ORA: 16011407-IRB01 Date IRB Approved: 11/10/2017 Amendment Date: 6/22/2018

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 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 in rural areas who may not have easy access to medical care.

Reviewed & Approved By:

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RESEARCH FAMILY CARE EDUCATION

The CART Research Study

CART is a collaboration with the **Minority Aging Research Study at Rush**

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Inclusion Criteria:

- Live independently or with a partner
- Are enrolled in one of the RADC studies (MARS, Clinical Core or MAP)
- Access to a computer in your home with active internet connection
- Are at least 65 years old

Exclusion Criteria:

- Conditions that would limit physical participation (e.g. wheelchair bound, bed bound)
- Uncontrolled medical condition that is expected to stop you from finishing the study (e.g. late stage cancers)
- More than two people live in your home
- Diagnosed by a doctor that you may have Alzheimer's or Dementia

What else is involved?

- A weekly online survey about physical and brain health
- A monetary stipend is provided to help offset the cost of internet use while in the study

How the technology works:

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

The sensors and devices use your internet connection to securely send data to the CART team's servers, allowing researchers to translate it into meaningful information.

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

No video or audio data are obtained.

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)