

Family and professional caregivers agree on usefulness of robot-assisted care scenarios.

What We Learned
Personalization is a key design consideration.

Caregivers perceive benefits of Socially Assistive Robots over other technologies.

Introduction/Background

Assistive technology, such as robots, has the potential to support healthy aging of older adults with and without dementia. Robots can support cognitive and socio-emotional tasks in addition to the traditional help with physical tasks.

The goal of this feasibility study was to determine initial interest, engagement, facilitators, and barriers to support persons living with dementia (PWD) through social interaction via a Socially Assistive Robot.

Participants

Family caregivers (N=10)

- Age: M=58 years (SD = 10.3)
- Relationship: Spouse or adult child of a person living with dementia

Paid caregivers (N=10)

- Age: M=35 years (SD = 11.7)
- Occupation: 70% CNA, 20% RMA/CMA, 10% other
- Employment: Assisted Living Facilities

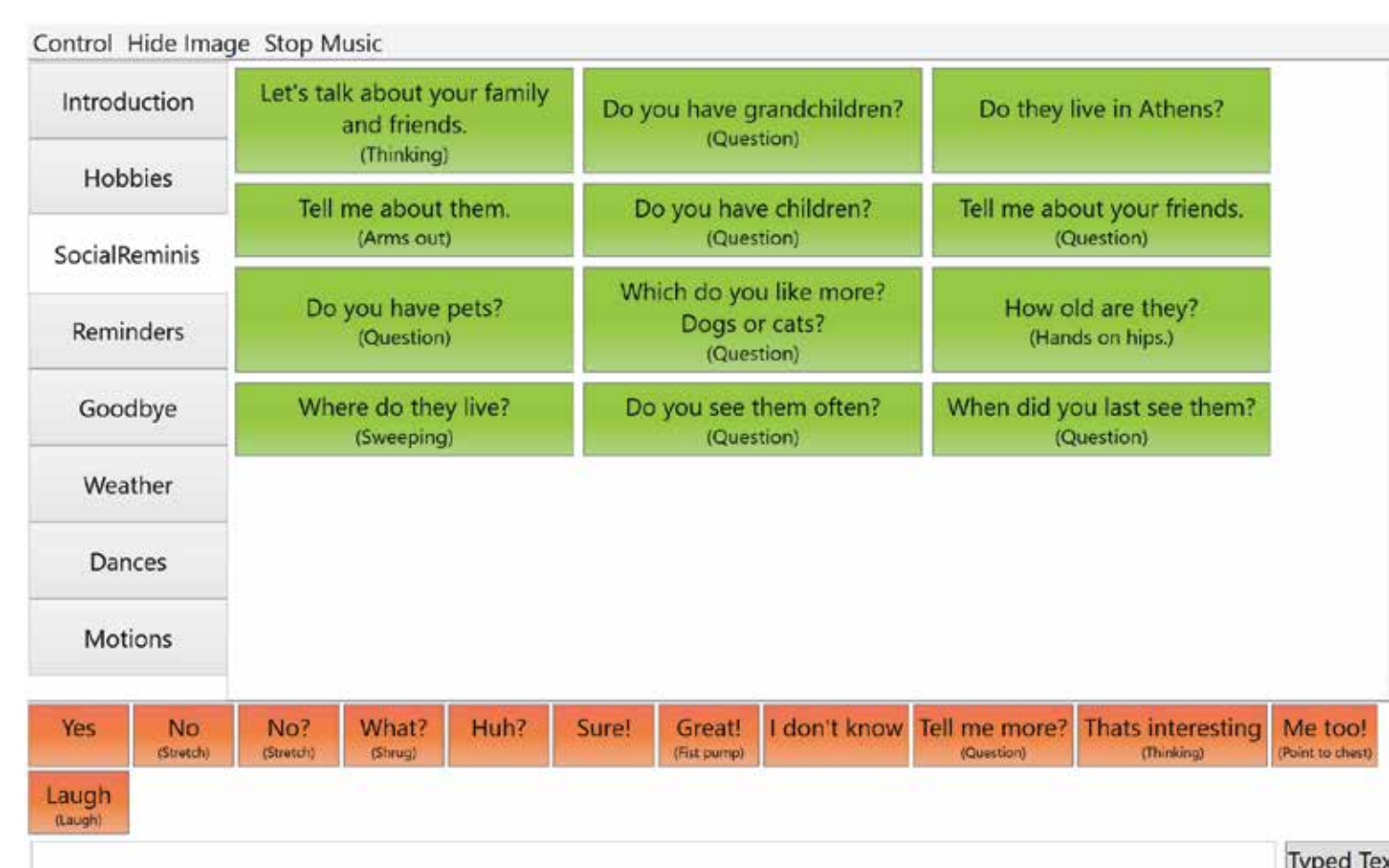
Methodology

Introduction

- Demographics questionnaire
- Introduction to Aldebaran NAO robot we called "Archie" (Assistive Robot Companion for Health interaction and Engagement)

Care Scenarios

- Information (e.g., weather, news)
- Hobbies (e.g., bird watching)
- Music/Dance (e.g., The Twist)
- Social Reminiscence (e.g., family)
- Reminders (e.g., stretch, hydration)
- Relaxation (e.g., stress, breathing)



[Researcher remotely controlled the robot with a series of pre-defined interactions in response to participants utterances.]

Closing Interview Example Questions

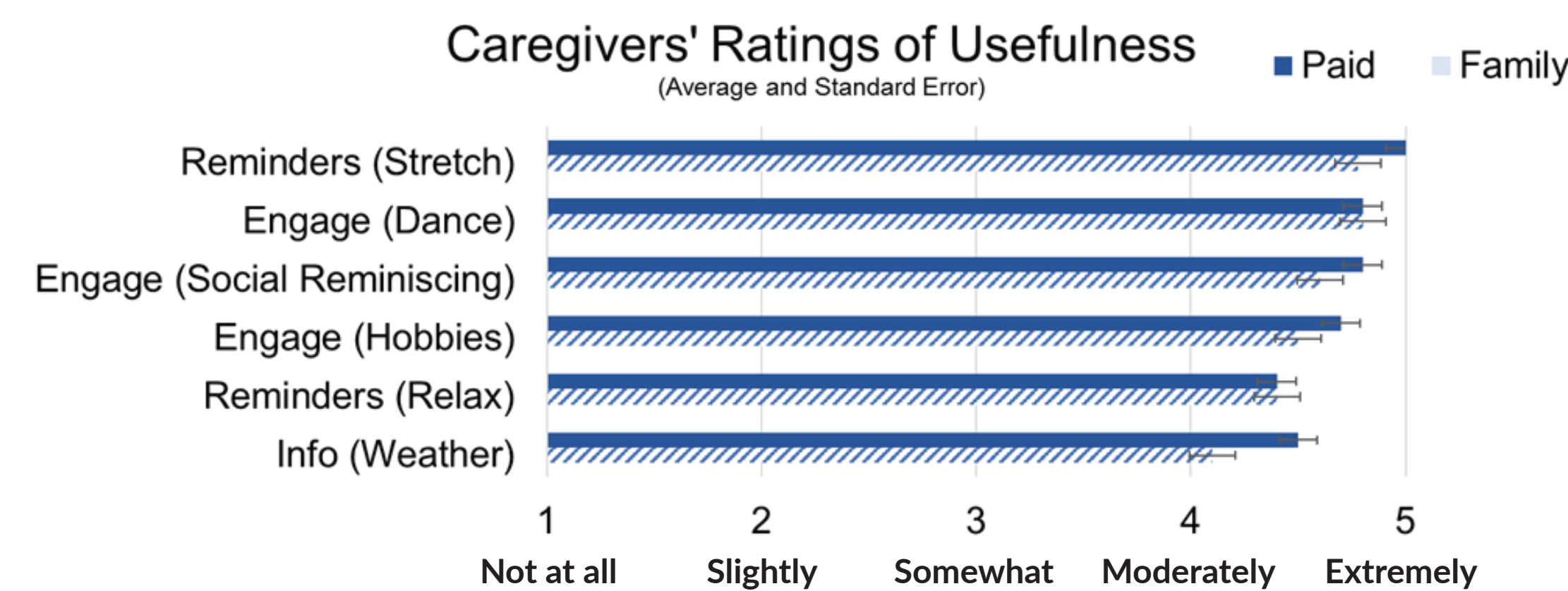
- Do you think most residents would accept the robot?
- Should the voice be male or female?
- Would robot be most beneficial in apartment or in a common area?

