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COGNITIVELY IMPAIRED OLDER ADULTS: FROM HOSPITAL TO HOME

An exploratory study of these patients and their caregivers.

OVERVIEW: Although it's known that cognitive impairment in older adults can adversely affect outcomes of care during and after hospitalization, it often goes unrecognized or is poorly managed. Few clinicians understand these patients' needs or those of their caregivers (a spouse, partner, friend, or family member). For these reasons, we conducted an exploratory study, the primary purposes of which were the following:

- to determine the rates of cognitive impairment among older adults hospitalized for acute medical or surgical events
- to identify the needs of these older adults and caregivers throughout an episode of acute illness
- to examine patients' and caregivers' needs at specific times during and immediately after hospitalization

Older adults hospitalized for a common medical or surgical condition were screened for the presence of cognitive impairment on specified days at three hospitals in Philadelphia for four

months. Of 145 who completed the screening, 65% (n = 94) had no evidence of cognitive impairment and 35% (n = 51) had evidence of cognitive impairment; in 65% (n = 33) of the latter group, cognitive impairment was identified only by using the screening instruments.

Five cognitively impaired patients and their caregivers were identified as a convenience subsample; patients and their caregivers were interviewed together (four times, for a total of 20 patient-caregiver interviews); each caregiver was also interviewed alone (one time for a total of five caregiver interviews). The interviews were transcribed. Analysis of transcriptions revealed that patients and caregivers had unmet needs in the following categories: managing and negotiating care, managing illness, and psychosocial coping. Findings from this study reinforce the critical importance of individualized interventions targeting the hospitalization and immediate-post-discharge period (two to six weeks).

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A NEW LOOK AT THE Old



Warren DeWitt, 76, comforts Arden Peters, 90, whose wife died after battling Alzheimer disease, Parkinson disease, and arthritis. DeWitt lived with the Peterses on their West Virginia farm as their primary caregiver and continued to care for Peters after his wife's death. "I want him to be around for a long time," DeWitt said. "We're going to be together for life." Taken from *Aging in America: The Years Ahead*, by photographer Ed Kashi and writer Julie Winokur.

Cognitive impairment among older adults hospitalized for medical or surgical conditions can be devastating and costly.¹⁻⁹ Prolonged hospital stays, higher incidences of complications and hospital readmission, delayed rehabilitation, and higher health care costs and mortality rates all threaten the well-being of patients with cognitive impairment. Yet cognitive function is rarely assessed formally in acute care settings, so it's often difficult to track the course of cognitive change in patients.⁵ Two of the most common cognitive disorders are delirium, an acute disruption of cognition that can persist for months after discharge, and dementia, a chronic, degenerative cognitive disorder. Yet even these disorders are poorly recognized and managed. Better identification of cognitive impairment at admission and during hospitalization may improve the care these patients receive.

Although research has demonstrated that cognitive impairment adds substantially to the complexity of care and increases the patient's risk of poor outcomes during and after an acute episode of illness, little evidence exists to guide best practices in the management of older adults with cognitive impairment who're hospitalized for acute conditions.^{8,10,11} Nor has research focused on the needs of these patients and their caregivers immediately after hospital discharge.¹²

For more than 15 years, our multidisciplinary research team has been testing and refining an innovative "transitional care" model designed to address the needs of cognitively intact older adults at high risk for hospitalization or rehospitalization and their caregivers during and after hospitalization. After we published a paper describing the findings from one of our clinical trials, the Alzheimer's Association contacted us about applying this model to cognitively impaired older adults. We initiated this effort with a generous grant from the Alzheimer's Association.

The primary purposes of this exploratory study were to determine the extent of cognitive impairment among older adults hospitalized for a common medical or surgical condition, identify the needs of cognitively impaired hospitalized older adults and their caregivers throughout an episode of acute illness, and examine differences in both patients' and caregivers' needs at specified times during and after hospitalization.

