

## Complete Summary

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### **GUIDELINE TITLE**

Assessing cognitive function. In: Evidence-based geriatric nursing protocols for best practice.

### **BIBLIOGRAPHIC SOURCE(S)**

Braes T, Milisen K, Foreman MD. Assessing cognitive function. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008. p. 41-56. [39 references]

### **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Foreman MD, Fletcher K, Mion LC, Trygstad L. Assessing cognitive function. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). Geriatric nursing protocols for best practice. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 99-115.

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## SCOPE

### **DISEASE/CONDITION(S)**

Impairment in cognitive function from conditions such as delirium, dementia, and depression

### **GUIDELINE CATEGORY**

Evaluation  
 Screening

## **CLINICAL SPECIALTY**

Geriatrics  
Nursing

## **INTENDED USERS**

Advanced Practice Nurses  
Allied Health Personnel  
Health Care Providers  
Hospitals  
Nurses  
Physician Assistants  
Physicians

## **GUIDELINE OBJECTIVE(S)**

- To determine an individual's cognitive abilities
- To recognize early the presence of an impairment in cognitive functioning
- To monitor an individual's cognitive response to various treatments

## **TARGET POPULATION**

Hospitalized older adults

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Assessment**

1. How and when to screen for and monitor cognitive function
2. Assessment tools
  - Mini-Mental State Examination
  - Mini-Cog
  - IQCDE
  - Naturally occurring interactions
3. Cautions for cognitive function assessment
  - Physical environment
  - Interpersonal environment
  - Timing of assessment

## **MAJOR OUTCOMES CONSIDERED**

- Incidence of cognitive impairment
- Patient satisfaction
- Cost of care

## **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

## **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

Although the AGREE instrument (which is described in Chapter 1 of the original guideline document) was created to critically appraise clinical practice guidelines, the process and criteria can also be applied to the development and evaluation of clinical practice protocols. Thus the AGREE instrument has been expanded for that purpose to standardize the creation and revision of the geriatric nursing practice guidelines.

### **The Search for Evidence Process**

Locating the best evidence in the published research is dependent on framing a focused, searchable clinical question. The PICO format—an acronym for population, intervention (or occurrence or risk factor), comparison (or control), and outcome—can frame an effective literature search. The editors enlisted the assistance of the New York University Health Sciences librarian to ensure a standardized and efficient approach to collecting evidence on clinical topics. A literature search was conducted to find the best available evidence for each clinical question addressed. The results were rated for level of evidence and sent to the respective chapter author(s) to provide possible substantiation for the nursing practice protocol being developed.

In addition to rating each literature citation to its level of evidence, each citation was given a general classification, coded as "Risks," "Assessment," "Prevention," "Management," "Evaluation/Follow-up," or "Comprehensive." The citations were organized in a searchable database for later retrieval and output to chapter authors. All authors had to review the evidence and decide on its quality and relevance for inclusion in their chapter or protocol. They had the option, of course, to reject or not use the evidence provided as a result of the search or to dispute the applied level of evidence.

### **Developing a Search Strategy**

Development of a search strategy to capture best evidence begins with database selection and translation of search terms into the controlled vocabulary of the database, if possible. In descending order of importance, the three major databases for finding the best primary evidence for most clinical nursing questions are the Cochrane Database of Systematic Reviews, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Medline or PubMed. In addition, the PsycINFO database was used to ensure capture of relevant evidence in the psychology and behavioral sciences literature for many of the topics. Synthesis sources such as UpToDate® and British Medical Journal (BMJ) Clinical Evidence and abstract journals such as *Evidence Based Nursing* supplemented the initial searches. Searching of other specialty databases may have to be warranted depending on the clinical question.

It bears noting that the database architecture can be exploited to limit the search to articles tagged with the publication type "meta-analysis" in Medline or

"systematic review" in CINAHL. Filtering by standard age groups such as "65 and over" is another standard categorical limit for narrowing for relevance. A literature search retrieves the initial citations that begin to provide evidence. Appraisal of the initial literature retrieved may lead the searcher to other cited articles, triggering new ideas for expanding or narrowing the literature search with related descriptors or terms in the article abstract.

## **NUMBER OF SOURCE DOCUMENTS**

Not stated

## **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**

### **Levels of Evidence**

**Level I:** Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

**Level II:** Single experimental study (randomized controlled trials [RCTs])

**Level III:** Quasi-experimental studies

**Level IV:** Non-experimental studies

**Level V:** Case report/program evaluation/narrative literature reviews

**Level VI:** Opinions of respected authorities/Consensus panels

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## **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## DESCRIPTION OF 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

Not stated

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

**Note from the National Guideline Clearinghouse (NGC):** In this update of the guideline, the process previously used to develop the geriatric nursing protocols has been enhanced.

Levels of evidence (I – VI) are defined at the end of the "Major Recommendations" field.

### Assessment of Cognitive Function

- Reasons/Purposes of Assessment
  - Screening: to determine the absence or presence of impairment (Foreman et al., 2003 [**Level VI**]).
  - Monitoring: to track cognitive status over time, especially response to treatment (Foreman et al., 2003 [**Level VI**]).
- How to Assess Cognitive Function
  - Mini-Mental State Examination (MMSE) (Folstein, Folstein & McHugh, 1975 [**Level IV**]) can be used to screen for or monitor cognitive function instrument; however, performance on the MMSE is adversely influenced by education, age, language, and verbal ability. The MMSE also is criticized for taking too long to administer and score.
  - Mini-Cog (Borson et al., 2000 [**Level IV**]) also can be used to screen and monitor cognitive function; is not adversely influenced by age,

language, and education; and it takes about half as much time to administer and score as the MMSE.

