

# Lost Alzheimer's Resident

Robert J. Koester



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## dbS Topics covered

- Scope of the wandering problem
- Characteristics of lost dementia subjects
- Response technology
- Mitigation techniques
- Preparedness

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## dbS Alzheimer's Headlines

**World Dementia Day**  
**Badly decomposed remains found**  
**near large airport**  
**Normansy, France**

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**dbS** Alzheimer's and Related Disorders

- Alzheimer's disease
- Vascular Dementia
- Parkinson's disease
- Lewy-Body
- Huntington's disease
- Creutzfeldt-Jakob disease
- Picks disease
- Other causes of dementia
  - Depression, drug reactions, thyroid disease, nutritional deficiencies, brain tumors, head injuries, alcoholism, infections, hydrocephalus.

Category	Percentage
Alzheimer's	56%
Vascular Dementia	14%
Multiple Causes	12%
Parkinson's Disease	8%
Other Causes	6%
Brain Injury	4%

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**dbS**

# They go until they get stuck

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**dbS** Gross Appearance of Brain

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**dbS** Alzheimer's versus Navigation

- Poor Recent memory
- Inability to judge time
- Loss of visual-spatial skills
- Landmarks
- Estimate distances
- Sense of direction

HOME CENTRE REFERENCE SYSTEM

SELF CENTRE REFERENCE SYSTEM

Home centre system and self centre reference system

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**dbS** Country Contributors

ISRID  
INTERNATIONAL SYMPOSIUM & EXHIBITION ON ALZHEIMER'S DISEASE

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**dbS** The Wandering Problem

- 1% of all Alzheimer's patients will require law enforcement assistance as a result of becoming lost
- 1% of lost Alzheimer's wandering incidents reported to law enforcement result in fatalities

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**dbS** **Overview of Wandering**

*not all who wander  
are lost*  
J.R.R. Tolkien

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**dbS** **Wandering Definition**

- Imprecise term
- Critical Wandering
  - When someone with dementia wanders away from supervised care, a controlled environment, or cannot be located.

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**dbS** **Types of Wandering**

Wandering Type	Synder	Hirst	Martino	Butler	Hussain
Goal directed	Searching Industrious	Active	Direct Pacing Lapping	Purposeful Escapist	Stimulator Exit Akathisia
Non Goal	Non-goal	Passive	Random	Aimless	
Other		Nocturnal		Critical	

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**dbS** **Random Wandering**

- A type of wandering where the subject moves about aimlessly with no apparent goal
- Operational significance

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**dbS** **Goal-Directed Wandering**

- A type of wandering where the subjects movement can be attributed to some type of goal.
- Operational significance

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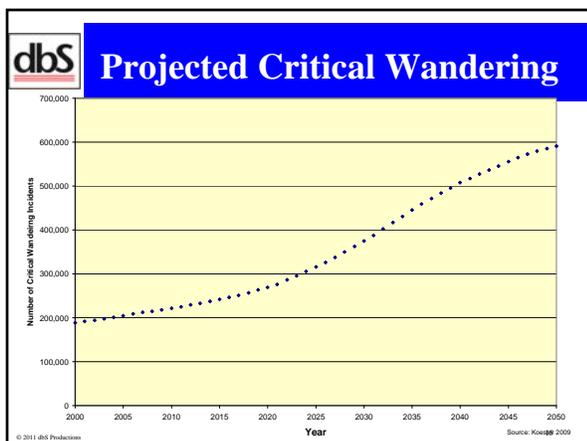
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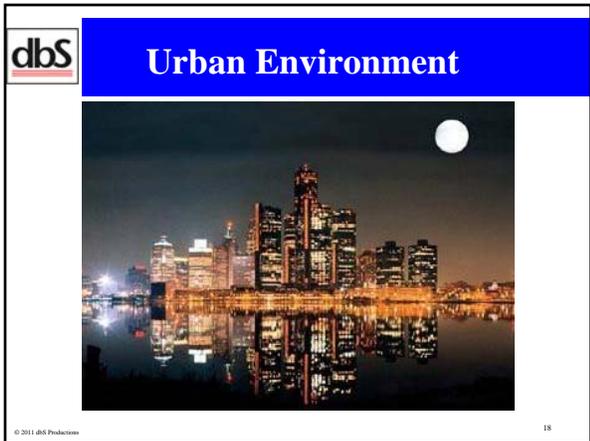
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**dbS** **Different Models for POA**

