TARGET CONTEXT / USERS

Our target context was AHAVA Memory Care Residence, an assisted living facility at the Jewish Association on Aging. It is partnered with the Hearthstone Institute, founded by Dr. John Ziesel, with care designed with Hearthstone's *I'm Still Here* approach. This approach makes AHAVA unique, leading the design of the environment, programming, structure, and care to consider the individual challenges, wishes, and needs of those with Alzheimer's and other dementias at various stages in an empathetic way. AHAVA's goal is to make residents' lives meaningful, dignified, and rewarding, and enhance their sense of independence, while providing individualized one-on-one care.

The interior and exterior of the facility is designed with these goals in mind. For example, there is lots of natural lighting, spatial cues, memory cues (i.e., password for exiting door is hung on a picture frame nearby), learning/helping tables along hallways (to boost confidence, allow residents to help out). At AHAVA, there are three main programs that are based off the *I'm Still Here* approach: *Discovery, Vitality*, and *Serenity*. These programs include a variety of activities that aim to be engaging, catered to those with mild dementia, moderate memory challenges, and later stages of dementia. The activities aim to foster confidence and learning, social connection, and sensory rich experiences (respectively).

The users that we ended up focusing on were the residents, family members, and staff. Specifically, we developed a persona with moderate dementia (Timothy Roberts), one of a daughter of a resident (Mia Wilson), and one of a certified nursing assistant (Sarah Miller).

Timothy Roberts is a 72 year old former university professor who now resides at AHAVA. Some of his hobbies include creating and engaging in art, and helping out others when he can. Despite his memory challenges and his use of a wheelchair, he wants to do the best he can to feel and be independent. During his everyday experience at the residence, he experiences confusion and stress when he clashes with poor clarification and communication from staff. For example, staff members sometimes take him to lunch when he doesn't want to eat, or insist on him going to activities.

Mia Wilson is a 45 year old mother of two children who works full time. Her mother resides at AHAVA, and she frequently visits her there. Mia sometimes experiences "caregiver guilt"- the commonly identified phenomenon of caregivers wondering if they are doing enough for their parent. She experiences stress and worry about their parent's condition, and has had difficulty navigating the facility at times.

Sarah Miller is a certified nursing assistant whose primary role is to engage in one-on-one care and interaction with a resident at AHAVA. However, she is sometimes overwhelmed when her responsibilities overlap; one second she might be caring for a

resident, and also trying to manage a spa activity at the same time. She really wishes to learn more and advance in her career, and feel more appreciated for her efforts.

OBSERVATIONS / INTERVIEWS

For our primary research data, we used fly-on-the-wall observation and interviews at the AHAVA residence. We visited the residence two separate times. The first time, we spoke with Amy Dukes to gain more context and understanding of how it is like to be a resident at AHAVA and how the care is designed. She led us through the facility, pointing out various elements of the interior and explaining the design intent and reasoning that went behind these aspects. After this introduction, we went in our separate ways to walk through the residence, noting observations about the space, taking photos, as well as the activities (accordion player performance). However, during the time frame that we first visited, there wasn't much human interaction to be observed. We conducted interviews of the food staff members (there were two), and then interviewed a CNA, which provided us with a lot more data.

During our second visit, we were able to do more fly-on-the-wall observations as residents watched TV together, as they were wheeled to the dining room, and as they ate lunch together. In this time, we gathered more observational data about staff and resident interactions, as well as pain points as residents interacted with the space (such as getting around furniture). We noticed some pain points, such as when residents did not want to go eat at lunchtime, but were wheeled to the lunchroom anyway. Some residents disliked both options that were available for meals, but had no choice. Another important pain point we observed was that many residents used wheelchairs; and it was a bit cumbersome for them to navigate around the tables or sit comfortably around the tables.

50 PROBLEMS / SOLUTIONS

Problems:

- Organization/Structure:
 - Lots of natural lighting, but shadows might start startle them
 - Sizes of rooms
 - Big rooms can feel empty/cold/hostile/lonely
 - Quality of decorations/artworks
 - Lack of signs
 - Narrow hallways
 - Too clustered
 - Only 1 TV
 - Privacy of individual rooms
 - Doors are not all disability friendly

- Confusing entrance/exit
- Bathrooms can't be used fully independently (because of doors)
- Narrow doors
- TV room: residents seated too close to TV, need to look up above eye level
- Rooms too close to each other
- Wrinkled paper signs
- Dining table not compatible with wheelchairs

Activities

- o more opportunities to do most favored activities throughout the day
- Attention span of residents may be too short for long activities
- Not easy to convince residents to do activities
- More guest lectures/education driven activities (feel growth)
- Less generic activities → tailor to residents' interests/ passions more
- More empowering activities that are purposeful rather than passing time