METHODS

Design. The institutional review board at the University of Pennsylvania approved the protocol for this study, which employed an exploratory methodology and took place at three Philadelphia-area hospitals affiliated with the University of

Pennsylvania Health System. There were two main parts to the protocol. First, in order to define prevalence of cognitive impairment, all patients who fit the eligibility requirements and agreed to participate were screened for evidence of dementia or delirium. Second, a series of interviews took place with patients identified as having cognitive impairment and with their primary caregivers.

Sample. To be eligible for inclusion in the study, patients had to be 70 years of age or older; had to speak English; could not be institutionalized; had to have been admitted for a commonplace cardiovascular, respiratory, orthopedic, or endocrine medical or surgical event; and had to have a primary caregiver, defined as a spouse, partner, friend, or family member who provided assistance with care. There were no set exclusion criteria.

Instruments. To assess for cognitive impairment, the Mini-Mental State Examination (MMSE), Brief Dementia Severity Rating Scale (BDSRS), and Confusion Assessment Method (CAM) diagnostic algorithm were used. In the interview portion of the study, research assistants carried out in-depth, semi-structured interviews in person and by telephone. All instruments have been validated in previous studies.¹³⁻¹⁵

Procedure. Three RNs were hired as research assistants and trained by the research team.

Phase one: determining presence of cognitive impairment. To identify the initial cohort, the research assistants spent two days a week over a four-month period at each of the three facilities. At each one, they were given an updated, computer-generated admissions log, which was used to identify potentially eligible participants. Once these were identified, the research assistants reviewed the patients' medical records for a history of dementia, recent episodes of delirium or cognitive change, and baseline sociodemographic and clinical data. Within 48 hours of hospital admission, all patients who met the criteria were approached (or their caregivers were) by the research assistant and, if they agreed to participate, screened for evidence of dementia or delirium.

Screening for dementia and delirium was conducted as follows. First, a research assistant administered the MMSE, in which 11 criteria are used to assess for cognitive impairment, including orientation to time and place, recall ability, short-term memory, comprehension, and attention and calculation.¹³ A "perfect" score—that at which no evidence of impairment is indicated—is 30, although dementia or delirium is highly unlikely with a score of 25 or above. As suggested by Uhlmann and Larson, the patient's educational level was also considered when assessing the MMSE score. The following education

levels and MMSE scores were considered indicative of impairment: a middle school education, a score less than or equal to 21; a high school education, less than or equal to 23; a college or graduate school education, less than or equal to 24.¹⁶

A patient whose score on the MMSE was below the suggested cutoff for impairment was screened (by a staff nurse who was familiar with him) for delirium using the four-item standardized diagnostic algorithm that's part of the CAM; it enables clinicians who don't have formal psychiatric training to identify delirium in hospitalized older adults.^{6,17} In order to meet the criteria for delirium, a patient must exhibit both inattention and confusion—the latter of acute onset and fluctuating course—as well as either disorganized thinking or an altered level of consciousness.

Patients who passed the MMSE with a borderline score and those who passed because of the educational adjustment were screened further using the BDSRS.¹⁵ In addition to assessing the severity of cognitive impairment, the BDSRS helps to identify it in patients who have passed the MMSE. The BDSRS is a simple list of "informant-based" questions (in this study asked of the patient's caregiver) in order to assess the patient's memory, language, orientation to time, ability to make decisions, and mobility. A score of 0 to 4 indicates intact cognition; 5 to 7, mild cognitive impairment; and 8 or higher, dementia. The BDSRS provides a method of capturing the 50% of patients who may have impairment but pass the MMSE (for instance, a BDSRS score higher than 4 in a college-educated patient who scored higher than 24 on the MMSE could indicate dementia).¹³

Patients were considered to have met the criteria for dementia or delirium if they had a documented history of dementia, if they had an MMSE score of less than 24 (or a score indicative of dementia after adjusting for educational level), a BDSRS score higher than 4, or a positive CAM result.

