretaking so that the learning curve is exciting?
4. HMW bring in and instruct willing family friends and community members on joining?
5. **HMW create a culturally grounding experience instead of a culturally alienating one?**
6. HMW make dementia care management energizing instead of draining?
7. **HMW develop ties to cultural communities for counseling and culturally-appropriate material support?**
8. HMW make home a place they want to go to instead of escaping from?
9. HMW acclimate seniors to relying on external memory (family members) and not their own memory?
10. HMW strengthen rather than weaken familial relationships between family members and members with dementia?

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POV 2: Sean

POV 2:

We met... an elderly Chinese man in his 80's who managed his wife's dementia as her primary caretaker before she passed away.

We were surprised... to notice that despite the clear love and dedication he held for her, there were severe arguments between them due to her loss of autonomy.

We wonder if this means... he was constantly exhausted and at his capacity limit because of the stress of caring for her.

It would be game changing if... he could have a sustainable way of caring for his wife that sufficiently manages her dementia while preserving a sense of independence.



HMW 2: Sean

How might we...

1. HMW make patients feel independent and autonomous?
2. **HMW pre-empt arguments / conflicts between the spouse and the patient?**
3. HMW take care of patients at home without stressing the spouse?
4. HMW lower the likelihood of developing dementia?
5. HMW get spouses to want to utilize care facilities?
6. HMW make dementia management a new bonding experience between the spouse and the patient?
7. HMW leverage the local community to assist with care?
8. HMW make care fun and enjoyable for the patient?
9. **HMW make at-home care the ideal solution instead of care homes?**
10. HMW make recurring conversations less frustrating for the spouse?
11. HMW engage patients / make their day-to-day enriching? HMW give spouses time to themselves?

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POV 3: Ivy

POV3:

We met Ivy, a physically and mentally healthy 85-year-old German woman who prides herself on her independence and structured lifestyle.

We were surprised to notice she highly relies on community resources, especially the senior center, to both provide her with a place to socialize and inform her daily routine.

We wonder if this means she is **afraid** of being lonely and what would happen to her mental health and lifestyle if she wasn't able to interact with others.

It would be game changing if she were able to access a social network comparable to the senior center from any location at any time.



HMW 3: Ivy

How might we...

1. HMW maintain routine and scheduling for older adults?
2. HMW leverage caretakers to improve the social life of seniors?
3. **HMW encourage seniors to socialize and make friends?**
4. HMW make seniors feel less lonely?
5. HMW create larger networks of caretaking that seniors can easily join?
6. **HMW change seniors' mindset on health issues?**
7. **HMW allow seniors to share their stories and talk with the public?**
8. HMW make day-to-day routine a practice of rote memorization?
9. HMW make senior centers more accessible to less independent seniors?
10. HMW make organizing senior socialization feel easy?
11. HMW encourage grandchildren to interact with their older family members more?

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HMW develop ties to cultural communities for counseling and culturally-appropriate material support?

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HMW pre-empt arguments and conflicts between spouse & patient?

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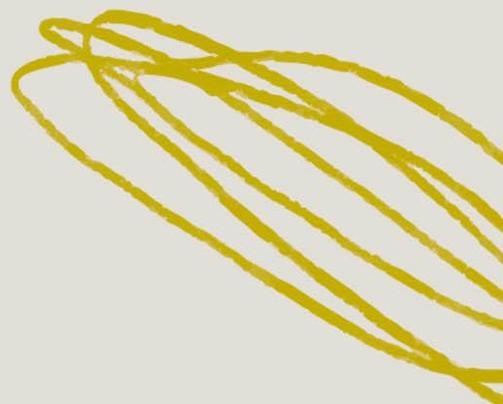
Solutions

Top 3 Solutions

1. **A pen pal app** to connect groups of culturally-aligned seniors (also app can scan written letters, AI fills in the typed transcript to send, provide audio support to read aloud etc)
2. **Chatbot** that pretends to be an expert in whatever domain the argument is in (i.e. patient wants to go to the bank to withdraw money, caretaker gets chatbot pretends to be a bank employee that is “sending them cash”)
3. **Teaching app** to show spouses how their relationship may change and how to manage their spouses dementia

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Experience Protoypes

Top 3 Solutions

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Assumptions

1. Seniors are afraid of loneliness and want to connect with peers of their own culture.
2. Dementia patients want to complete tasks that require leaving the house, which places stress on caretakers (notably loved ones or family members), so if the task were to be completed remotely, they would not feel the need to leave.
3. Seniors don't know how to interact with someone who has dementia, even if they are family



Prototypes



PEN PAL PROFILE

MARIA DELGADO

BIRTHDAY: MARCH 15, 1952

AGE: 72

MY FAVORITES
Favorite Hobbies: Gardening, playing classical guitar, painting traditional Spanish tiles. Favorite Food: Paella, churros with chocolate, and gazpacho. Other Interests: Loves Spanish cinema and follows the works of Pedro Almodóvar. Enjoys cooking traditional dishes for her grandchildren.

FUN FACT ABOUT ME
Maria was once a flamenco dancer and still practices at home for fun.

CULTURAL BACKGROUND
Spanish, born in Seville, Spain. Immigrated to the U.S. in the 1980s.