- IQCDE (Informant Questionnaire on Cognitive Decline in the Elderly) is useful to supplement testing with the MMSE or Mini-Cog because it is useful to determine onset, duration, and functional impact of the cognitive impairment. Information from intimate others can be obtained by using the IQCDE (Jorm, 1994 **[Level IV]**).
- Naturally occurring interactions: Observations and conversations during naturally occurring care interactions can be the impetus for additional screening/monitoring of cognitive function with the MMSE or Mini-Cog (Foreman et al., 2003 **[Level VI]**).
- When to Assess Cognitive Function
  - On admission to and discharge from an institutional care setting (Shekelle et al., 2001 **[Level I]**; British Geriatric Society, 2005 **[Level I]**).
  - On transfer from one care setting to another (Shekelle et al., 2001 **[Level I]**).
  - During hospitalization, every 8 to 12 hours throughout hospitalization (<http://www.icudelirium.org/delirium>).
  - As follow-up to hospital care, within 6 weeks of discharge (Shekelle et al., 2001 **[Level I]**).
  - Before making important health care decisions as an adjunct to determining an individual's capacity to consent (Shekelle et al., 2001 **[Level I]**).
  - On the first visit to a new care provider (Shekelle et al., 2001 **[Level I]**).
  - Following major changes in pharmacotherapy (Shekelle et al., 2001 **[Level I]**).
  - With behavior that is unusual for the individual and/or inappropriate to the situation (Foreman & Vermeersch, 2004 **[Level I]**).
- Cautions for Assessing Cognitive Function
  - Physical environment (Dellasega, 1998 **[Level VI]**).
    - Comfortable ambient temperature.
    - Adequate lighting (i.e., not glaring).
    - Free of distractions (e.g., should be conducted in the absence of others and other activities).
    - Position self to maximize individual's sensory abilities.
  - Interpersonal environment (Engberg & McDowell, 1999 **[Level VI]**)
    - Prepare individual for assessment.
    - Initiate assessment within nonthreatening conversation.
    - Let individual set pace of assessment.
    - Be emotionally nonthreatening.
  - Timing of assessment (Foreman et al., 2003 **[Level VI]**)
    - Select time of assessment to reflect actual cognitive abilities of the individual.
    - Avoid the following times:
      - Immediately on awakening from sleep; wait at least 30 minutes.
      - Immediately before and after meals.
      - Immediately before and after medical diagnostic or therapeutic procedures.
      - In the presence of pain or discomfort.

## Follow-up Monitoring

- Provider competence in the assessment of cognitive function
- Consistent and appropriate documentation of cognitive assessments
- Consistent and appropriate care and follow-up in instances of impairment
- Timely and appropriate referral for diagnostic and treatment recommendations

## Definitions:

**Level I:** Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

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## 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 recommendations.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

#### Patient

- Assessed at recommended time points
- Impairments detected early

- Care tailored to appropriately address cognitive status/impairment
- Satisfaction with care improved

#### **Health Care Provider**

- Competent to assess cognitive function
- Able to differentiate among delirium, dementia, and depression
- Uses standardized cognitive assessment protocol
- Satisfaction with care improved

#### **Institution**

- Improved documentation of cognitive function
- Impairments in cognitive function identified promptly and accurately
- Improved referral to appropriate advanced providers for additional assessment and treatment recommendations
- Decreased overall cost of care

#### **POTENTIAL HARMS**

Not stated

### **IMPLEMENTATION OF THE GUIDELINE**

#### **DESCRIPTION OF IMPLEMENTATION STRATEGY**

An implementation strategy was not provided.

### **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

#### **IOM CARE NEED**

Getting Better  
Living with Illness  
Staying Healthy

#### **IOM DOMAIN**

Effectiveness

### **IDENTIFYING INFORMATION AND AVAILABILITY**

#### **BIBLIOGRAPHIC SOURCE(S)**

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**ADAPTATION**

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

**DATE RELEASED**

2003 (revised 2008 Jan)

**GUIDELINE DEVELOPER(S)**

Hartford Institute for Geriatric Nursing - Academic Institution

**GUIDELINE DEVELOPER COMMENT**

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of The John A. Hartford Foundation Institute for Geriatric Nursing.

**SOURCE(S) OF FUNDING**

Supported by a grant from The John A. Hartford Foundation.

**GUIDELINE COMMITTEE**

Not stated

**COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Primary Authors:* Tom Braes; Koen Milisen; Marquis D. Foreman

**FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

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**GUIDELINE AVAILABILITY**

Electronic copies: Not available at this time.

Copies of the book *Geriatric Nursing Protocols for Best Practice*, 3rd edition: Available from Springer Publishing Company, 536 Broadway, New York, NY

10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web:  
[www.springerpub.com](http://www.springerpub.com).

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This summary was completed by ECRI on May 30, 2003. The information was verified by the guideline developer on August 25, 2003. This summary was updated by ECRI Institute on June 23, 2008. The updated information was verified by the guideline developer on August 4, 2008.

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