Phase two: interviewing patients and caregivers. From this group, a convenience sample (n = 5) was approached; after informed consent from patients, caregivers, or other legally responsible parties was obtained, they were enrolled in the second phase of this study, the interviews.

In all, 25 interviews were completed. A total of 20 (four with each of the five patients) were completed with both the patient and the caregiver. These occurred at the following times: during hospitalization and at 48 hours, two weeks, and six weeks after discharge. (Postdischarge interviews took place in the patients' homes.) One additional telephone interview was conducted with the caregiver within the first week of discharge. Because the



MARY D. NAYLOR NAMED McCANN SCHOLAR

The lead investigator on this study, Naylor was the first nurse to be recognized as an outstanding mentor in 2004 by the Joy McCann Foundation, which recognizes mentorships in medicine, nursing, and science. She is noted for "combining her humanistic concern and respect for vulnerable elders with rigorous science to create innovative models to enhance the care and health outcomes of this population."

patient wasn't included in this conversation, the caregiver had the opportunity to discuss concerns freely. The research assistants used a series of open-ended questions to determine caregivers' skills, unmet needs, coping behaviors, and level of burden. Tapes of all of the interviews were transcribed.

One of the authors (Caroline Stephens) analyzed the 25 transcripts using a five-step process:

- reading the entire transcript
- extracting significant statements (which Colaizzi calls "units of analysis"¹⁸) and labeling them according to content
- grouping these labeled units into clusters of themes
- analyzing these themes for discrepancies and synthesizing them into positive and negative categories
- integrating the insights from all of the interviews into a description of the "transitional care needs" of the patients and caregivers

Steps 1 through 3 resulted in logically derived themes. Significant statements that emerged from the transcripts were marked. These highlighted terms, consisting of sentences or phrases that described the needs of cognitively impaired patients and their caregivers, were extracted from the transcripts to generate a list for each participant. Labels were assigned to terms with the same idea or thought patterns. Similar labels were clustered together to form themes. As in steps 4 and 5, another author (Katherine H. Bowles) independently reviewed the codes to determine consistency.

TABLE 1. Patients Identified as Cognitively Impaired (n = 51): Sociodemographic Data and Health Characteristics

Age	Range	70–94
	Mean	79.83
Sex	Male	25 (49%)
	Female	26 (51%)
Race	African American	34 (66%)
	White	17 (34%)
Education	Completed high school	32 (63%)
	Did not complete high school	19 (37%)
Marital status	Married	18 (35%)
	Widowed	20 (39%)
	Divorced	3 (6%)
	Single	10 (20%)
Caregiver type*	Spouse	20 (39%)
	Other relative	17 (33%)
	Friend	4 (7%)
	Paid companion	2 (4%)
	Other	2 (4%)
	None	0 (0%)
Insurance	Medicare	30 (59%)
	Medicaid	2 (4%)
	HMO	19 (37%)
Diagnosis†	Heart failure	12 (24%)
	Angina with complex diagnosis	9 (18%)
	Angioplasty with or without stent	4 (7%)
	Myocardial infarction	4 (7%)
	Angina pectoris	3 (5%)
	Pneumonia	2 (4%)
Number of comorbidities	Range	1–18
	Mean	7.29 (SD ± 5.59)
Number of medications	Range	1–21
	Mean	7.61 (SD ± 3.57)
Length of stay in days	Range	1–12
	Mean	5.21 (SD ± 3.11)
Mini-Mental Status Examination score	Range	5–23
	Mean	17.84 (SD ± 5.06)
Confusion Assessment Method diagnostic algorithm score	Range	0–1
	Mean	0.189 (SD ± 0.398)
Brief Dementia Severity Rating Scale score	Range	0–13
	Mean	4.10 (SD ± 3.87)

*Percentages do not total 100% because of missing data or a refusal to provide it.

