# Aging in Place

A micro + macro level analysis from the elder's perspective

# Client Requirements

what we currently know

# Aging in Place
## Opportunity + Problem Space

Design a support system for elders who choose to live in their home. While they may, at the moment, be somewhat  independent, they are in a state of continuous and accelerating decline and require ever-changing levels of support/care. Given the nature of aging, the decline might be physical, cognitive, or emotional.

Assume the following:

• A primary caregiver

• Secondary family members and social network

• Some level of second party caregiver support (agency or independent)

• Other critical stakeholders

• Complicating factors of an unexpected pandemic



Information provided by Dr. Gribbons

Persona

# Amy Rosenberry

"I love me a Tangerine Whiteclaw" · 75 years old · Lowell, MA

**Goals**

- **Minimized interruption to my life. Wanting to feel comfortable in the home while receiving support system**

- **Maintaining independence in my life while receiving help**

- **Feeling connected to family and friends**

**Daily Needs**

- Blood pressure me high cholesterol medication, daily vitamins, calcium supplements and medication

- Upper body resistance exercises

**Hobbies + Tech Capabilities**

- Placing orders on Instacart and Amazon with reading glasses
- Gardening and knitting
- Comfortable with online banking and investment portfolio management
- Drinking Whiteclaw with the grandson, Taylor

**Frustrations**

- Easily frustrated. Forgets to refill medication
- Takes a bit longer to go up and down the stairs
- Misplacing my knitting needles

**Demographic + Other**

- Widowed and living alone
- Caucasian decent
- Annual income with retirement: $75k

# Micro Level Analysis

# Choosing Services

## A micro level analysis from the elder's perspective

**The terminal objective**

The elder must have the ability to consent or deny services provided by the agency as long as they are deemed mentally and coherently able to do so.

This allows the elder to uphold their agency and sense of independence of who and what is affecting their lives. In addition, the agency must avoid potential legality issues. The elder must eventually consider course of action once they are in a state of facing mental or physical impairment and assign a power to the immediate care family member or terminate agency services.

The application service provided by the agency may not be utilized as much by the elder as opposed to the other user groups.

**Factors that initiate the task**

• Current physical and mental state of the elder

• Existing routines and their frequency of the elder

• Daily needs and chores of the elder
  ie: pet care, medication, exercise, appointments

• Mental willingness of the elder and their relationship/trust established between the agency/in-home health aide and caregivers

• Financial ability + stability to afford external services of the agency

• Services and features offered by the agency

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**Information needed to determine micro-level tasks**

The ability for the elder to consent to services can be broken down into micro-level tasks that are dependent to the agency's offerings, the elder's current physical + mental conditions and willingness to participate in the agency's services. Tasks include:

- Auto bill payment setup

- Releasing of medical records

- Choosing options of available services: Laundry, meal-preparation,

- Changing live-in house aides

- Upgrading or downgrading services

- Determining work hours of the in-house aides

- Who their secondary care-givers are

- Determining their financial abilities to afford these services including: retirement funds, investments, any outstanding debt and inheritances

**The Micro Level Task Example: Determining the frequency and duration that the in home-health aide will assist the elder.** Breaking down that tasks can be further broken down into the following:

- Choosing the payment methods

- Determining their physical and cognitive state

- Checking insurances or accounts that can contribute toward the overall payment of the services

- Coordinating times to visit friends and family

- Determining third-party regular appointments or scheduling them

- Signing or consenting to these services and liabilities

- Interviewing in-home health aide

- Selecting an in-home health aide based on their experience

- Settling on pricing and payment methods

- Setting up reminders and notifications, including payment method(s)

- Determining "public" spaces that the in-home aide is allowed to occupy

- Determining what services would make their lives easier and less time consuming vs what they enjoy. Ie: grocery shopping

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## Criteria conveying successful task completion

The elder may opt to provide verbal feedback by calling the agency and agency check-ins to the elder.

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Other indications of successful task completion would be:

- Decreased changes in downgrading services

- Decreased time it takes to connect and communicate with friends and family via the agency's application system

- Increase in upgrading of services

- Increased frequency and duration of services

## Success metrics impacting other personas

Indication of success and elder satisfaction with the service could include the following:

- Reduced turnover rate of in home health aides to elders and their families as elders would show satisfaction with their health-aides

- Another success metric would be adding on more services and reduced file complaints to the agency

- Utilizing the usage of application to communicate with their loved ones

- Level of emotional satisfaction between elders and health-aides

- Increased retention rates with the supplied service

Other success metrics include satisfaction of the levels reports accuracy of home health aides completing tasks and successful payments from the user's account to the home health aides.

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**Recommendations and applied covert thinking**

Understanding the pain points of the elders are important to bringing aide and assistance during the uncertain times of their aging process. For example, it is probable that the elder would rather enjoy time with their pets rather than go through the physical strenuous process of feeding or cleaning up after them.

Depending on the elder, some may enjoy learning and becoming more capable in areas that society may seem "unfit." For example, becoming acquainted with technology. Perhaps offering services that engage elders in technology could promote their sense of independence and have agency over their independence while exercising their motor skills. A way to measure success would be the time it takes for them to complete tasks like, texting, or scheduling appointments online and their emotional satisfaction with learning.

Another way of easing an overload of services options is for the agency to offer "bundled" options like, pet care, laundry, and meal prepping.

