

Evaluating a Home Safety Program for Veterans with Dementia

Kathy Horvath, PhD, RN

Associate Director, Education/Evaluation

**New England Geriatric Research Education
and Clinical Center (GRECC)**

Education Core Leader

Boston University Alzheimer's Disease Center



Why Home Safety

- ◆ The rate of injury for those 65 and over is twice that of middle aged people.
- ◆ Thirty per cent of people age 65 and older are involved in falls each year, the leading cause of death from unintentional injury in the home.
- ◆ People age 65 and older are more likely to die in a fire except for children below the age of 6.
- ◆ If a person with dementia can walk, they will wander. (Alzheimer's Association)

Where do Fatal Falls Occur

- ◆ 60% happen at home
- ◆ 30% occur in public places
- ◆ 10% occur in health care institutions

(www.cdc.gov/ncipi/factsheets/falls.htm)

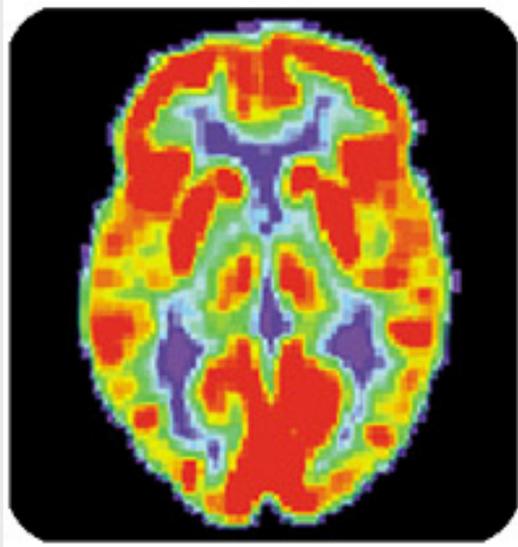
Cognitive and Motor Changes in Dementia

- ◆ Memory Loss
- ◆ Poor Judgment
- ◆ Confusion
- ◆ Diurnal Rhythm Reversal
- ◆ Delusions
- ◆ Hallucinations

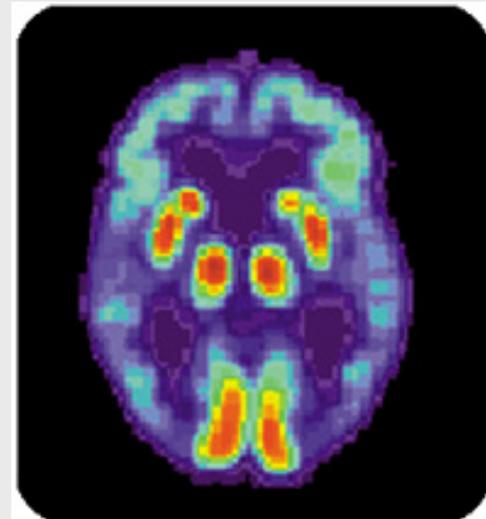
AD and the Brain

The Changing Brain in Alzheimer's Disease

No one knows what causes AD to begin, but we do know a lot about what happens in the brain once AD takes hold.



Pet Scan of Normal Brain



Pet Scan of Alzheimer's Disease Brain

Cognitive and Motor Changes (cont.)

- ◆ **Visual Impairments**
- ◆ **Loss of Balance**
- ◆ **Abnormal Gait**
- ◆ **Decreased Reaction Time**

Firearm Access and Automobile Driving Among Veterans with Dementia



Office of the Medical Inspector

June 18, 2004

Firearms and Dementia

- ◆ Spangenberg, et al. (1999) *Journal of the American Geriatrics Society* 47:1183-6.
- ◆ Sample of 106 patients and family members in New Hampshire and South Carolina
- ◆ 60% of households had a gun
- ◆ 44% of owners kept the guns loaded

“Safety Enhancement to Prevent Home Injury to Veterans with Alzheimer’s Disease”

