

By Donna Marie Fick, PhD, APRN, BC, and Lorraine C. Mion, PhD, RN, FAAN

Delirium Superimposed on Dementia

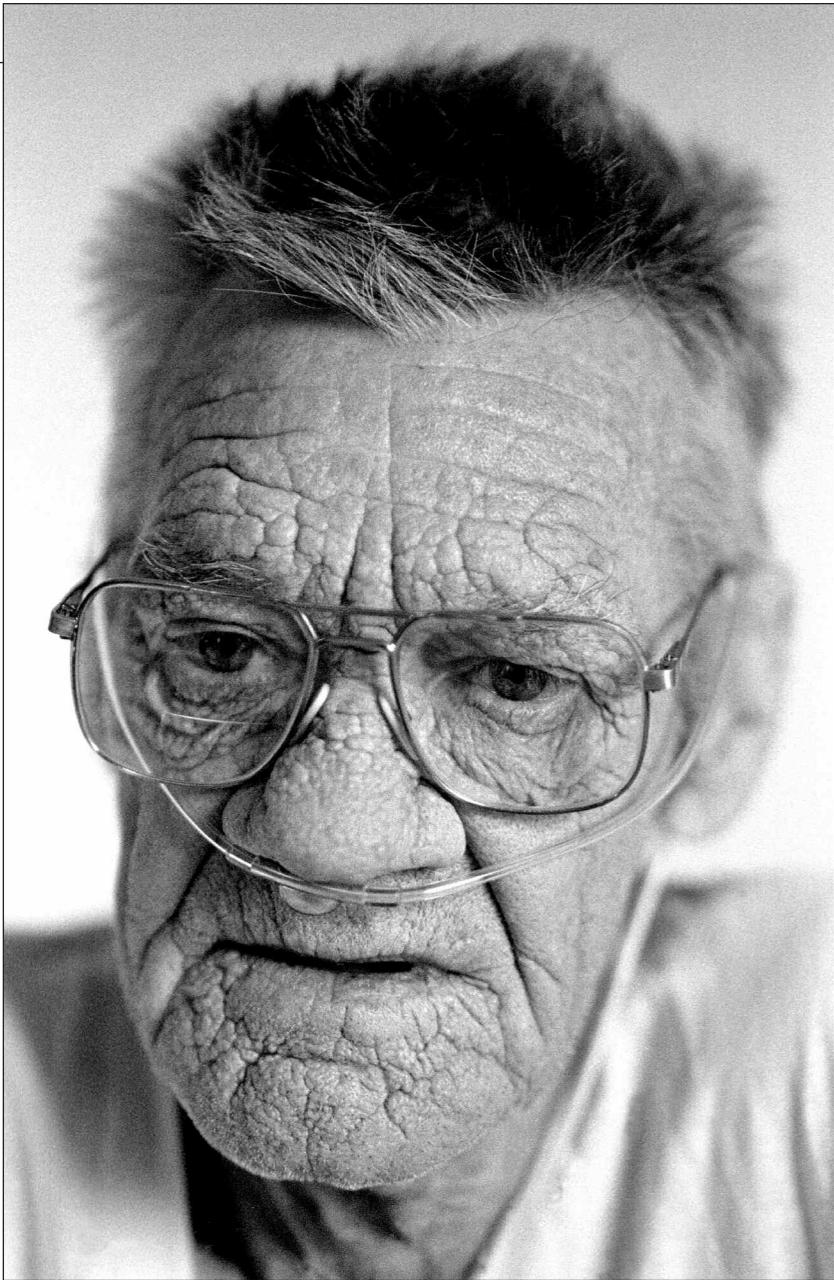
An algorithm for detecting and managing this underrecognized confluence of conditions.

Overview: Delirium is common in older adults who have dementia, but too often nurses confuse the symptoms of delirium with those of dementia and it goes unrecognized and untreated. Delirium can signal a serious underlying condition such as infection or dehydration and can increase the risk of falling and the length of hospitalization. This article presents an algorithm meant to guide nurses in the assessment and treatment of delirium superimposed on dementia. For a free online video demonstrating the use of this algorithm, go to <http://links.lww.com/A209>.