Perhaps these elder's may also need services while they are away or visiting family. If there is an established relationship with the agency or health-aide, they may schedule services while elder's are away with their loved ones or friends. For example, preparing medication or maintaining the home while they are away.

Providing services to the external family of reminders and notifications for more cost effective options for medication or services could also benefit in satisfaction of the agency and their services.

Lastly, it is also probable that the elder may know exactly what they want, even though it conflicts with the caring child persona, however if they are ale to tell the agency what they need verbally, the system can determine the best "package" or services that should be utilized by the agency.

# Considering the other user profiles + their goals

**The Agency**

Perhaps the least physically engaged profiles next to the distant child caregiver. The agency would provide the services and options that the elder or elder's caregiver can accept or decline. It is the agency's responsibility to be transparent in the levels of services offered and provide solutions or next-step options once the elder is unable to make independent choices.

The agency must do their best to avoid legal issues that hinder them from running their business and track changes and requests in their system. That being said, the agency must consider the degree of flexibility and types of services offered.

Given the current climate of the pandemic, the agency must explore ways to enforce and communicate health precautions between the home-health aides and this high risk population.

**The Home-Health Aide**

What the elder chooses to consent to or the services they want will affect the macro level tasks that the home-health aide provides. They will be the most in-contact client to the primary user next to the affectionate care giver if they are within the area.

The in home-health aide must respect the independence that the elder demands in their services and gauge the level of privacy and comfortability within their home. This would affect the relationship the home-health aide has with the agency.

The level of consent and services that elder requests will impact the rigor and degree to which they are engaged in the daily activities of the elder. Ie: Laundry, bathing, meal preparation. It will also impact the intensity of their chores and checklists and ultimately reporting tasks to the primary care givers.

The more tasks and services that are requested, the higher risk of error or complaints may arise to which the agency must address to ensure customer satisfaction.

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### The Affectionate Child Caregiver

The affectionate child could be the most supportive in the comfortability of their parent and would most likely advocate for their parent to maintain their independence if they are able. They may find themselves in conflict with the demands of their parents and the recommendations of the in home-health care. For example, the aide may recommend more time to be invested in physical assistance, but the elder may resist, placing distress on the affectionate child.

They may be heavily involved in the use of the application, if provided.

Given the current environment of the pandemic, the child may be uncomfortable with their parent being around the health-aides and may refuse services.

### The Distant Child Caregiver

Some of the goals of the distant child caregiver would be to receive fast, informative information ensuring that the basic needs of their parents are being met and will most likely make decisions based on the recommendations of the in-home health giver and report and tracking of the metics provided by the application and its reports if distant child caregiver has a strained relationship with the elder.

# Macro Level Analysis

A requirements table with a goal-driven focus

# From the elder's perspective

| User Requirement | Priority | Usability Requirement | Allocation | Rationale | Success Metrics |
|---|---|---|---|---|---|
| Ability to decline or consent to services | High | User should be able to provide easy feedback, ability to change services or providers, automatic bill payments and release of medical records | User interacting with the system | For legality purposes and establishing independence for the elder. Critical to enhance to customer satisfaction and feel safe in their home | Reduced turnover rate of in home health aides to elders and their families |
| Receive appropriate medication and assistance with physical tasks | High | User should be receiving the most critical care in maintaining appropriate healthcare | User | It is critical that the elder receives services and aide in areas affected by their physical deterioration | Minimal legal complaints or cases made regarding misdistribution of medication |
| Track health related tasks, appointments and daily schedules | Medium | User should be able to see services provided to them daily and monthly | System | Enhances transparency with the elder and service and decreases the risk of error | Completed tasks by in home caregivers and reduced changes to schedules long term |
| Have access to reports and administrative documents sent to family members | Medium | User should be able to view documents and reports sent to family members from the agency | System | Builds trust and transparency with the elder preventing disputes | Decreased disputes between elders and family members |
| Ability to track payments, investments and coverages, including healthcare | Medium | User should be able to manage payments they are making and track billing cycles and services | System | Builds trust and transparency with the elder and providing organization | Decreased bill disputes and third party calls to insurance companies |
| Utilize the system to communicate with family members | Low | User should be able to communicate with their family members by using the application | System Application | Provides opportunity to build trust with the system and addresses the goal of maintaining relationships with family | Increase in in-application calls or texting |

# Comparing Personas

# The elder and the home health aide

## Varied measurements of success and priority



The elder acts as one of the final steps or stages of the in home caregiver's goal at the macro level. For example, one of the elder's macro goal is to consume the right dosage and distribution of medication. Both the caregiver and elder's measure of success is receiving them. For the caregiver, the distribution of correct medication may fall under the hierarchy of personal care for the day. However, for the elder, it is one of their most essential macro level tasks.

Administrative macro tasks do not quite overlap with the macro level tasks of the elder in terms of engagement. The elder may want to engage with friends and family, contributing to their goals of feeling connected to friends and family, but the elder may not find it important or recognize changes such as decreased motor functions and decreased memory recognition as the caregiver would.

In addition, both persona's interpretation of success do not necessarily coincide in all areas. For example, the elder's satisfaction with the caregiver's success could be measured by the amount of disruption the elder feels they are receiving, thus maintaining their level of independence. On the other hand, the caregiver's measure of success could be more task completion based rather than emotional satisfaction.