Kathy Horvath, PhD, RN; Ann Hurley, DNSc, RN, FAAN

Scott Trudeau, MA, OTR; P.B.Cipolloni, MD

Sally Smith, MS, CANP, RN; Corinne Clark, MA, CANP, RN

Mary Anne Gauthier, EdD, CGNP, RN; Rose Harvey, DNSc, RN

Mary Duffy, PhD, RN; Ann Hendricks, PhD

Supported by the VHA Nursing Research Initiative; Center for Excellence in Nursing Practice, Brigham and Women’s Hospital; and School of Nursing, Bouve College, Northeastern University

Research Questions

- ◆ What are the environmental dangers for injury risk and accidents in homes?
- ◆ What is the range of home environmental modifications to which families agree?
- ◆ What are the costs and logistics of making home safety modifications?
- ◆ Can home safety modifications be standardized?

Sample

- ◆ **52 Veteran/Caregiver dyads**
- ◆ **Average age of veteran = 77**
 - **Primarily Caucasian men (3 women)**
 - **Education: 48% college credit or graduate**
 - 26% HS Diploma**
 - 14% Grade School**
- ◆ **Type of Residence: 67% Single Family Home**
 - 12% Condominium**
 - 19% Multiple Family**
 - 2% Apartment**

Sample (cont.)

- ◆ **Caregiver Relationship**
 - Spouse: 83%
 - Adult Child: 12%
 - Sibling: 5%
- ◆ **Caregiver Average Age: 69**
- ◆ **Veteran disease severity MMSE: Mean = 16**
- ◆ **Veteran functional Status: PSMS Mean = 11**

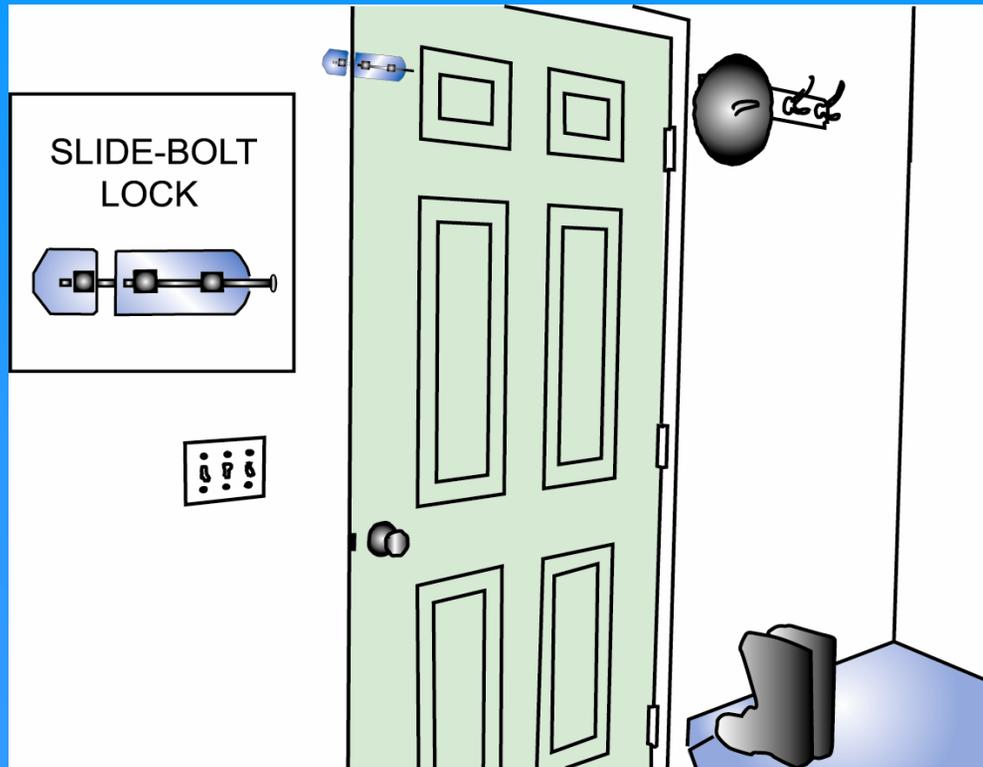
“My Home is My Castle”