Helen Chittenden is an RN on a 28-bed medical unit in a busy urban medical center. (This case is a composite based on our experience.) As she reviewed her assignments for the day shift, the night-shift nurse informed her of the “confused old lady” in room 62, bed 1. The patient, 76-year-old Sonia Ortiz, was admitted to the unit from the ED at 1 AM. She had been dropped off by her neighbor at 9 PM the previous evening after he had found her wandering in the street. The neighbor left the hospital after telling the ED staff that Ms. Ortiz’s son was a patient in the hospital’s cardiology unit.

Ms. Ortiz’s admitting diagnosis was dehydration. When the night-shift nurse attempted to insert an iv, Ms. Ortiz struck her hand, yelling angrily in Spanish. The night shift nurse phoned the resident on call and received an order for haloperidol (Haldol) 2 mg and lorazepam (Ativan) 2 mg, both given intramuscularly every four hours, and bilateral wrist restraints. After the patient had been restrained, the iv line was inserted and fluids were begun. When the sedatives took effect, blood was drawn and a urine sample was obtained by catheterization.

When Ms. Chittenden entered the room, Ms. Ortiz had received a total of 10 mg of haloperidol and 4 mg of lorazepam and was now difficult to rouse. Ms. Chittenden removed the physical restraints, discussed the medication with the senior resident, and discontinued the haloperidol and lorazepam. She reviewed Ms. Ortiz’s vital signs and oxygen saturation level, all of which were in normal ranges. Blood tests revealed an elevated white blood cell count of $15 \times 10^3/\text{mm}^3$ (normal range: 4.5 to $11 \times 10^3/\text{mm}^3$), a blood urea nitrogen level of 32 mg/dL (normal: 10 to 20 mg/dL), and serum creatinine level of 1.5 mg/dL (normal: less than 1.5 mg/dL), indicating an infection and dehydration. The chest X-ray was clear, and urinalysis showed white blood cells and bacteria. Pending the urine culture results, a broad-spectrum iv antibiotic was begun. Shortly after 10 AM, Ms. Ortiz woke up and pulled out her iv line and urinary catheter. She was able to walk independently, but was incontinent of urine and tried to leave the unit. She drank water from a cup placed in her hand and could take her antibiotic from a medicine cup, and so Ms. Chittenden and the senior resident decided not to reinsert an iv line. Later that afternoon, Ms. Ortiz again became lethargic and hard to awaken.



Ed Kashi

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Web Video

Watch a video demonstrating the use and interpretation of these approaches in identifying delirium superimposed on dementia at <http://links.lww.com/A209>.



A Closer Look

Get more information on why it's important to recognize delirium superimposed on dementia in hospitals.



Try This: Assessing and Managing Delirium in Older Adults with Dementia

This features the Delirium Superimposed on Dementia Algorithm in its original form. See page 57.



Online Only

Unique online material is available for this article. URL citations appear in the printed text; simply type the URL into any Web browser.

HOW TO ASSESS DELIRIUM SUPERIMPOSED ON DEMENTIA

A systematic review by Fick (one of the authors of this article) and colleagues found that prevalence rates of delirium in people with dementia ranged from 22% among older adults who lived in the community to 89% in hospitalized patients.¹ Despite the frequency of delirium in patients with dementia and the underrecognition of this condition, little research has been done to inform the creation of evidence-based guidelines for its assessment, prevention, and management in this population, and many studies of delirium and its management have excluded people with dementia or have not been focused on their needs.^{2,3} It's more difficult to recognize delirium in

people with dementia than in those without because of overlapping symptoms, difficulty in ascertaining baseline mental status and the acuteness of symptoms, and the tendency to attribute symptoms of delirium to a worsening of dementia symptoms.⁴ (See *Why Screen for Delirium Superimposed on Dementia?* page 54.) Yet early recognition is essential in order to

- determine and treat underlying causes.
- institute interventions to maintain safety.
- restore prior cognitive function and improve short- and long-term outcomes.

The Delirium Superimposed on Dementia Algorithm, page 58, is an algorithm based on clinical experience and the results of randomized clinical trials in hospitalized older adults with delirium. The algorithm has not been psychometrically tested, but it does provide a structured approach for the assessment and management of delirium in people who also have dementia.



Why Screen for Delirium Superimposed on Dementia?