Data Analysis

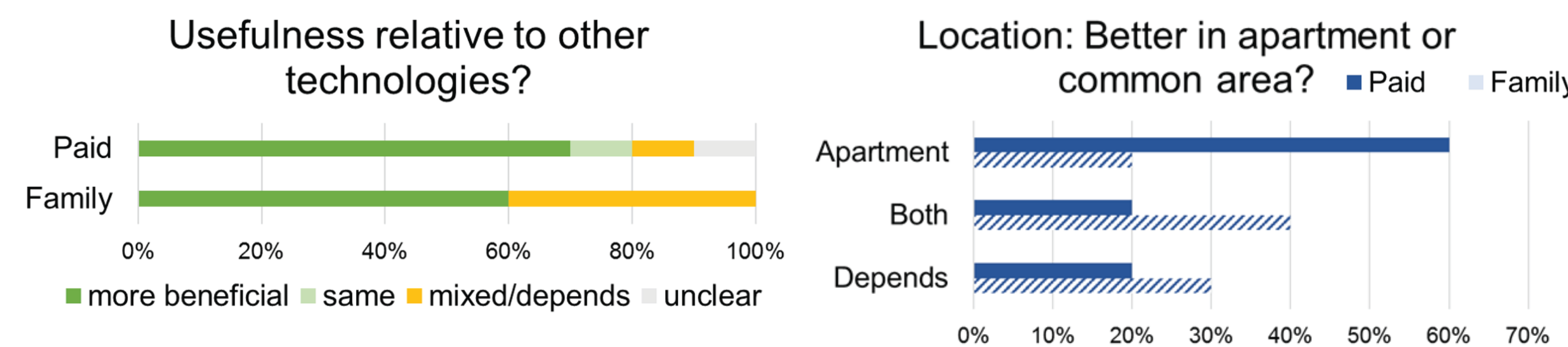
- Participants' ratings of usefulness of each care scenario on a 5-point scale.
- An average of 90% agreement was achieved by 3 coders on 5 transcripts; remaining transcripts were coded once.

Results

Family and paid caregivers agree on usefulness of six robot-assisted care scenarios



Usefulness seen relative to other technologies and for different locations



"He [the robot] can guide the experience. He can initiate things and respond to that interaction. Archie [communicates] so they [the residents] can continually interact throughout the [disease] progression, and he [adapts] to them."