- ◆ **Requires deep appreciation of the personal and cultural context of this setting**
- ◆ **Establishing Trust**
- ◆ **Partnership with caregivers who provide care at home “36”/7**

Risk of Injury in Homes

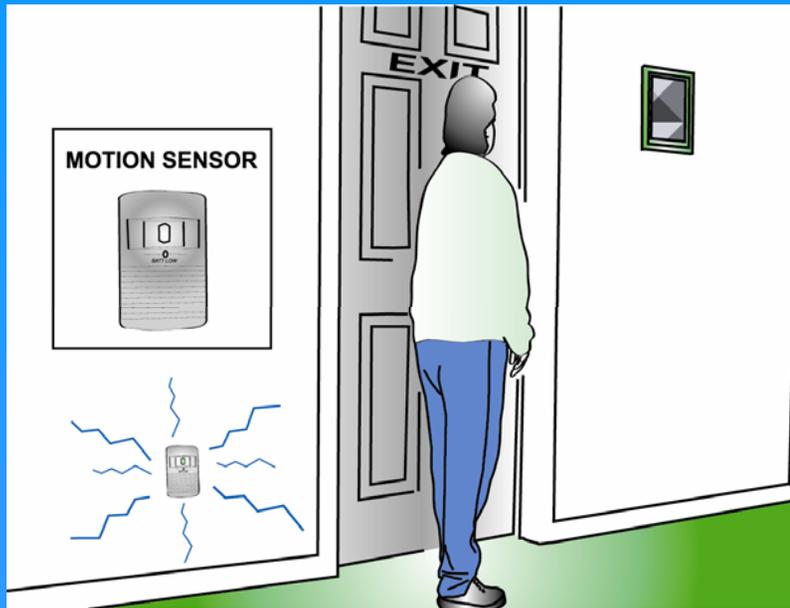
- ◆ Falls/Tripping: >10 incidents
- ◆ Exiting Alone: 10 incidents
- ◆ Stove incidents: 6
- ◆ 1 Firearm and 2 Knife incidents
- ◆ 1 Driving incident
- ◆ 2 Toxic substances
- ◆ 2 fires (smoker; clothes dryer)

Make Exits Safer



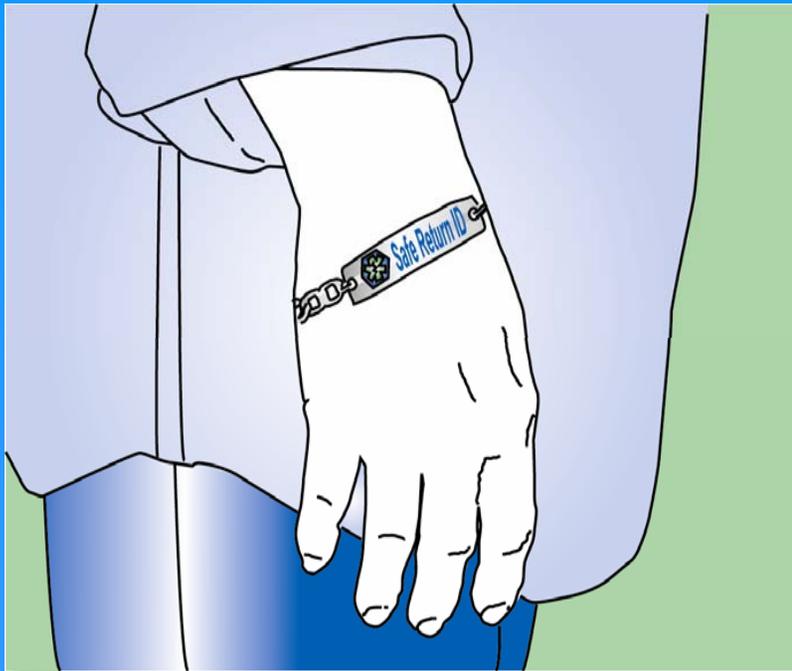
- ◆ Put a slide-bolt lock at the top or bottom of doors to the outside, so the person will not notice it.

