



Complete Summary

GUIDELINE TITLE

Evidence-based practice guideline. Wandering.

BIBLIOGRAPHIC SOURCE(S)

Futrell M, Melillo KD, Remington R. Evidence-based practice guideline. Wandering. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation Dissemination Core; 2008 Jul. 51 p. [85 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Futrell M, Melillo KD. Evidence-based protocol. Wandering. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core; 2002 Mar. 45 p.

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SCOPE

DISEASE/CONDITION(S)

Wandering associated with:

- Alzheimer's disease
- Dementia
- Depression

GUIDELINE CATEGORY

Counseling
Evaluation
Management
Prevention
Risk Assessment

CLINICAL SPECIALTY

Geriatrics
Nursing
Psychiatry
Psychology

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

To assist caregivers in dealing with wandering behavior in community-dwelling or institutionalized older adults with dementia

TARGET POPULATION

Older adults who are at risk for wandering behaviors, including community-residing or institutionalized older adults with dementia (see the original guideline document for defining characteristics and related factors)

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Assessment criteria indicating patient likely to benefit most
 - Cognitive decline
 - Degree of wandering and wandering patterns
 - Depressive symptomatology
 - Agitation
 - Memory and behavior problems
 - Factors associated with wandering
 - Environmental strategies being used by formal and/or informal caregivers in dealing with problem wandering
 - Premorbid lifestyle

2. Assessment tools
 - Mini-Mental State Exam (MMSE)
 - Revised Algate Wandering Scale (RAWS)
 - Short Geriatric Depression Scale (SGDS)

- Cohen-Mansfield Agitation Inventory: Long Form with Expanded Descriptions of Behaviors
- Memory and Behavior Problems Checklist--1990R (MBPC)
- Need Driven Dementia-Compromised Behavior Model (NDB)

Management

1. Environmental modifications
2. Use of technology and safety devices to locate and monitor wandering
3. Physical & psychosocial interventions
4. Caregiving support and education

MAJOR OUTCOMES CONSIDERED

Patient Outcomes

- Wandering frequency, duration, and pattern
- Safety of the individual, such as elopement, getting lost, falls
- Increase in way finding
- Decrease in disorientation
- Body weight maintenance
- Change in related behavior, including sleep problems, depression

Caregiver Outcomes

- Knowledge about wandering
- Understanding of the guideline

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
 Hand-searches of Published Literature (Secondary Sources)
 Searches of Electronic Databases
 Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases

The search strategy included the National Guideline Clearinghouse, CINAHL, Medline, Ageline, the Cochrane Database of Systematic Reviews, and the Joanna Briggs Institute. Dissertation Abstracts were also searched in an attempt to locate unpublished relevant research. Reference lists of retrieved manuscripts were hand searched for additional studies.

Keywords

The following search terms were used: *wandering, dementia, Alzheimer's disease, agitation, and spatial disorientation.*

Inclusion and Exclusion Criteria

Because this was an update of an original guideline published in 2002, the focus was on research published between 2002 and 2007. The search was limited to research, including both qualitative and quantitative studies, and review articles which focused on wandering and were written in English. Articles dealing with pharmacological management of wandering and related symptoms were excluded.

NUMBER OF SOURCE DOCUMENTS

One hundred twenty-six articles were evaluated. Twenty-three documents met inclusion and exclusion criteria and were selected for use in assessment, making recommendations, or providing additional information for this guideline.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The grading schema used to make recommendations is as follows:

A1: Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g., assessment, intervention, or treatment)

A2: Evidence from one or more randomized controlled trials with consistent results

B1: Evidence from high quality evidence-based practice guidelines

B2: Evidence from one or more quasi experimental studies with consistent results

C1: Evidence from observational studies with consistent results (e.g., correlational, descriptive studies)

C2: Inconsistent evidence from observational studies or controlled trials

D: Evidence from expert opinion, multiple case reports, or national consensus reports

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

This guideline was developed from a systematic review and synthesis of current evidence on wandering. Research findings and other evidence, such as guidelines and standards from professional organizations, case reports, and expert opinion were critiqued, analyzed, and used as supporting evidence.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Internal review was conducted at Research Translation and Dissemination Core (RTDC) and by external expert content reviewers (see Contact Resources page in the original guideline document).

This guideline was reviewed by experts knowledgeable of research on wandering and development of guidelines. The reviewers suggested additional evidence for selected actions, inclusion of some additional practice recommendations, and changes in the guideline presentation to enhance its clinical utility.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (*A1, A2, B1, B2, C1, C2, D*) are defined at the end of the "Major Recommendations" field.

Refer to the original guideline document for a definition of key terms (dementia, Alzheimer's disease, and wandering), a description of individuals/patients at risk for wandering (i.e., defining characteristics and related factors), and a list of assessment tools and instruments.