Staff

- CNA responsibilities: too much simultaneously (one-on-one *and* activities)
- Staff roles are interchangeable sometimes, causing diluted efforts on one task
- Resident to employee ratio
- Understaffed: not enough employees for fully attentive experiences
- No consistent one-to-one relationship between resident and a staff
- Difficulty in guiding residents to activities/lunch→ need better communication
- No employee around rooms during meals

Food

- Limited food menu options (cuisine, etc)
- Quality of food → how do they get feedback?
- Available menu items don't satisfy some residents

Curriculum

- Need greater sense of familiarity in facility (more personal photos)
- No resident council/actual feedback from residents
- Personal choice limited in structuring day
- Need for deeper sense of purpose while accommodating to memory challenges
- Not everyone wants to eat at mealtime

Residents

- Residents don't have a place to go when restless
- Residents moved around without verbal consent

- restless/agitated residents can disrupt peace in public areas
- Visitors
 - Visitor access to facility is complicated

Solutions

- Device to communicate needs if verbal affirmation can't be given sometimes
- Consent to be moved around: lock on wheelchair that only unlocks when user signals
- Increase number of employees
- More one-on-one employee-resident ratio
- Break down bigger rooms, use extra space for different purposes: i.e., meditation
- Field trip opportunities (i.e., sign up to go to zoo)
- Raise employee wages
- Assign a staff worker to one responsibility at a time according to priority
- Art booth/table for drawing and painting
- Painting studio room, somewhere to release stress/thoughts
- Mindfulness room focused on peace for agitated residents
- Walk around/check on visitors (family members)
- Resident feedback directly to director
- Shorten activities, more break time for nurses and staff
- Employee centered events (make them feel important/valued)
- Artist workshop→ interactive activities
- Assign staff to activities based on their own interests/hobbies→ more engagement
- Fully automated doors, disability friendly
- Goal driven activities tailored to individuals passions (i.e., one poem a day)
- Create a resident council to voice needs/opinions of residents
- Collaborative outdoor mural→ residents and local pittsburgh artists→ purpose, goals
- Clean water fountains often
- Switch wall decorations once in a while → get a professional to design
- More art/wall decor to indicate space and direction
- Table without feet to clash with wheelchairs
- better/clear signs to locate residence
- Reorganize dining room tables to make wheelchair flow/movement better
- open doors
- Keep space organized frequently
- Bigger TV or projector
- More personal decorations (donated items) → less generic

- Blanket stations
- Have residents reflect on activities to solidify experience more
- Wider variety of food options (survey, etc)
- Structure the day according to activity sign up sheet for residents
- More signs→ help residents and visitors find their way
- Increase number of trash cans
- Meal time: assign staff to certain sections of residents seated
- Increase security at entrance
- activities where residents share stories from the past (open to guests)
- Communal photo wall/gallery
- Project plans: each interested resident pursues month/year-long (add purpose)
- Snack bar 24/7 (if not hungry at meal time)
- Laminate paper signs
- Clear path of exit from dining room to TV room: use more spatial cues, colors
- Employee reward incentives
- Big tray to catch fall outs from bird cages
- Employee survey for improvements/changes
- More colors added to interior
- Chair facing activity table → able to be pushed in

BRAINSTORM SYNOPSIS / CONCEPT SYNTHESIS

Before we began any process, we came together as a group to brainstorm our ideas. Sometimes the brainstorming session involved writing them down on post-it notes and arranging them on a wall in order to easily draw connections and discover patterns. We made sure to take photos of them so we could revisit them anytime we wanted to. This method, although rather simple, allowed us to generate and share our own ideas, which we discussed and dissected as a group. We also asked our TA Tammar to take a look our project from the perspective of a design student. We were able to receive some great advice and opinions on the layout and content of our presentation, which we later discussed separately and made final decisions as a group.

To address the needs of our persona- Timothy Roberts- we focused on presenting two main solutions: making tables in the dining area more wheelchair accessible, and providing an all-day snack bar for residents who may not want to eat during mealtime. Other solutions included having clear and structured designated roles for staff, employee incentives such as "employee of the month" rewards, and having more staff on shift; these served to meet the needs of our certified nursing assistant, Sarah Miller. Lastly, to meet Mia Wilson's needs, we felt that it was important to develop better navigation around the JAA and AHAVA through better signage. These seemed

like the best solutions to present, since they had a clear and direct connection to the observations we made.

RESPONSIBILITIES

As a group of three, we brainstormed, ideated, made visits, and created presentation slides together. Most of the process involved collaboration and teamwork, while we had some individual roles: Sachi focused on interviews, Holly on observing resident behaviors, GyuEun on observing and photographing the interior of AHAVA.