Make Exits Safer



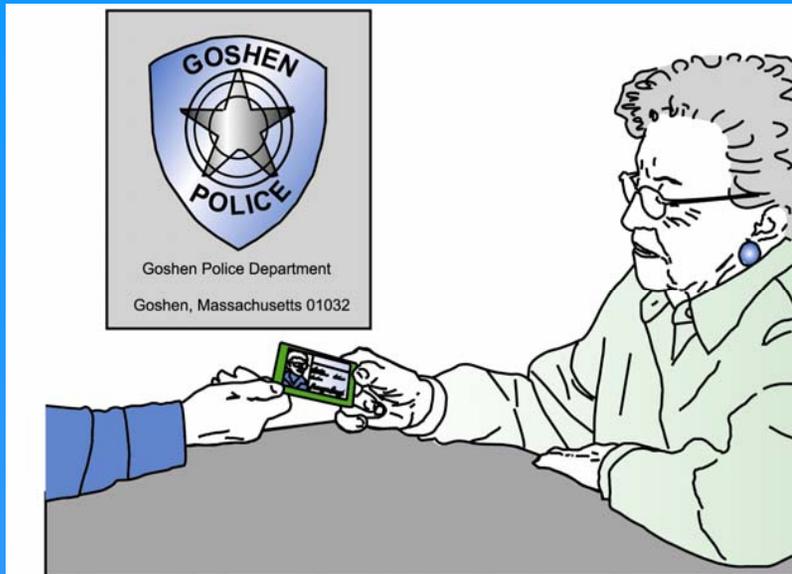
- ◆ Use a motion sensor to warn you when the person wanders to an exit door or to a risky room such as the kitchen.

Wandering



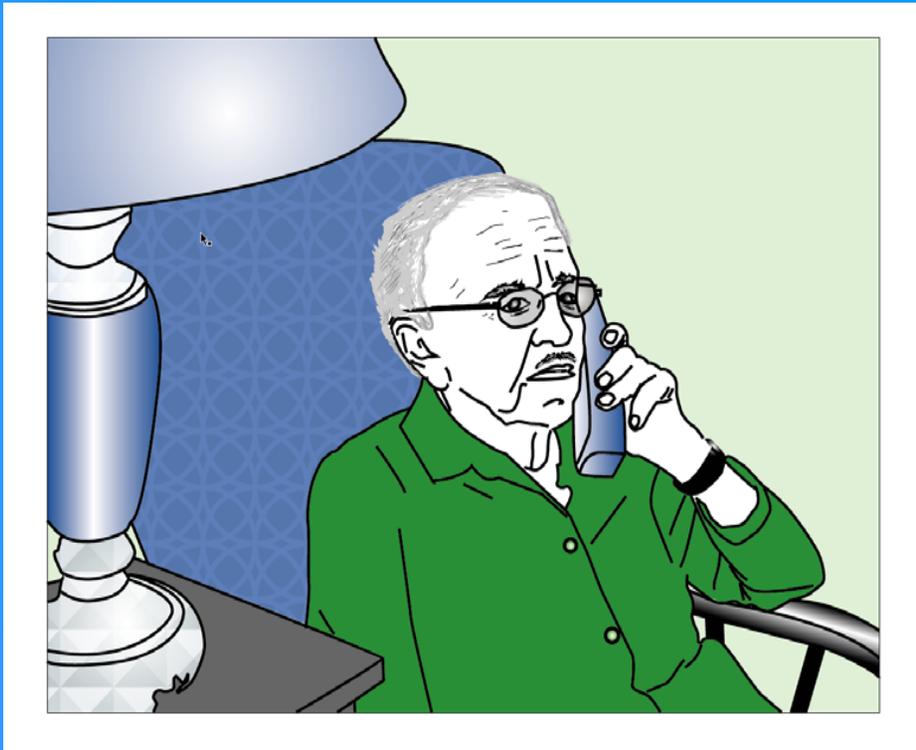
- ◆ Send for an identification bracelet from the Alzheimer's Association "Safe Return" Program.
- ◆ Call 1-800-548-2111 for information.