LANGUAGE
Spanish (primary), English (secondary)

Hello, how may I help you today? 10:43 AM ✓

I would like to withdraw money from my account 10:43 AM

Great! We are connecting your account now 10:45 AM ✓

What is your full name? 10:45 AM ✓

K k Lee 10:45 AM

Thank you! How much would you like to withdraw from your account? 10:46 AM ✓

\$200 10:46 AM

Processing your withdrawal now, please wait a moment 10:46 AM ✓

Great thank you 10:47 AM

Withdrawal complete! You will receive the money in an hour 10:48 AM ✓

Ok thank you I will wait 10:49 AM

How can I receive my money? 10:49 AM

Ah okay, so the problem is not she steal things. Is because she is going outside with nobody. 11:33 AM

Yes, that's correct!

How likely would you be to use this proposed solution, on a scale from 0-5?

0 = I wouldn't use it.
5 = I would use it if a similar scenario happened in real life.

Read 11:36 AM

Maybe I would use. My wife like to stay at home so it's not a problem. 11:38 AM

Thank you for your response. Let's continue to the next scenario.

Read 11:39 AM

It's time for your partner to take their daily medication. You give it to them, but they refuse.

How would you react in this

Participants

66 year old Korean resident in Santa Clara

Senior with good health and mental fortitude

67 year old retired Taiwanese businessman

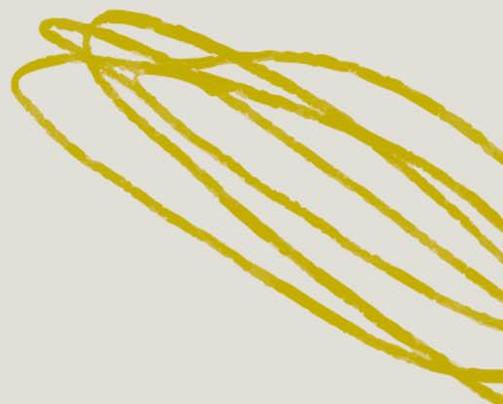


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What worked? What didn't?





What's next?



Pen Pal App!





APPENDIX



Solutions Brainstorms

Top 3 HMW:

HMW make at-home care the ideal solution

1. An app that provides resources for spouses dealing with grief for their partner developing dementia but also teaching how to provide adequate home care
2. **Volunteering app that connects seniors with younger people who are willing to help with tasks; seniors can connect with people and get help, younger adults can learn their stories**
3. An app that schedules home-visiting nurses for patients with dementia
4. Home redesign app to create in-home versions of external experiences that elders are seeking
5. **Teaching app to show spouses how their relationship may change and how to manage their spouses dementia**
6. Connect counselors with grieving spouses caring for their partner and provides support for them, along with local resources for managing dementia
7. App that helps track mental progression / regression through memorisation tests / tasks
8. A reminder app that helps manage medication, schedule tasks and provide enriching activities for the couple they can still enjoy together at home
9. App that provides rote memorisation games / routine schedule tasks daily
10. **An app that provides telehealth / reality orientation therapy remotely for dementia patients**

HMW develop ties to cultural communities for counseling & culturally appropriate material support + encourage seniors to socialize and make friends

1. **A pen pal app to connect groups of culturally-aligned seniors (also app can scan written letters, AI fills in the typed transcript to send, provide audio support to read aloud etc)**
 - a. **Option for language table or cross language interaction**
2. An app that connects the community with a message board to facilitate events, meetings, and new friendships amongst seniors
3. **Map to find local community centers - cultural, ethnic, religious, etc. and implement their events calendar into yours with travel times added**
4. **Live map of board games / activities at local parks (Mahjong, etc.)**
5. An app that allows restaurants to host lunchtime events for seniors, connecting through shared cultural food
6. **App that establishes language tables, speak with seniors in mother tongue to let youth practice**
7. Holiday / cultural festival organizer, helps recruit seniors as advisors or volunteers
8. An app that connects seniors from different cultural backgrounds and allows them to share their stories and cultural experiences.
9. App that seniors can post their favorite cultural recipes and host workshops to teach to other seniors, socialize and learn something new + tasty food

10. An app that connects seniors with smaller opportunities in the community that they can fulfill to still actively participate in community and receive stimulation

HMW pre-empt arguments and conflicts between spouse & patient

1. A chatbot that acts as a mediator during conflicts
2. Online community forum seeking advice on regular conflict patterns and how others have resolved them
3. An app that tracks conversation and argument topics as well as potential triggers
4. **Chatbot that pretends to be an expert in whatever domain the argument is in (i.e. patient wants to go to the bank to withdraw money, caretaker gets chatbot pretends to be a bank employee that is "sending them cash")**
5. An app that teaches healthy communication skills and allows couples/family to give feedback on how they're feeling.
6. An app that walks caretakers through potential arguments or conflicts and tutorial on different ways to respond
7. For arguments surrounding scheduling and promises- an app that allows for a collaborative decision and organization of day plans
8. **An app that keeps track of past arguments and how they resolved them last time for the spouse (since likely the dementia patient doesn't remember it)**
9. An AI app that summarizes and distills conflicts/arguments and offers more understanding perspectives and positive reframings and takeaways for the caretaker
10. A conflict journaling app for both spouse and patient to write their perspectives and understanding of current conflicts