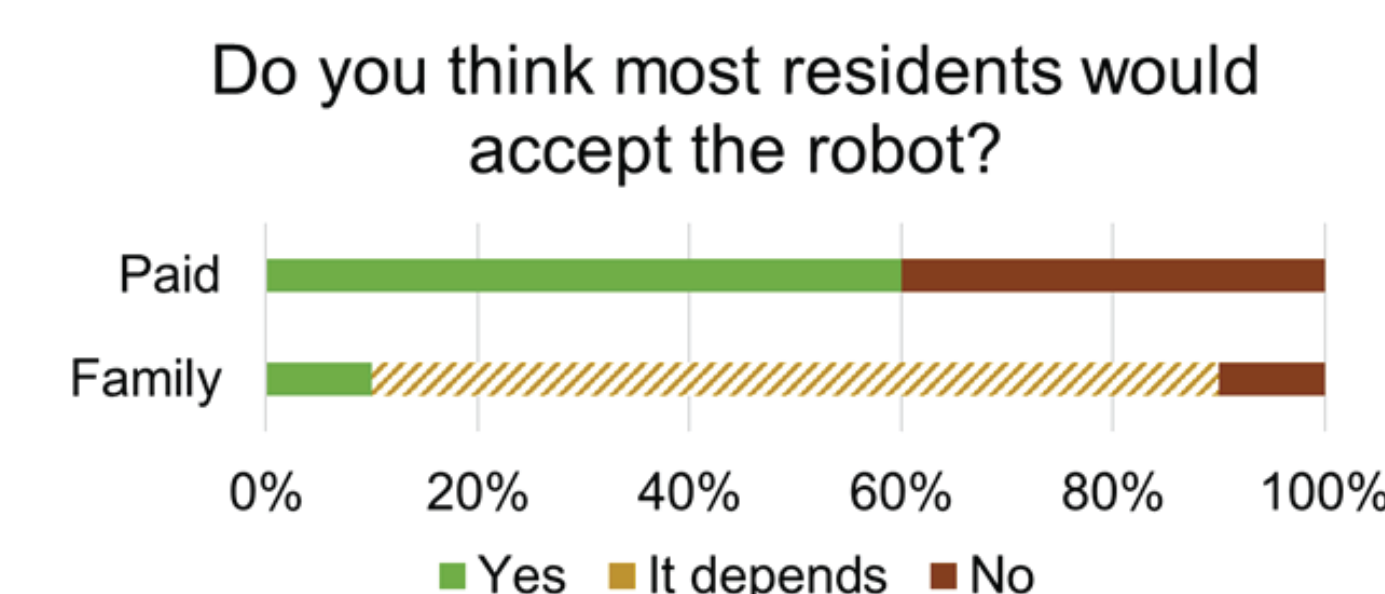
"It depends on the person and if he needs one-on-one [attention]. But if you don't have many people that need one-on-one, the robot would be good for the whole [common area] environment."

"Doesn't require the resident to be technologically savvy."

"In a common area, the robot can lead a group exercise program. I think that's great, too."

"He's mobile! The TV is not." "They can touch him."

Acceptance is expected, as well as some adjustment time



"I think she would really enjoy something like that. I think she would get used to him after a while. Yeah."

"If you can incorporate him into their routine early on, I feel like that will carry on throughout the progression."

Acknowledgements

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Results (Continued)