Assessment Criteria

The following assessment criteria indicate patients who are likely to benefit the most from use of this evidence-based guideline:

- Assess for cognitive decline using the **Mini-Mental State Exam (MMSE)** (Folstein, Folstein, & McHugh, 1975). (See Appendix A.1 in the original guideline document).
- Assess the degree of wandering behavior using the **Revised Algase Wandering Scale (RAWS)** (Nelson & Algase, 2007). The RAWS was developed to quantify wandering in several domains as reported by caregivers. It contains three subscales; persistent walking, spatial disorientation, and eloping behavior (see Appendix A.2 in the original guideline document).
- Assess for depressive symptomatology with **Short Geriatric Depression Scale (SGDS)** (Sheikh & Yesavage, 1986) (See Appendix A.3 in the original guideline document).
- Assess for agitation. In assessing these symptoms, it is critical to conduct a careful evaluation for a general medical, psychiatric, or psychosocial problem that may underlie the disturbance (American Psychiatric Association [APA], 1997). The **Cohen-Mansfield Agitation Inventory: Long Form with Expanded Descriptions of Behaviors** (Cohen-Mansfield, 1999; Cohen-Mansfield, Marx, & Rosenthal, 1989) is useful in assessing agitation (See Appendix A.4 in the original guideline document).
- Assess the frequency with which memory and behavior problems occur including wandering and to what degree the behavior upsets the caregiver. The Zarit & Zarit (Zarit & Zarit, 1983) **Memory and Behavior Problems Checklist—1990R (MBPC)** is useful for this assessment (See Appendix A.5 in the original guideline document).
- Assess for factors associated with wandering as lack of activity, cognitive impairment, socially inappropriate behavior, resistance to care, and greater impairment in activities of daily living (ADL) (Logsdon, et al., 1998; Schonfeld et al., 2007) (*Evidence Grade = B2*).
- Assess what environmental strategies are currently used by formal and/or informal caregivers in dealing with problem wandering (e.g., latches and alarms on doors, barring or disguising exits, visual cues such as stop signs, constant personal supervision, and/or restriction of caregiver’s own activities due to concerns about care recipient’s wandering in other settings such as shopping malls or community outings) and evaluate their effectiveness.
- Assess wandering patterns, which may help to determine treatment.
 1. Identify the triggers for wandering, such as staff attention, access to items (e.g., sweet foods) and sensory stimulation. Interventions may be applied when patients are not wandering, thus reducing their impetus to wander (Heard & Watson, 1999) (*Evidence Grade = C1*).
 2. Identify the travel patterns of patients who wander, such as (Algase et al., 2001; Martino-Saltzman et al., 1991) (*Evidence Grade = C1*):
 - a. Direct travel – travel from one location to another without diversion
 - b. Random travel – roundabout or haphazard travel to many locations within an area without repetition; no obvious route to stopping point
 - c. Pacing – repetitive back and forth movement within a limited area
 - d. Lapping – repetitive travel characterized by circling large areas

Direct travel is most efficient; other methods (2b-2d) are inefficient. Travel inefficiency is inversely related to cognitive status. Severely demented patients travel inefficiently throughout the day. Less

cognitively impaired patients travel more inefficiently near end of day, perhaps due to fatigue effects.

3. Assessment should also incorporate notation of the types of wandering behaviors (Snyder et al., 1978) (*Evidence Grade = C1*). These may include:
 - a. Overtly goal directed/searching behavior – searching for something often unattainable, often associated with calling out repeatedly or approaching others in pursuit of a goal.
 - b. Overtly goal directed/industrious behavior – inexhaustible drive to do things or remain busy, often commenting on need to perform a stated task or gesturing as if performing work.
 - c. Apparently non-goal directed behavior – aimlessly drawn to one stimulus after another.
- Assess pre-morbid lifestyle to help identify those likely to wander. These include:
 1. An active interest, physically and mentally, in music. Examples include singing, playing an instrument, and having a recognized love of music (Thomas, 1999) (*Evidence Grade = C1*).
 2. Demonstrating extroverted personality characteristics of warmth, gregariousness, activity, and positive emotion; demonstrating altruism. Examples may include being more continually active in daily activities, demonstrating social-seeking behavior, demonstrating a greater positive regard toward oneself and others (Thomas, 1997) (*Evidence Grade = C1*).
 3. Additional important pre-morbid lifestyles to assess include:
 - a. Having been physically active in social and leisure activities.
 - b. Having experienced a number of stressful events throughout a lifetime, necessitating readjustments.
 - c. Responding to stress with psychomotor activity, rather than emotional reactions.
 - d. Having demonstrated more motoric behavioral styles in earlier years (Monsour & Robb, 1982) (*Evidence Grade = C1*).
- A descriptive typology of wandering in dementia (Hope & Fairburn, 1990) is also helpful in determining individuals who may benefit from this guideline. This typology is listed in Table 1 in the original guideline document.
- Developing technologies have the potential to aid in diagnosis and monitoring of dementia and related behaviors such as wandering (National Institute on Aging, 2007) (*Evidence Grade = D*).