Delirium, a common and potentially life-threatening condition in older adults, is characterized by an acute decline in attention and cognition. Reviewing the literature on the topic, Inouye and colleagues noted that up to 25% of older adults are hospitalized with delirium, and up to 56% develop delirium during hospitalization.³ Adverse outcomes of delirium in older adults include longer hospitalizations, functional and mental decline, and higher costs and mortality rates.^{5,9} Delirium in older adults may be a sign of a serious though preventable and treatable condition, such as dehydration, urinary tract infection, pneumonia, pain, or myocardial infarction.

According to one systematic review, in nine out of 10 studies that looked at hospitalized patients with dementia there was a prevalence rate of delirium of at least 50%.¹ Yet in older adults who have dementia, delirium is less likely to be recognized and treated than is delirium in older adults without dementia.^{4, 10, 11} Fick (one of the authors of this article) and colleagues found that nurses recognize 41% of cases of hypoactive delirium and only 21% of cases when the patient has both hypoactive delirium and dementia.¹⁰ The presence of dementia contributes to the underrecognition of delirium.^{10, 12} Delirium superimposed on dementia has not been extensively studied. Fick and colleagues found in a literature review that, in patients with dementia, delirium leads to poor outcomes, including prolonged hospitalization, hospital readmission in less than 30 days, further cognitive and physical decline, nursing home placement, and death.¹

ASSESSING FOR DELIRIUM IN PATIENTS WITH DEMENTIA

Establishing a baseline cognitive status is essential. As in the case of Ms. Ortiz, hospital nurses and physicians often don't have this information and may consider confusion to be the patient's baseline or attribute certain signs to dementia or "sundowning." If there's not a complete medical record, the nurse should determine the patient's usual ability to perform activities of daily living and instrumental activities of daily living (such as handling finances or shopping) by talking to someone who knows the patient, such as a family member, a neighbor, or another provider. Is there a diagnosis of dementia? If the patient had been living in a long-term care facility, staff there can usually be called 24 hours a day. Even if the patient has a diagnosis of dementia, delirium should still be assessed.

Assess for key features of delirium. The primary tool for identifying the presence of delirium is the Confusion Assessment Method (CAM). (For information on how to use the CAM and the evidence for its use, see "Detecting Delirium," *How to Try This*, December 2007, and to view the portion of the online video discussing how to use the CAM, go to <http://links.lww.com/A210>. ) The CAM is a standardized, evidence-based diagnostic algorithm that allows people without formal psychiatric training to identify delirium quickly and accurately (although nurses trained in its use show the best results). The CAM identifies delirium if both of the following two features are present:

- mental status altered from baseline (acute onset or fluctuating)
- inattention

And also if at least one of the following two is present:

- disorganized thinking
- altered level of consciousness

Voyer and colleagues found that, of these symptoms of delirium, only disorganized thinking is also a symptom of dementia.¹¹ Acuteness, fluctuation, inattention, and altered level of consciousness are *not* normal in people with dementia, and their presence should trigger further assessment and treatment.

If the patient has had a diagnosis of dementia, it's crucial to determine whether there's been an acute change. Fluctuation of symptoms is a hallmark of delirium that's not usually present in dementia alone. Still, the nurse should determine whether signs of delirium are present: does the patient's attention wander, and is the patient's conversation rambling or incoherent? There are several motoric subtypes of delirium: hypoactivity, hyperactivity, or both. Patients with the hyperactive form are easy to identify: they're likely to jump at noises, pick at linens and tubes, and are tremulous and easily agitated. For this reason patients who are lethargic or somnolent, with decreased physical activity, may be overlooked.^{10, 11, 13} Since patients with dementia are not hypoactive until the disease is well advanced, delirium should be suspected in any excessively quiet or sleepy older adult until it can be ruled out. (To view the portion of the online video on how to identify delirium, go to <http://links.lww.com/A216>. )

Despite some common signs and symptoms, delirium and dementia are not the same, and delirium has unique signs and symptoms regardless of whether the patient has dementia.¹⁴ When the nurse administers the CAM and determines the main symptoms of delirium are present in a person with dementia, the patient should be understood to have delirium that is acute, reversible, and a medical