†Includes only the top six hospital diagnoses at discharge.

The two authors met once to discuss their findings; although they discussed several items during the meeting, they ultimately reached 100% agreement on the themes and subcategories.

RESULTS

Cognitive impairment. A total of 158 patients were approached for screening; 39% were African American and 53% were women. The total refusal rate was 8% (n = 13).

Of the 145 who completed the screening, 51 (35%) had evidence of cognitive impairment. Of the 51 patients, nine (18%) had a preexisting diagnosis of dementia, nine (18%) had a preexisting diagnosis of delirium, and 33 (65%) were found to have met the criteria for cognitive impairment only through the use of the screening instruments. Of this last group, 20 had no previously documented evidence of cognitive impairment. The remaining 13 had documented episodes of confusion or disorientation, but none had received further assessment or treatment. More information about these 51 patients can be found in Table 1, page 56.

The mean MMSE score for the 51 patients identified as having evidence of cognitive impairment was 17.84 (SD ± 5.06; range, 5 to 23). Twelve percent had a baseline score of less than 12, indicating severe dementia. The CAM algorithm was used 38 times (in 74.5% of the 51 patients); results were positive for delirium in nine patients. The mean BDSRS score was 4.10 (SD ± 3.87; range, 0 to 13).

The unmet needs of patients and caregivers. The mean age of the five patients who took part in the interviews was 80.2 years (range, 78 years to 84 years). The convenience sample included three women and two men; four were African American and one was white. The mean MMSE score was 13.2, and the mean BDSRS score was 6.5. One of five patients had a CAM score indicating delirium, two had a preexisting diagnosis of dementia, and three had test scores that indicated dementia. Of the five primary caregivers, one was a spouse, two were family members, one was a friend, and one was a paid companion.

Analysis of the transcribed interviews revealed three categories of greatest concern to patients and caregivers.

- managing and negotiating care with multiple providers
- managing illness
- psychosocial support and coping

Although there was much overlap in patients' and caregivers' responses, not everyone had the same needs or complaints.

Managing and negotiating care encompasses interactions between the patient and the caregiver,

as well as among the caregiver and family, friends, community, health care professionals, and outside agencies. Common concerns included the need for information, transportation, proper equipment, coordination of services, and help finding appropriate resources (such as informal providers of respite care and state-run prescription plans for low-income elderly people).

Caregivers. "Right now, I want to know what is wrong," said one caregiver, breaking down in tears. "Nobody tells me anything. I haven't talked to a doctor . . . only once . . . I am in the dark."

Another caregiver struggled with obtaining necessary medical equipment. "They delivered a wheelchair, but I couldn't get it out the front door if I wanted to put her on the porch," she said. "I called them, and they came and exchanged it. They gave

LITTLE EVIDENCE EXISTS TO GUIDE
BEST PRACTICES IN THE MANAGEMENT
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FOR ACUTE CONDITIONS.

me one that is small enough to get out the door, but there is nothing to hold her head straight. So the wheelchair is really no good to me."

Patients. The desire for outside assistance was not limited to caregivers. One patient expressed the need for homemaker services to help her grandson, her primary caregiver. "My need at home is somebody to help him . . . wash my clothes and cook. . . . I can get up and down the stairs if I sit and rest a while."

Managing illness. The interviews underscored the fact that the care of cognitively impaired older adults can be far more complex than that provided to cognitively intact older adults.

Caregivers. "He starts cursing at you," said one caregiver. "Then if he gets real angry, he won't respond to anything you say to him. You have to let him mellow out, and then later on he will be fine." Certainly, the visual hallucinations, paranoia, wandering, agitation, safety concerns, memory lapses, sleep disturbances, and socially inappropriate behaviors common to dementia were troubling to all caregivers. One was disturbed that her father

WHAT'S THAT SMELL?

Not knowing these 10 odors could signal Alzheimer.

