What is CART?

The Collaborative Aging (in Place) Research using Technology (CART) study uses technology to assess activity in a home, with the eventual goal of detecting the onset of medical problems that may need a doctor's attention. By participating in this three-year long study, the subject will be helping researchers find new ways to keep older adults healthy and living independently in their homes as they age, especially those who may not have easy access to medical care.

Reviewed & Approved By:

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Oregon Health & Science University is the Coordinating Center for this research study.

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of MEDICINE

IRB Approved: 9/24/2018

The CART Research Study

Inclusion Criteria:

- Is at least 62 years old
- Lives independently or with a partner who is over 18
- Is considered low-income (50% median income limits in Miami)
- Is considered to be socially isolated
- Lives in a home that has the ability to host a reliable broadband internet connection

Exclusion Criteria:

- Conditions that would limit physical participation (e.g. wheelchair bound)
- Diagnosis of any uncontrolled medical condition that is expected to preclude completion of the study (e.g. late stage cancers).
- More than two people live in the residence
- Diagnosis of Alzheimer's or Dementia

What else is involved?

- In-home cognitive assessments
- A weekly online survey about mental health
- Financial compensation is provided for effort in the study

How the technology works

After undergoing a screening process, researchers will install motion sensors in each room of the subject's home, as well as devices like a digital watch, scale and pillbox. These sensors and devices are sensitive to a person's presence and can continuously measure home-based activity in real-time.

Using an internet connection, data from these devices is sent securely to the research team's servers. Innovative algorithms can translate the raw data into meaningful information.

The sensors are discreet and the devices do not interfere with daily life, so the participant does not need to change their daily routines.

No video or audio data are obtained.

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What the technology can measure:

- Mobility (walking speed, movement between rooms)
- Socialization (outings, phone calls, emails sent)
- Medication adherence
- Sleeping patterns
- Physiologic function (BMI, pulse)