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**dbS** **Find Location Wild/Urban**

<b>Structure</b>	<b>20%</b>	<b>35%</b>
<b>Creeks/Drainages</b>	<b>9%</b>	<b>4%</b>
<b>Open Field</b>	<b>14%</b>	<b>6%</b>
<b>Road</b>	<b>18%</b>	<b>36%</b>
<b>Woods</b>	<b>17%</b>	<b>3%</b>
<b>Water</b>	<b>7%</b>	<b>6%</b>
<b>Brush</b>	<b>6%</b>	<b>1%</b>

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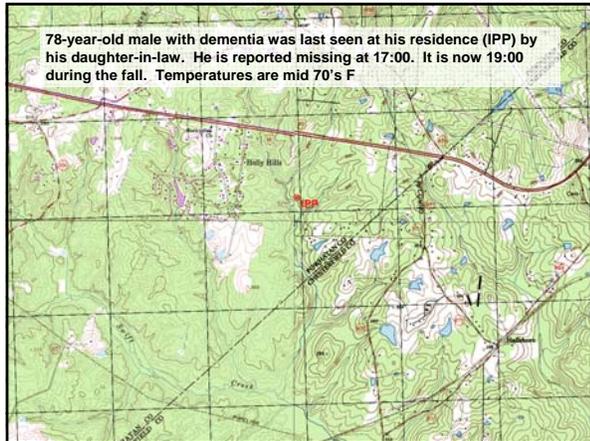
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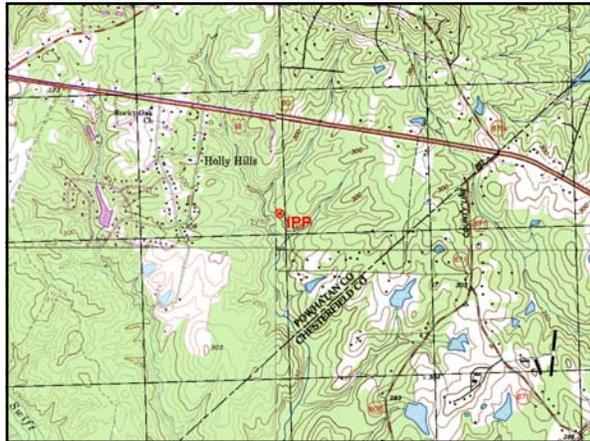
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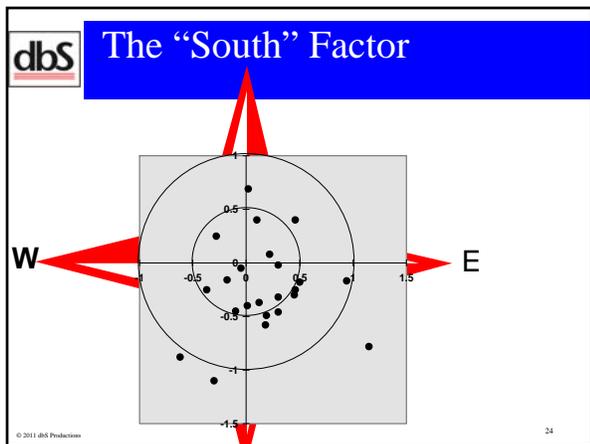
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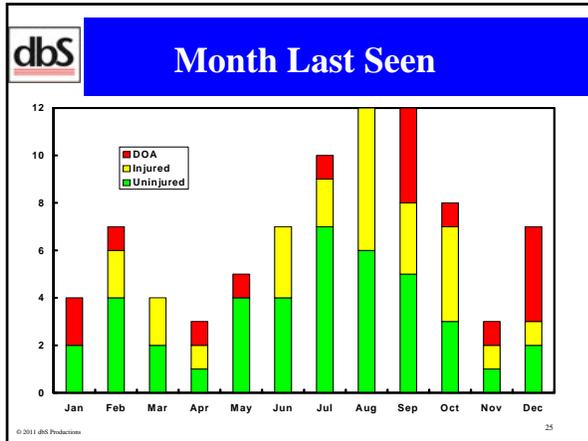
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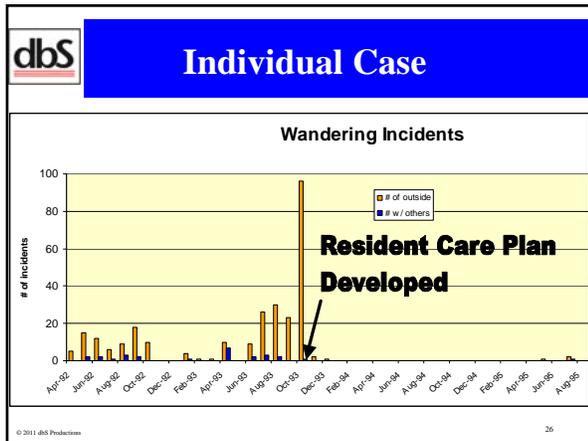
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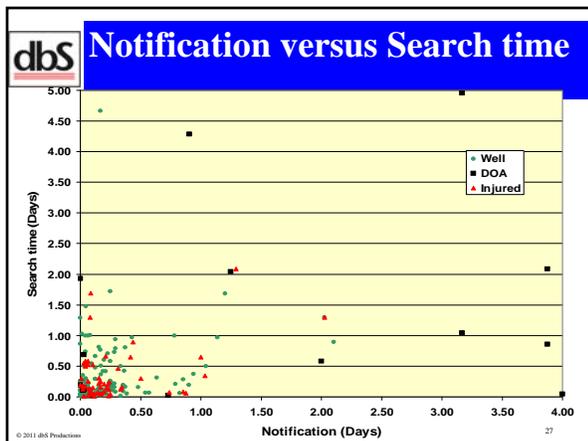
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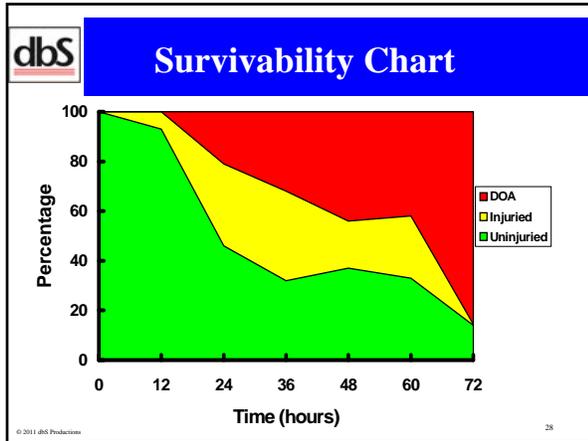
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- Subject's Profile**
- Leaves residence or nursing home
  - Has previous history of wandering
  - May cross or depart from roads (67%)
  - Usually (89%) found within one mile of PLS
  - Usually found a short distance from road
  - Attempts to travel to former residence

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- Subject Profile**
- Leaves few verifiable clues
  - Will not cry-out for "help" or respond to shouts (1%)
  - Usually found in creek, drainage, brush, or briars (47%)
  - Succumbs to the environment

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**dbS** Behavioral Hypothesis

- **Wandering Initiated**
  - agitation (exit seekers, escapist)
  - depression, goal oriented
- **Becomes lost**
  - loss of time, short term memory, spatial mapping
- **Intense emotional crisis**
  - panic reaction

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**dbS** Response

- Caregiver/Skilled Care Facility
- Safe Return/Technology
- Local Law Enforcement
- SAR Resources

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**dbS** **Wandering Devices**

- Labels
- Consumer grade – RF/DF
- Prosumer grade – RF/DF
- Professional – RF/DF
- Network location/GSM Notification
- GPS/GSM
- GPS/Satellite

