## Problem Statement

### Various Caretaking Communities

<table>
<thead>
<tr>
<th>GRIP at Jewish Community Center (JCC)</th>
<th>WP School for Blind Children (WPSBC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Senior (caree)</td>
<td>- Student: 2–21 years old (caree)</td>
</tr>
<tr>
<td>- Case manager</td>
<td>- Classroom teacher</td>
</tr>
<tr>
<td>- Medical personnel</td>
<td>- Art, music and gym teachers</td>
</tr>
<tr>
<td>- Family members</td>
<td>- Medical personnel</td>
</tr>
<tr>
<td></td>
<td>- Various therapists</td>
</tr>
<tr>
<td></td>
<td>- Staff members</td>
</tr>
<tr>
<td></td>
<td>- Family members</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>West PA School for the Deaf (WPSD)</th>
<th>Pittsburgh Vision Services (PGHVIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Student: K–12th grade (caree)</td>
<td>- Senior: Adult (caree)</td>
</tr>
<tr>
<td>- Classroom teacher</td>
<td>- Carers to be determined</td>
</tr>
<tr>
<td>- Medical personnel</td>
<td></td>
</tr>
<tr>
<td>- Audiologist</td>
<td></td>
</tr>
<tr>
<td>- Therapists, intervention specialists</td>
<td></td>
</tr>
<tr>
<td>- Family members</td>
<td></td>
</tr>
</tbody>
</table>
Commonalities of Caretaking Communities

- Consist of a caree and multiple carers

- Caretaking happens in three levels
  - Private: Family members
  - Institutional: School, MediCare
  - Public: General society

- Caree is under medical care
  - Preventative care: Prevent disabilities
  - Maintenance care: Keep using deteriorating functions
  - Corrective care: Fix or heal damaged functions

- Caree’s mobility is limited

- Exposed to additional risk factors such as injury and security

- Caree is in great need and short supply of
  - Routine activities
  - Communication
  - Interaction

- Make use of assistive technologies in various level, yet such technologies are
  - Expensive
  - Unattractive and alienating
  - To resolve functional aspects only
  - Little concern for the emotional aspects
  - Mostly for very specific use
  - Possess little marketability
  - Mostly for caree
  - No device or technology that help organize carer’s responsibilities
Design Opportunity

Adaptable “Caretaking” Device

Definition
- Based on the commonalities of such caretaking communities
- Reconfigured and adapted by carers to suit their specific needs (e.g., DynaVox)

Process Scheme
1. Study specific cases in multiple caretaking communities
2. Identify commonalities
3. Portray fixed vs. adaptable parts based on specific scenarios

Case A + YoG
Case B + YoG
Case C + YoG

1 Specific
2 General
3 Specific
Design Opportunity

Adaptable “Caretaking” Device

User Group
- Intensive caretaking communities
- Mainly for carer
- With functional and emotional needs
- Consumer product (informal) vs. institutional product?
  (formal, liability, database)

Broader Marketability
- Families with members with disabilities
- Institutions for members with disabilities
- Families with senior citizens
- Senior care facilities
- Medical facilities
- Babycare

Potential Functions and Goals: Brainstorm
- Make administrative tasks easier
- Track medical regimen
- Avoid leaving the well-being of a caree to one carer (failsafe)
- Make communication and responsibilities of carers seamless
- Emergency use to carer/to a third party
- Focused on improving the end-care of the caree, or, focused on improving the administration side of the carers.
## Functionality Brainstorm

### What Are Carers’ Responsibilities?

<table>
<thead>
<tr>
<th>Craig</th>
<th>Vasu and Mary</th>
<th>Betty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Carer of His Mother</td>
<td>Teachers of blind children</td>
<td>Nurse</td>
</tr>
<tr>
<td>- Responsibility of transport</td>
<td>- Daily notebook to parents</td>
<td>- Care</td>
</tr>
<tr>
<td>- Medicine &amp; hospital visits</td>
<td>- Organize recreational activities and contact</td>
<td>Physical vs. mental</td>
</tr>
<tr>
<td>- Emergency contact</td>
<td>- Assign device/tech</td>
<td>Regular, irregular, constant</td>
</tr>
<tr>
<td>- Have good meal? (checkup)</td>
<td>- Customize device/tech</td>
<td>- Comm. with patients</td>
</tr>
<tr>
<td>- Emotional support (daily conversation)</td>
<td>- Track progress</td>
<td>- Comm. with patient’s family</td>
</tr>
<tr>
<td>- Communication with other primary carers (wife)</td>
<td>- Curriculum</td>
<td>- Structure/liability/hierarchy</td>
</tr>
<tr>
<td>- Two levels of comm: monitoring (passive) intervention (active)</td>
<td>- Physical/Basic needs (hungry, bathroom, tired...)</td>
<td>Doctor, nurse, practitioner</td>
</tr>
<tr>
<td>- Peer networking with other carers</td>
<td>- Emergency calls: to parents, to medical</td>
<td>- More...</td>
</tr>
</tbody>
</table>

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**Note:**
- Craig: Primary Carer of His Mother
- Vasu and Mary: Teachers of blind children
- Betty: Nurse