Wandering



- ◆ Give the name and a recent picture of the person to your local police in case the person wanders away and gets lost.

Wandering



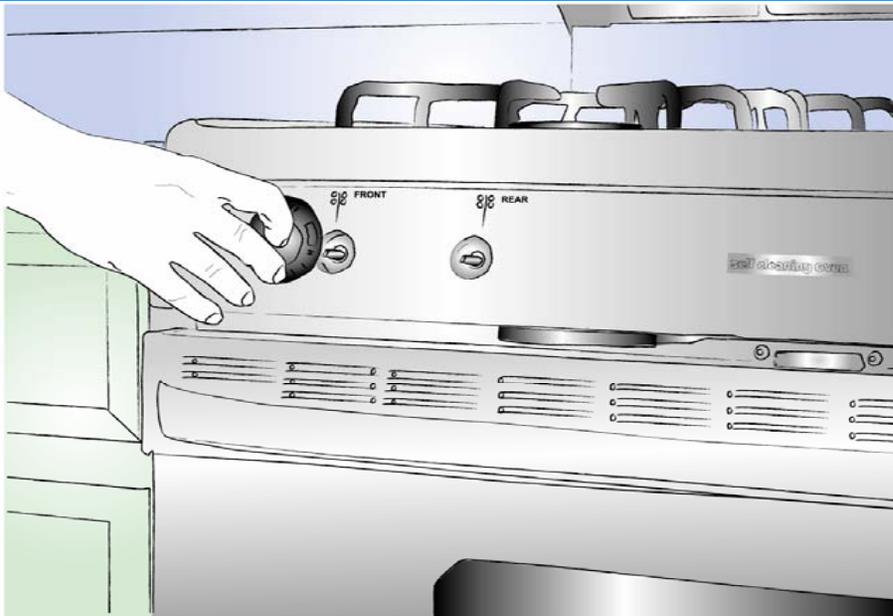
Tell trusted neighbors
that the person has
memory problems
and might get lost.
Keep a list with their
names and phone
numbers

General Living Areas

- ◆ **Remove scatter rugs**
- ◆ **Put contrasting tape on the edge of steps to highlight stairs**
- ◆ **Increase the brightness of current lamps and fixtures**