Description of the Practice

The Need Driven Dementia-Compromised Behavior Model (NDB) (Algase et al., 1996) remains an excellent model to use for conceptualizing behaviors and identifying individuals at risk.

Practices to manage wandering in this guideline are grouped into four areas: environmental modifications, technology and safety, physical and psychosocial interventions, and caregiving support and education (Futrell & Melillo, 2002).

Environmental Modifications

1. Provide a secure place for clients to wander such as a wanderer's lounge and/or a large, safe, walking area (Allen-Burge, Stevens, & Burgio, 1999; APA, 1997; McGrowder-Lin & Bhatt, 1988). (*Evidence Grade = C1*).
2. Enhance the environment by increasing visual appeal, such as tactile boards or three dimensional wall art (Allen-Burge, Stevens, & Burgio, 1999; Cohen-Mansfield & Werner, 1998; Dickinson & McLain-Kark, 1998; Richter, Roberto, & Bottenberg, 1995; Yao & Algase, 2006) (*Evidence Grade = C1*).
3. Place or paint a wall mural over doorway to disguise exits (Kincaid & Peacock, 2003) (*Evidence Grade = C1*)
4. Place gridlines in front of doors to decrease exit seeking (Forbes, 1998; Hussian & Brown, 1987) (*Evidence Grade = C1*).
5. Make exits less accessible by covering panic bar with cloth and allow walking where doors are not in the path, using safety locks or complex and less accessible door latches (APA, 1997; Dickinson & McLain-Kark, 1998) (*Evidence Grade = C1*).
6. Maintain safety by removing clutter, disabling appliances, and utilizing safety locks (Gitlin & Corcoran, 1996) (*Evidence Grade = D*).
7. Provide stimulation clues such as pictures and signs (Allen-Burge, Stevens, & Burgio, 1999; Gitlin & Corcoran, 1996) (*Evidence Grade = D*).
8. Use a combination of large-print signs and portrait-like photographs to aid in way finding (Namazi, Rosner, & Rechlin, 1991; Nolan, Mathews, & Harrison, 2001) (*Evidence Grade = C1*).
9. Use a multifaceted approach to environmental modifications, as it is more effective than singular modifications (Bair et al., 1999; Coltharp, Richie, & Kaas, 1996; Dickinson & McLain-Kark, 1998; Price, Hermans, & Grimley, 2007) (*Evidence Grade = C1*). (See the National Guideline Clearinghouse [NGC] summary of the University of Iowa Gerontological Nursing [UIGN] Interventions Research Center guideline: [Non-pharmacologic management of agitated behaviors in persons with Alzheimer disease and other chronic dementing illnesses](#) by McGonigal-Kenny & Schutte, 2004).

Technology & Safety

1. Use technological devices to locate and monitor wandering (Algase et al., 1997; Cohen-Mansfield et al., Assessment of ambulatory behavior, 1997) (*Evidence Grade = B2*).
2. Use a verbal alarm system as it is more effective than an aversive alarm system (Connell & Sanford, 1998) (*Evidence Grade = C1*).
3. Use mobile locator devices for quickly locating wanderers (Altus et al., 2000; McShane, et al., 1998; Melillo & Futrell, 1998; Melillo & Futrell, 1999; Miskelly, 2004; Miskelly, 2005) (*Evidence Grade = C1*).
4. See Appendix B in the original guideline document for specific information on the **Low Cost Patient Locator System for Geriatric Wandering** (Melillo & Futrell, 1999) (*Evidence Grade = C1*).