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**dbS** **What matters**

<p><b>Consumer</b></p> <ul style="list-style-type: none"> <li>• Price</li> <li>• Battery</li> <li>• Appearance</li> </ul>	<p><b>Searcher</b></p> <ul style="list-style-type: none"> <li>• Battery</li> <li>• Cost</li> <li>• False Alarms</li> <li>• Ease of Tracking</li> <li>• Public Appearance</li> </ul>
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**dbS** **Recovery**

- Data collection
- Research and evaluation
- After Action Reports
- Reimbursement of SAR resources

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**dbS** **Wandering Prevention**

- 1. Behavioral** - Identification of the contributing factors. Agenda behavior.
- 2. Environmental** - Modification of the environment to enable the person to move about in a safe, non-intrusive manner within the structure.
- 3. Exit Control**

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**dbS** **Triggers to Wandering**

- Placed in unfamiliar environment (28%)(20%)
- Saw coat and hat and decided to leave (27%) (13%)
- Argumentative or confronting situation (23%)(47%)
- Change in schedule or routine. Often first week of moving to a new care facility (23%)(27%)
- Spent the day in day care (23%)
- Had a change in medication (21%)
- Was left alone in car (18%)

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**dbS** **Possible Triggers**

- **Physical** – discomfort, pain, hunger, thirst
- **Intellectual** – Cannot interpret environment
- **Emotional** – Confused, lost, anger, bored
- **Capabilities** – Over/under stimulated
- **Environmental** – Noise, space, lighting
- **Social/Cultural** – Previous occupation, habits

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**dbS** **Possible Mitigation**

- Physical – Comfortable, exercise
- Intellectual – Calm, simple, avoid arguments
- Emotional – Redirect, reassure, reorient
- Capabilities – Engage in activities
- Environmental – Safe wandering, exit cues
- Social/Cultural – Build on previous habits

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**dbS** **Preparedness**

- Response plan for caregivers
- Response plan for skilled care facilities
- Response plan for law enforcement
- Training for law enforcement
- Training for search & rescue resources



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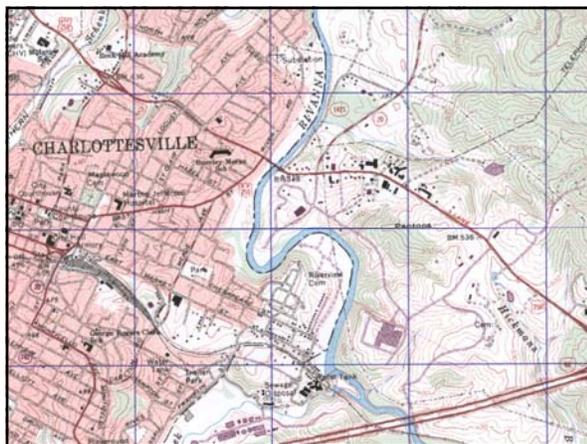
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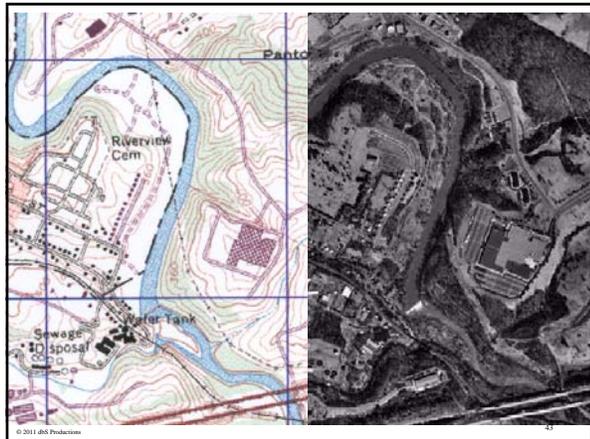
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**dbS** **Acknowledgements**

- USDA SBIR Grant 2004-02667
- 5 Data entry team
- 32 Reviewers
- 61 individuals who helped obtain 40 different databases from around the world
- 4754+ individuals who filled out reports
- 50,692 Incidents
- 2,000,000 manhours from searchers

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**dbS** **Thank you**

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