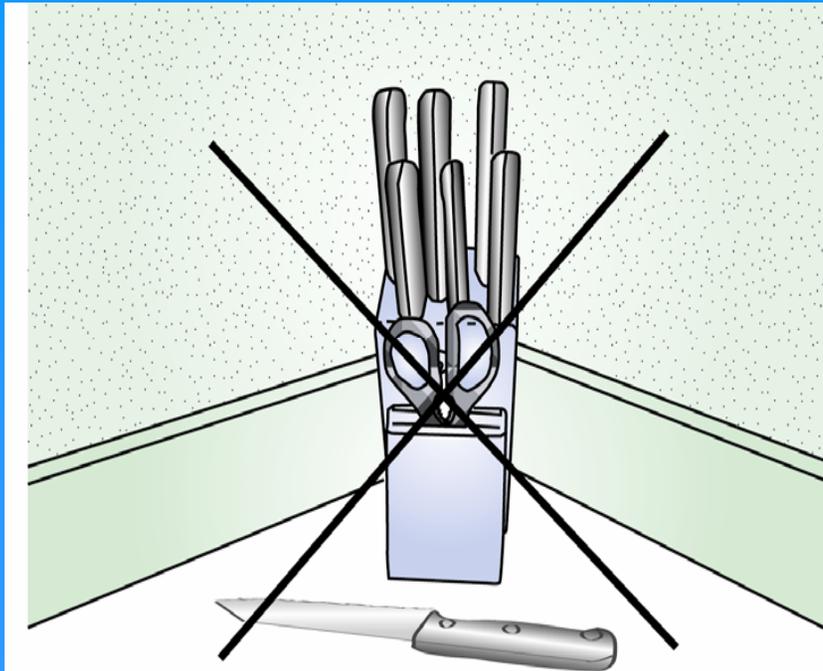


Kitchen Safety



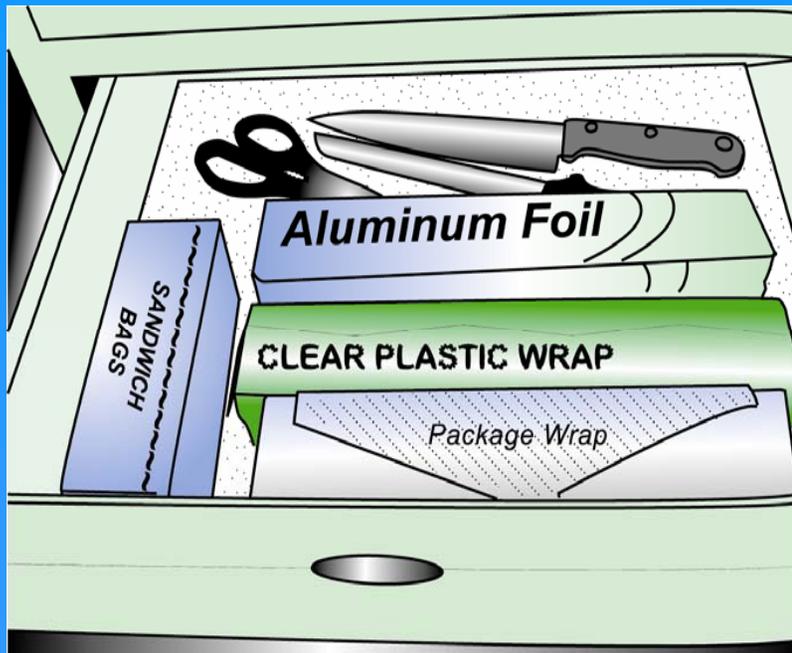
- ◆ Remove stove knobs and hide them in a nearby drawer.
- ◆ You can also use stove knob covers made for child safety.

Kitchen Safety



- ◆ Remove scissors and knives from counters and drawers.

Kitchen Safety



- ◆ Keep one large and one small knife for your use hidden in a drawer or cabinet.

Safe Firearms Practices

- ◆ **ASK if there are firearms in the house.**
- ◆ **Ideally, remove the firearms and ammunition from the house.**
- ◆ **At least remove the ammunition; lock the firearms.**

Driving Safety

- ◆ If the care-recipient is still driving:
- ◆ <http://www.thehartford.com/alzheimers>
- ◆ Family awareness and guidance
- ◆ Has he/she gotten lost or made errors while driving, e.g. parking on wrong side of street or turning into wrong lane?

