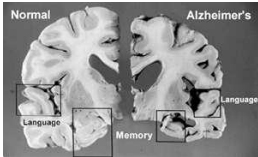


## Home Monitoring and Feedback for Family Caregivers of Persons with Dementia

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## Dementia Caregiving: A New Public Health Priority

- \* Alzheimer's disease and other dementias
  - \* 50% of persons 85+ years
  - \* 35.6 million today to 115.4 million
- \* Family caregivers provide most care at home (\$375 million annual value)
- \* Negative effects of stress and burden
  - \* Depression, increased morbidity and mortality



## Caregiver Challenges

- \* Progressive memory loss
- \* Self-care impairment
- \* Communication breakdown
- \* Disruptive behaviors (physical aggression, vocalizations, withdrawal, wandering, sleep disturbances)
  - \* Occur in 90% of persons with dementia
  - \* Precipitate nursing home placement



## Managing Disruptive Behaviors

- \* ID precipitating factors & responses to behaviors
- \* Professionals observe and guide caregivers in behavior management
- \* Currently caregivers recall and report at clinic visits
- \* Home monitoring
  - \* Links isolated caregivers
  - \* Timely professional recommendations



# Home Video Monitoring



- \* Developed for behavior monitoring of autistic children at home & school
- \* Improved behavior management
- \* First use in dementia home care
  - \* Determine effects on caregiver stress, physical and mental health

# Behavior Capture

(Behavior Imaging Technologies)

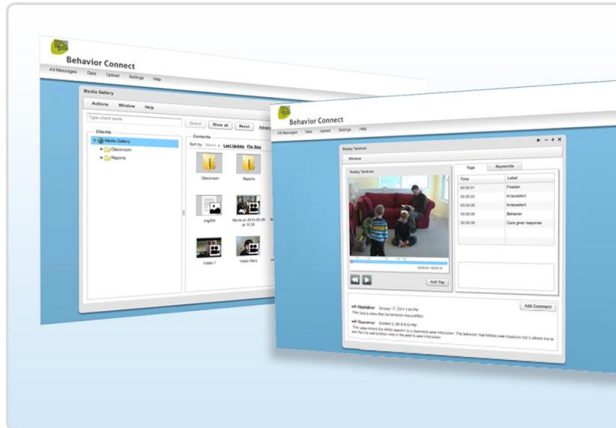


- \* Laptop moves around home
- \* Remote control triggers recordings
- \* “Look back” captures video before trigger
- \* Automatic upload for professional review & feedback

# Behavior Connect

(Behavior Imaging Technologies)

- \* HIPAA secure
- \* Interdisciplinary team review with prompt feedback
- \* Mark videos for precipitating factors
- \* Caregiver training



## Project Partners

### Patients and Caregivers

### Dementia Care Review Team

- \* KUMC Alzheimer's & Memory program patients with disruptive behaviors
- \* Caregivers stressed by managing problem behaviors
- \* Internet at home
- \* KUMC ADC
- \* Alz. Assoc. Heart of America  
Michelle Niedens, MSW
- \* School of Nursing
- \* KUMC Telehealth
- \* Computer Support



## Weekly Care Plan Topics

- \* Going to work/day care
- \* Searching Behaviors
- \* Grandchildren Visiting
- \* Anxiety about leaving home
- \* Repeatedly asking about wife
- \* Smoking
- \* Confusion/Anxiety

## Challenges

- \* HIPAA & Computer Security
  - \* Site Kiosk
- \* Technical Support
  - \* Computer Issues
- \* Recruitment

Mahoney, D.F., Purtilo, R.B., Webbe, F.M., Alwan, M., Bharucha, A.J. et al., In-home monitoring of persons with dementia: Ethical guidelines for technology research and development. (2007), *Alzheimer's & Dementia*, 3, 217-226.

## Future Plans

- \* Explore application for NH staff training
- \* Additional research outcomes
  - \* Reduced costs for clinician/clinic time
  - \* Caregiver savings for fewer clinic visits, travel, negative caregiver outcomes
  - \* Actual reduction in disruptive behaviors
  - \* Reduced nursing home placement
  - \* Improved Quality of Life
- \* Implementation in Kansas City's "fiberhood"