Managing Delirium Superimposed on Dementia

emergency needing prompt assessment. The underlying cause should be assessed for as quickly as possible and treatment begun. A plan of care to address the cause of the delirium might include withdrawing or tapering a medication, treating an infection, or removing a urinary catheter. The goal is to prevent further cognitive decline and restore the patient's baseline condition. (To view an algorithm showing when to use the different tools for assessing mental status in older adults presented in the *How to Try* series, go to <http://links.lww.com/A353>. )

Ms. Ortiz, assessed. Ms. Chittenden and the other staff members had little knowledge of Ms. Ortiz's baseline cognitive status. As she woke in the morning and became more alert, a translator was brought in. Through the translator, it became apparent that Ms. Ortiz did not understand one-step commands (for example, "hold up two fingers") and was disoriented to time and place. She didn't respond to redirection and couldn't focus on the translator's directions. Although Ms. Ortiz was verbally responsive, the translator described her responses as "nonsense" and could not understand what Ms. Ortiz was saying.

Ms. Chittenden phoned the cardiology unit and verified that Ms. Ortiz's son was a patient. A cardiology nurse brought Mr. Ortiz to the medical unit in a wheelchair. Mr. Ortiz said that his mother had been diagnosed with dementia the previous year. She lived with him and was able to bathe and dress herself, fix herself simple meals, and feed herself. She did not wander and was not incontinent at home. Mr. Ortiz was dismayed to learn that his mother had struck a nurse, stating that this was a change in her behavior and that she "never hurt anyone." He also said that at home, his mother could follow commands and was not easily distracted as she currently was. Ms. Chittenden told Mr. Ortiz that in addition to dementia his mother appeared to have delirium most likely caused by a urinary tract infection and dehydration. She said that the goal of treating the infection and dehydration was a return of her baseline cognitive condition, which might take a few weeks. (To view the portion of the video explaining how to distinguish delirium from dementia, go to <http://links.lww.com/A212>. )

MANAGEMENT OF DELIRIUM SUPERIMPOSED ON DEMENTIA

Understanding causes. Delirium often results from an interaction of factors: those specific to the patient and those related to hospital care, such as the use of restraints and new medications.¹⁵ As in the case of Ms. Ortiz, preexisting dementia increases susceptibility to delirium, as does a urinary tract infection and dehydration. Other causes include medications

- **First, assess for the most common causes of delirium:** review all medications; look for the presence of infection, acute illness, or dehydration; review lab values; assess sensory factors, such as poor vision and hearing, and environmental factors.
- **Prevent injury and delirium complications**—falls, skin breakdown, aspiration.
- **Avoid** sedatives and hypnotics.
- **Remove or camouflage** tubes, catheters, and other invasive devices.
- **Provide nonpharmacologic** sleep aids and recreational, physical, and occupational therapies as needed, as a first line of treatment before the use of drugs.
- **Provide sensory aides**—eyeglasses and hearing aids as needed.
- **Maintain** mobility.
- **Schedule regular visits** to the toilet.
- **Monitor** hydration, nutrition, and swallowing.
- **Provide discharge teaching and home care as needed**—counsel and educate family about delirium duration and prevention.

that affect the central nervous system such as anticholinergics and benzodiazepines, electrolyte imbalance, fecal impaction or urinary retention, hypoxia, pain, immobility, and sensory impairment. All such factors should be evaluated.

Preventing injury presents a challenge. Delirium increases a patient's vulnerability to falling, overexertion, skin breakdown, immobility, aspiration pneumonia, and poor nutrition and hydration.^{5, 7, 16} Patients must be monitored for these complications and for removing or disrupting necessary medical devices. To improve surveillance, keep the patient near the nurses' station, use bed or chair alarms, and schedule frequent room visits. (See *Managing Delirium Superimposed On Dementia*, above.)

Modifying risk. Certain environmental stimuli and processes of care can increase the risk of delirium. If television or radio sounds seem to increase anxiety or agitation, then these should be avoided. Eyeglasses and hearing aids are essential for keeping patients oriented; since they are often not available at admission, you may have to ask family members to bring these from home. Activity—such as walking, sitting up in a chair, and active or passive range of motion exercises—should be promoted and scheduled with alternating rest periods. Nutrition and hydration must be provided and monitored—this includes providing dentures and oral care. If family members are available, schedule the presence of someone familiar to the patient throughout the



Watch It!