According to Davangere Devanand, MD, and colleagues, the inability to answer this question may be predictive of Alzheimer disease. Their comparison of people with minimal-to-mild cognitive impairment with healthy controls was presented at the 43rd Annual Meeting of the American College of Neuropsychopharmacology, which took place December 12 through 16, 2004. According to the researchers, these are the 10 odors that may foreshadow the development of Alzheimer disease in people who cannot detect them:

- Strawberry
- Smoke
- Soap
- Menthol
- Clove
- Pineapple
- "Egg" (the artificial egg-like odor added to natural gas)
- Lilac
- Lemon
- Leather

—Lisa Santandrea



"sees a man or shadow or people in the room." Another commented, "Sometimes she forgets she has stuff burning on the stove."

Memory loss exacerbated the challenges of adherence to a complicated medication regimen. As one caregiver noted, her mother "always forgets to take her medications, gets sick, and ends up in the hospital." Another source of frustration was worsening physical symptoms and the many therapies they required. As one caregiver commented, "It is a constant adding and taking away [of medications]. This other new medication is for his legs tightening up, but how can this stop what has already been purposed by God?"

Finally, dietary changes proved difficult for both patient and caregiver, even in at least one case, causing the patient to become depressed—a point of great concern for the caregiver. After the patient (who had Parkinson dementia with resolving delirium) was prescribed a mechanical soft diet, his caregiver related her attempts to boost his morale. "(We are) trying to pep him up because he is . . . depressed because of his . . . diet change. He feels because his diet is soft that he is getting worse. I'm trying to encourage him, you know, comfort him. He was crying today because he was scared and that kind of made me cry."

Patients. Many patients were forced to accept new physical limitations—to different degrees of success. For example, one patient commented that after being discharged from the hospital, "I stagger when I walk [now]. . . . There is nothing [the doctor] can do for that."

Psychosocial coping. "[When] you are an old man, nobody listens to you," said one patient. Indeed, both patients and caregivers found it difficult to cope during the course of the study. Complaints included burdened caregivers, depression, isolation, fear, and loss (patients experienced losses of strength, health, and autonomy, whereas caregivers lost personal time).

Caregivers often commented on the significant burden of caring for a loved one; resignation was a common theme: "You have to do what you have to do . . . take it as it comes. . . . It has been kind of difficult but I love him and I take care of him. . . . I feel it is my responsibility to do it as long as I can." Spirituality was a common coping strategy among these patients and caregivers. "My greatest strength comes from the Lord, my religious beliefs. I believe that God doesn't give us more than we can bear. And if it is my task to take care of him, I just bear with it."

Despite the burdens reported, many caregivers seemed to take on the role of cheerleaders, maintaining a strong sense of hope for their loved ones. Loyalty and commitment were common. "I want to try to get him back to his old self," explained one. "Hopefully, he will jump back."

Patients. Several patients struggled with their diminished physical functioning and the losses of independence, control, and meaning and purpose in life. "My children took over everything about my life," said one. "[My daughter] is the boss. My independence is gone. I have nothing to do. I have been sitting here for six months. I am always bored. They don't need anything from me. They take the joys out of life . . . the things I love to do they took away from me. . . . They don't mean to take away. They are helping me."

CHANGES OVER TIME

We conducted interviews at several points in time to examine how needs changed.

Caregivers. At all data collection points, caregivers reported struggling with feelings of powerlessness and difficulty in accepting the patient's functional decline. Social isolation was a consistent theme.

During hospitalization, caregivers' primary concerns were the patient's loss of function and need to regain it. Practical issues were also major concerns. For example, several were worried about planning

transportation from the hospital to home or arranging for assistance in caring for the patient after discharge, including making sure the patient's medication, dietary, and safety needs could be met. At 48 hours after discharge, symptom management and managing and negotiating care were the issues of greatest concern.

During the private telephone interview, caregivers reported frustration in dealing with systems issues and coordinating care. Several also reported that they were coping with their own chronic health issues, which they often refused to discuss with the patient.