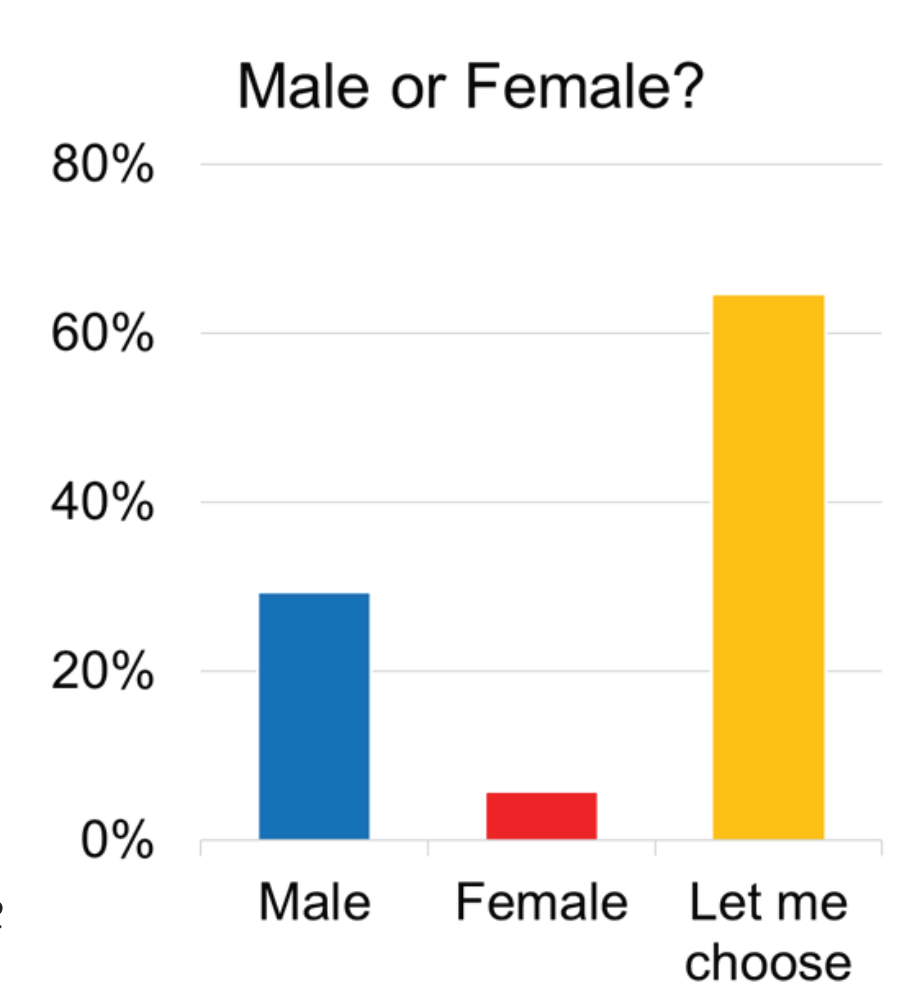
Personalization is key



"I like the idea that [you] could get a software [system] that has some background and could relate to the individual."

"This would be something custom to their interests and needs. And that's really neat."

"I think he would be more beneficial [than other technologies], because he's more customized."

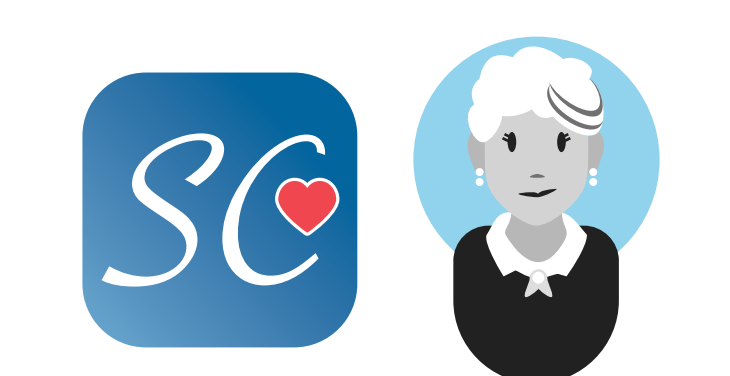


SimpleC Care 360 Platform of Care

Care 360 platform captures all health information to notify and alert the recipient, clinicians, and family of change in health status and suggest improvements.



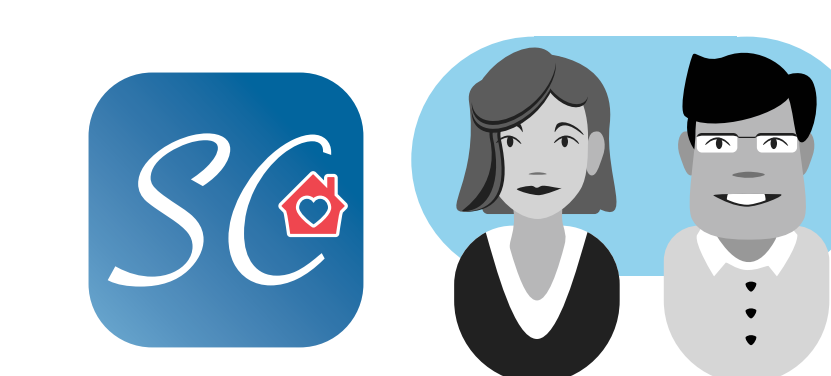
Progress.



SimpleC Companion™

The Companion communicates, using mobile technology, the right message at the right time. Stimulating digital therapeutics present and automate the family and care giver hands-on knowledge. It is a complete non-drug approach.

Motivate.



Family Connect

A mobile application that engages all active family members, in the platform, so everyone works together to communicate and support the care recipient at any time of day. Input to Care 360 is captured and used to improve care.

Prioritize.



Clinical Connect

Clinicians are constantly tracking health status across multiple care recipients. Clinical Connect creates an easy way to capture health measures for immediate use on the platform to identify, and head off, health care events for each individual recipient.

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