

## the Aware Home

# The Technology Coach

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### About This Project

With the aid of new technology, the use of home medical devices is more prevalent among older adults. These devices are often not designed with consideration for the cognitive differences that come with aging. Older adults typically need training to initially use these devices and often need assistance in the daily use of home medical devices as costly errors are common.

Unfortunately, the “training” for these devices is typically instructions created by marketing departments, rather than by designers. Though the instructions may be flashy, they do not result in learning or correct use by the older adult. Yet having a properly working medical device is crucial for maintaining health in the home.

The Technology Coach provides ongoing feedback to assist older adults in using home medical devices for the first time, or for the one hundredth time. The system “watches” the use of the device via different tracking technologies and provides appropriate guidance.

This research combines two complimentary efforts. To understand what kind of training and feedback should be used for older adults, we are evaluating the use of conceptual and procedural feedback for both short-term and long-term use of the device

To track and assess the use of the device, we are developing new techniques for modeling complex chronological tasks and new methods for recognizing actions with the device using optical sensors.

### Next Steps:

Our initial results indicate that giving informative feedback improved older adult performance. Our current activity recognition algorithm is quite strong yet still does not run in real time. Ultimately, we would like to discover a way to determine beforehand what type of feedback it is best to use for a task with the coach, and to combine a real time tracking system that dynamically recognizes potential errors by older adults.