Physical & Psychosocial Interventions

1. Assess for and treat depression (Lyketsos, et al., 1997) (*Evidence Grade = B2*).

2. Decrease wandering during structured activities by using social interaction of staff and/or visitors or music (Cohen-Mansfield & Werner, 1995; Holmberg, "A walking program," 1997; Matteson & Linton, 1996) (*Evidence Grade = B2*).
3. Music sessions are more effective than reading sessions in decreasing wandering behavior (Fitzgerald-Cloutier, 1993; Groene, 1993) (*Evidence Grade = B2*). (See the NGC summary of the UIGN guideline: [Individualized music for elders with dementia](#) by Gerdner, 2007).
4. Prevent risky situations by adequate supervision (APA, 1997; Aspinall, 1994) (*Evidence Grade = D*).
5. Walking should not be unnecessarily limited (APA, 1997; Brungardt, 1994) (*Evidence Grade = D*).
6. Promote safe walking (Cohen-Mansfield & Werner, 1998; Coltharp, Richie, & Kaas, 1996) (*Evidence Grade = C1*).
7. Decrease wandering by eliminating stressors from the environment, such as cold at night, changes in daily routines, and extra people at holidays (Hall & Laloudakis, 1999) (*Evidence Grade = D*).
8. Decrease wandering by providing regular exercise such as walking after meals (Holmberg, "A walking program," 1997; Holmberg, "Evaluation," 1997; Landi, Russo, & Bernabei, 2004) (*Evidence Grade = B2*).
9. Systematic behavioral conditioning at mealtime to improve food intake, to sit at the table longer, and to stabilize weight (Beattie, Algase, & Song, 2004) (*Evidence Grade = C1*).
10. Use air mattress therapy for treatment of agitated wandering (Shalek, Richeson, & Buettner, 2004) (*Evidence Grade = A2*).

Caregiving Support & Education

1. Educate caregivers to assist in their ability to care for the wanderer (Cohen-Mansfield et al., "Evaluation of an inservice program," 1997; Dodds, 1994) (*Evidence Grade = C1*).
2. A facility-based approach could include: identification of the problem, a wandering prevention program, interactions with staff, and staff mobilization around problem (Heard & Watson, 1999; Rader, 1987) (*Evidence Grade = C1*).
3. Dementia Care Training for Residential Care Staff using training modules (Alzheimer's Association, 2007) (*Evidence Grade = D*).

Definitions:

Evidence Grading

A1: Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g., assessment, intervention, or treatment)

A2: Evidence from one or more randomized controlled trials with consistent results

B1: Evidence from high quality evidence-based practice guidelines

B2: Evidence from one or more quasi experimental studies with consistent results

C1: Evidence from observational studies with consistent results (e.g., correlational, descriptive studies)

C2: Inconsistent evidence from observational studies or controlled trials

D: Evidence from expert opinion, multiple case reports, or national consensus reports

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Use of this guideline can help caregivers of older adults with dementia who wander in dealing with problem wandering behavior.

Individuals most likely to benefit include community-residing or institutionalized older adults with dementia who at risk for wandering behavior.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This is a general evidence-based practice guideline. Patient care continues to require individualization based on patient needs and requests.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Process Indicators

Process indicators are those interpersonal and environmental factors that can facilitate the use of a protocol.

One process factor that can be assessed with a sample of caregivers is knowledge about wandering. The **Wandering Knowledge Assessment Test** (see Appendix C in the original guideline) should be administered before and following the education of caregivers regarding use of this guideline.

The same sample of caregivers for whom the Knowledge Assessment Test was given should also take the **Process Evaluation Monitor** (see Appendix D in the original guideline) approximately one month following use of the guideline. The purpose of this monitor is to determine understanding of the guideline and to assess the support for carrying out the guideline.

Other process indicators can be used to evaluate the support and use of the guideline. For example, one method is to use chart audits to evaluate the inclusion and use of recommended assessment or evaluation forms.

Outcome Indicators

Outcome indicators are those expected to change or improve from consistent use of the guideline. The major outcome indicators (see the original guideline document for citations and evidence grading) that should be monitored over time include:

- Wandering
- Safety of the individual, such as elopement, getting lost, falls
- Way finding; disorientation
- Body weight maintenance

The **wandering monitor** described in Appendix E of the original guideline is to be used for monitoring and evaluating the usefulness of the wandering guideline in improving outcomes of people who wander. The guideline developer notes that this outcome monitor can be adapted to an organization or unit and further notes that other outcomes believed to be important can be added.

IMPLEMENTATION TOOLS

Patient Resources

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Futrell M, Melillo KD, Remington R. Evidence-based practice guideline. Wandering. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation Dissemination Core; 2008 Jul. 51 p. [85 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002 Mar (revised 2008 Jul)

GUIDELINE DEVELOPER(S)

University of Iowa Gerontological Nursing Interventions Research Center,
Research Translation and Dissemination Core - Academic Institution

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GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Futrell M, Melillo KD. Evidence-based protocol. Wandering. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core; 2002 Mar. 45 p.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print and CD-ROM copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the [University of Iowa Gerontological Nursing Interventions Research Center Web site](#).

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Wandering. Consumer information. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation Dissemination Core; 2003 Jun. 2 p.

Print and CD-ROM copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the [University of Iowa Gerontological Nursing Interventions Research Center Web site](#).

NGC STATUS

This NGC summary was completed by ECRI on October 4, 2002. The information was verified by the guideline developer on October 29, 2002. This summary was updated by ECRI Institute on November 14, 2008. The updated information was verified by the guideline developer on December 5, 2008.

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