Go to <http://links.lww.com/A209> to watch a nurse use the Delirium Superimposed on Dementia Algorithm to screen for delirium and discuss how to administer it and interpret results. Nurses discuss the fact that delirium occurs in older adults with or without dementia and that it's a medical emergency that requires immediate identification of causes and intervention.

View this video in its entirety and then apply for CE credit at www.nursingcenter.com/AJNolderadults; click on the *How to Try This* series link. All videos are free and in a downloadable format (not streaming video) that requires Windows Media Player.

hospital stay. While sleep is important, sedative—hypnotic medications that affect the central nervous system must be avoided. The nurse may use the Beers criteria (see the *Try This*, “Beers’ Criteria for Potentially Inappropriate Medication Use in the Elderly,” www.hartfordign.org/publications/trythis/issue16.pdf) to identify medications to avoid and to screen for potential medication-related problems. A nurse-led nonpharmacologic sleep protocol consisting of a back rub, warm milk, and relaxing music

The patient should be understood to have delirium that is acute, reversible, and a medical emergency needing prompt assessment.

has also been shown to be effective in decreasing sedative—hypnotic use in people with delirium superimposed on dementia and delirium alone.¹⁷

Address pain management, consider early removal of urinary catheters, and use orientation aids, such as a white board with information about the date, names of caregivers, meal times, activities, and scheduled tests. This orientation board should be visible to the patient and updated daily. Falls often occur when an older adult is attempting to use or reach the bathroom. Patients with delirium superimposed on dementia may be unable to communicate their need to use the bathroom. Scheduled toileting or prompted voiding (every two hours) was shown by Ouslander and colleagues to reduce daytime falls and increase conti-

nence.¹⁸ A number of researchers have tested interventions for delirium in hospitalized and post-acute care patients,^{19,20} but only a few studies have addressed risk factors and interventions specific to delirium superimposed on dementia.^{2,17,21} (To view the portion of the online video discussing the interpretation of the assessments, go to <http://links.lww.com/A213>. ▶)

Ms. Ortiz, continued. In the early evening, Ms. Ortiz was aroused from her state of lethargy and became more active, an indication that she had a mixed form of delirium with both hypoactive and hyperactive aspects. She stripped the linens off both beds in the semiprivate room, ripped up her menu, and kept trying to leave the unit. Ms. Chittenden enlisted the help of one of the nursing assistants, who spoke Spanish, to continually monitor Ms. Ortiz. The unoccupied bed was removed from the room. The bedside table was placed across the entrance to the room; Ms. Ortiz would approach the doorway, stop at the table, turn back and wander about the room. The nursing assistant took her periodically into the bathroom, but Ms. Ortiz remained incontinent. She readily ate and drank throughout the evening. The oncoming night shift nurse reviewed the plan of care and agreed to avoid the use of psychoactive medications and physical restraints. By 10 PM that evening, Ms. Ortiz had tired herself out and went to sleep. She slept throughout the night but readily got up twice during the night when a nursing assistant directed her to the bathroom, which she now recognized and used. In the morning, when the Spanish-speaking nursing assistant spoke with her, Ms. Ortiz was making sense and following one-step commands. A case manager had been consulted to work with Mr. Ortiz on making postdischarge care arrangements for his mother.

CHALLENGES

The biggest challenge of delirium superimposed on dementia lies in recognizing the condition, the symptoms of which are often attributed to the dementia process itself or to normal aging.¹⁰ To further confound matters, patients with Parkinson's dementia or Lewy body dementia often show signs of fluctuating cognition (Neef and Walling have written that the fluctuating cognition often seen in Lewy body dementia “closely mimics delirium and has been referred to as ‘pseudodelirium’²²). If the nurse is unable to establish the acuteness of the change in mental status, it should be assumed the patient has delirium until this is ruled out.