Two weeks after discharge proved to be an especially vulnerable time for many caregivers, who continued to feel insecure about their ability to recognize and manage changes in health status. At this point, the caregiver was seen as the "motivator." Although many were feeling powerless and frustrated, they still maintained hope and a strong sense of obligation and loyalty. Symptom management and behavioral issues were the areas of greatest concern; symptom management continued to be an issue six weeks after discharge.

Patients. At two weeks after discharge, patients commonly reported anger and frustration with their diminished functional status, the dietary changes, unresolved symptoms, and a lack of control and independence. Some expressed fears of being placed in a nursing home. Patients began to fear failing physically.

At six weeks after discharge, patients who had recovered some lost function or autonomy were more positive and optimistic than those who had experienced fewer or even no improvements. The latter group continued to express frustration with their caregivers over the loss of control in planning and decision making and, more important, were more likely to express frustration with their slowness in "bouncing back" or fear that recent changes might never fully reverse.

DISCUSSION

Findings from this study support others that suggest that family members and hospital staff often miss symptoms of cognitive impairment.^{2, 5-7, 10, 11, 19, 20} In our sample of 145 patients, 35% (n = 51) had evidence of delirium or dementia; in 33 of these patients (65%), the symptoms had gone unrecognized. Given the projected growth in the population of people over 65 years in the coming decades, the number of older adults with cognitive impairment is expected to increase dramatically.

One of the significant findings of this study was the need for increased responsiveness to patients' and caregivers' needs during the one-to-two-week period after hospital discharge, a time when both

TIPS FOR NURSES: TRANSITIONS IN CARE

Hospital

During a hospital stay, the level of physical assistance a patient requires can vary. To foster independence, encourage the patient to get involved in care planning and decision making and to participate in activities of daily living.

Nursing home

Residents fear a lack of control and independence. Develop a plan of care that maximizes independence and flexibility, allowing them to participate in care activities, attend meals, and perform supervised self-care.

Ambulatory care

The burden felt by caregivers may change with time. Encourage caregivers to discuss their feelings, and be prepared to refer them to services, such as local senior centers that offer respite care or support groups for caregivers.

Home care

Help patients and caregivers manage and cope with unresolved symptoms by providing detailed information on how to identify changes in or worsening symptoms. Work with them to develop a plan for assessing and reporting such changes.

groups felt especially vulnerable. During this time, patients are at increased risk for poor outcomes such as rehospitalization, yet caregivers report a substantial number of unmet needs.^{2, 6, 7} This is consistent with our previous studies on cognitively intact patients and their caregivers.²¹⁻²³

It's also noteworthy that at the six-week point after discharge—the time when most visiting nurse services end—patients and caregivers still felt the need for ongoing support in meeting health care needs. This suggests that it might be preferable for nurses to remain involved in care management for a longer period, perhaps in a less intensive way (for example, through telephone support).

Limitations. The study is limited by a small sample size and by the fact that screening occurred only at urban medical centers that were academically affiliated; this may affect generalizability to other centers. In addition, although two researchers reviewed all the transcripts, only one coded them, so there was no measure of interrater reliability.

Nursing implications. Many older adults are suf-

**CAREGIVERS REPORTED
STRUGGLING WITH FEELINGS OF
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fering from unrecognized or undiagnosed cognitive impairment. Nurses need to be aware of the risk factors—which include hospitalization, adverse effects of medication, major surgery, hypotension, and overmedication—and evidence-based strategies for early intervention. They should also be aware of the effect that dementia and delirium have on the course of an illness; of particular importance is how these impairments affect a patient's ability to understand and carry out discharge instructions.