Easing the Transition from Driver to Passenger

- ◆ Let others do the driving
- ◆ Reduce the need to drive
- ◆ Balance the social needs
- ◆ Early planning to limit driving
- ◆ Take the keys and/or disable the car as a last resort

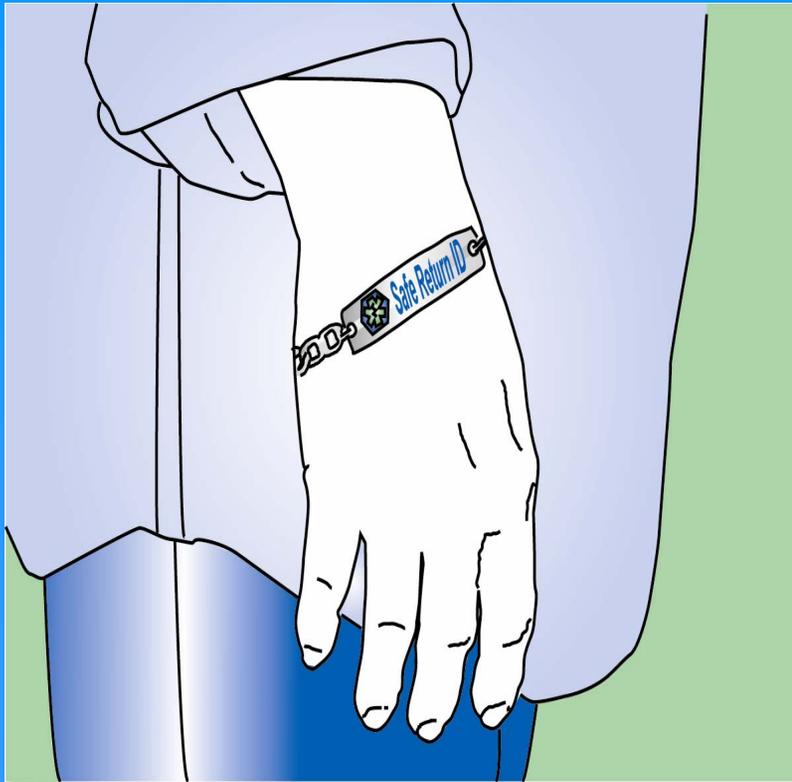
Learning Strategies

- ◆ **Multi-modal approach**
 - **Home Visit**
 - **Demonstration/Practice**
 - **Written recommendations**
 - **Use of photographs**
 - **Telephone contacts for follow up**

Guidelines for Consumer Education

- ◆ Reader should see action that is recommended
- ◆ Present information in bite-size steps
- ◆ Text goes to the right of the picture
- ◆ Use clear background and simple line drawings
- ◆ Colors: neutral and easy to read

Wandering



- ◆ Send for an identification bracelet from the Alzheimer's Association "Safe Return" Program.
- ◆ Call 1-800-548-2111 for information.

Learner Verification

- ◆ Comprehension
- ◆ Persuasion
- ◆ Self-Efficacy
- ◆ Attractiveness
- ◆ Acceptability

Doak, C.C., Doak, L.G., & Root, J.H.

Teaching Patients with Low Literacy Skills

Phila: Lippincott, 1996

Readiness to Make Changes

- ◆ “He’s not ready yet”
- ◆ “He’s never done that before”
- ◆ Understand the nature of the illness
- ◆ Unpredictable changes
- ◆ **Autonomy-Safety-Identity-Dignity**

Gaps in Supervision

Safety Resource List

- ◆ Motion Sensor (24.99)
- ◆ Slide Bolt Lock (6.99)
- ◆ Grab bars (24.00)
- ◆ Colored Duct Tape (4@ 3.99)
- ◆ Stove knob covers (7.99)
- ◆ Tub Chair (57.45)
- ◆ Bathtub Rail (49.99)
- ◆ Nightlights (3.99)

Costs of Home Safety Items

- ◆ **\$4576. - Total**
- ◆ **\$88. - Average per family**
- ◆ **\$10. - Minimum**
- ◆ **\$249. - Maximum**

Worksheet to Make the Home Safer

- ◆ Research-tested modifications that are effective and acceptable to families
- ◆ Includes resource list of safety items and where they can be purchased

www.alzresearch.bu.edu

Kathy.Horvath@med.va.gov