

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 Veterans 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:

VA Portland Health Care System

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VA IRB: #17123

**NOTE: This is for research only and
is not a substitute for treatment**

For more information:

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The
CART
Research Study

Inclusion Criteria:

- Is at least 62 years old
- Is a Veteran
- Lives independently or with a partner who is over 18
- 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
- Alzheimer's or Dementia diagnosis

What else is involved?

- Traveling to the VA is not necessary as study staff will travel to your home instead
- Annual in-home physical and cognitive assessments lasting 1-3 years
- A weekly online survey about physical and mental health
- Compensation is provided at up to \$100 per month per household

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)