The MMSE, CAM, or similar instruments should be routinely administered to all older adults on hospital admission. In addition, the tests should be part of ongoing assessments of older adults at risk for developing cognitive impairment during hospitalization (risk factors include infection, hypotension, poor perfusion, adverse effects of medication, and being restrained). The instruments used during this study are easily administered and interpreted, are acceptable to patients and caregivers, and require little formal training, which can be carried out during a routine new employee orientation or through inservice education.

Whenever possible, older adults need to be included in developing their own postdischarge plan of care. For example, patients with milder forms of cognitive impairment need to be included in all educational activities, when practical, to ensure that they will be able to resume self-care after discharge and to preserve the patient's dignity and sense of autonomy. Patients and caregivers also need education to understand the risks and behaviors associated with cognitive impairment. The ability to recognize hospital-acquired delirium is especially important, because early intervention can minimize the extent and severity of symptoms.

Findings from interviews with a subsample of hospitalized cognitively impaired elderly patients and their caregivers suggest that cognitive impair-

ment adds substantially to the complexity of patients' care needs. This suggests the need for hospital staff to increase efforts to collaborate with the patient's primary caregiver. Referrals to and excellent communication with home care providers are highly recommended. Special attention should be paid to the needs of caregivers with referrals provided for community resources, such as a local agency on aging.

In summary, the findings from this study reinforce the importance of determining the cognitive status of all hospitalized elderly patients and using evidence-based interventions. The study findings also provide insight into the unique challenges facing caregivers and are supportive of development of initiatives to identify and address their needs. Larger-scale studies are needed to test interventions designed to proactively meet the discharge-planning and home needs of this patient group and their caregivers. ▼



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CE² HOURS

Continuing Education

GENERAL PURPOSE: To offer registered professional nurses an opportunity to review an exploratory study that examined rates of cognitive impairment in older adults and the needs of patients with cognitive impairment and their caregivers during and after hospitalization.

LEARNING OBJECTIVES: After reading this article and taking the test on the next page, you will be able to

- outline background information regarding cognitive impairment in older hospitalized patients.
- identify the purposes and methods of this study.
- describe the results of this study and its implications for nursing practice.

To earn continuing education (CE) credit, follow these instructions:

1. After reading this article, darken the appropriate boxes (numbers 1–15) on the answer card between pages 48 and 49 (or a photocopy). Each question has only one correct answer.

2. Complete the registration information (Box A) and help us evaluate this offering (Box C).*

3. Send the card with your registration fee to: Continuing Education Department, Lippincott Williams & Wilkins, 333 Seventh Avenue, 19th Floor, New York, NY 10001.

4. Your registration fee for this offering is \$13.95. If you take two or more tests in any nursing journal published by Lippincott Williams & Wilkins and send in your answers to all tests together, you may deduct \$0.75 from the price of each test.

Within six weeks after Lippincott Williams & Wilkins receives your answer card, you'll be notified of your test results. A passing score for this test is 11 correct answers (73%). If you pass, Lippincott Williams & Wilkins will send you a CE certificate indicating the number of contact hours you've earned. If you fail, Lippincott Williams & Wilkins gives you the option of taking the test again at no additional cost. **All answer cards for this test on "Cognitively Impaired Older Adults: From Hospital to Home" must be received by February 28, 2007.**

This continuing education activity for 2 contact hours is provided by Lippincott Williams & Wilkins, which is accredited as a provider of continuing nursing education (CNE) by the American Nurses Credentialing Center's Commission on Accreditation and by the American Association of Critical-Care Nurses (AACN 00012278, category A). This activity is also provider approved by the California Board of Registered Nursing, provider number CEP11749 for 2 contact hours. Lippincott Williams & Wilkins is also an approved provider of CNE in Alabama, Florida, and Iowa, and holds the following provider numbers: AL #ABNP0114, FL #FBN2454, IA #75. All of its home study activities are classified for Texas nursing continuing education requirements as Type 1.

*In accordance with Iowa Board of Nursing administrative rules governing grievances, a copy of your evaluation of this CNE offering may be submitted to the Iowa Board of Nursing.