Another challenge is the intensity of nursing care required to manage the behaviors associated with delirium and the need to protect patients against their increased vulnerability for complications while in the hospital. Communication and collaboration

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Assessing and Managing Delirium in Older Adults with Dementia

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WHY: Delirium in a patient with pre-existing dementia is a common problem that may have life-threatening complications, especially if unrecognized and untreated. Acute changes in mental status in older adults with dementia are often attributed to the underlying dementia or “sundowning.” Delirium is thought to occur 4-5 times more often in a person with dementia. Delirium superimposed on dementia is less likely to be recognized and treated than is delirium without dementia. In patients with dementia, delirium can substantially worsen long-term outcomes, including prolonged hospitalization, further decline in cognitive and physical functioning, re-hospitalization, nursing home placement, and death.¹⁻³ Delirium in older adults with dementia may be a sign of preventable and treatable medical problems or serious underlying illnesses such as a myocardial infarction, urinary tract infection, pneumonia, pain, or dehydration. Common medications causing delirium include diphenhydramine, benzodiazepines, anti-depressants, and anti-psychotics.⁴ An unrecognized delirium may interfere with recovery and rehabilitation after a hospitalization.²

BEST TOOLS: Delirium is difficult to assess in older adults with dementia and in hospitalized older adults due to overlapping features of delirium and dementia and the uncertainty of the patient's baseline mental status. Most tools to assess delirium are less specific when assessing delirium in older adults with dementia. Use a standardized tool to measure delirium, if possible, such as the Confusion Assessment Method (CAM)⁵ (See *Try This*: Confusion Assessment Method). The CAM focuses on the KEY FEATURES OF DELIRIUM: Acute onset and fluctuating course, inattention, disorganized thinking, and altered level of consciousness. The Delirium Superimposed on Dementia Algorithm suggested on page two recommends a process for assessing for delirium for people with a pre-existing dementia.

TARGET POPULATION: The Delirium Superimposed on Dementia Algorithm should be used with any older adult with dementia who is hospitalized, at home, in assisted living, in the nursing home, or in the emergency room with a change in mental or physical functioning. All older adults with dementia who experience an acute change in mental or physical functioning and/or behavior changes, should be assessed for delirium superimposed on the dementia.

STRENGTHS AND LIMITATIONS: While the CAM is a useful tool, the Delirium Superimposed on Dementia Algorithm recognizes that the patient's baseline mental status is a critical parameter for assessing and treating delirium. It recommends review of the patient's medical record for indications of pre-existing dementia, and checking with the patient's family, if any, as to whether the patient has a diagnosis of dementia or signs and symptoms of possible dementia. If a patient is admitted from an assisted living or long term care facility, the nurse should question the staff at the facility about the patient's baseline mental and functional status.

The algorithm can be used with patients with dementia who present to the hospital without previous medical evaluation, and/or family members who cannot describe the patient's mental status pre-hospitalization, who are at increased risk for undetected delirium. The algorithm helps address ageism, a significant barrier to detecting the presence of delirium, wherein clinicians attribute further cognitive loss or lethargy in a person with dementia as an inevitable fact of life for older adults. (See *Try This*: Recognition of Dementia in Hospitalized Older Adults).

FOLLOW-UP: The algorithm includes assessment of mental status and physical functioning on a daily basis. Communication amongst interdisciplinary team members across health care settings is crucial to the detection and treatment of delirium in older adults, especially during times of acuity and transition.

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Delirium Superimposed on Dementia Algorithm

Assess for pre-hospital cognitive function:

- Review the patient's medical record for indications of pre-existing dementia and/or functional difficulties.
- Ask the patient's family, if any, whether the patient has a diagnosis of dementia or signs and symptoms of possible dementia.
- If a patient is admitted from an assisted living or long term care facility, question the staff about the patient's baseline mental and functional status.
- Complete a tool, such as the Family Questionnaire, to help assess pre-hospital cognitive and functional abilities (See *Try This*: Recognition of Dementia in Hospitalized Older Adults).



Assess for and identify delirium promptly:

- Acute onset of change in cognition (memory loss, disorientation, hallucination, delusions, and impaired function)
- Acute change in behaviors such as verbal and/or physical aggression, resistance to care, and wandering (See *Try This*: Wandering in the Hospitalized Older Adult). Educate the family about the nature of delirium, indicating this is not a "worsening of dementia" but an acute or emergent health issue. Use an instrument, such as the Confusion Assessment Method (CAM), to identify changes quickly (Inouye, 1990).
- Fluctuation of mental status
- Inattention
- Disorganized thinking
- Altered level of consciousness. Remember lethargy or hypo-alertness is NOT NORMAL in older adults with dementia

(See *Try This*: Confusion Assessment Method)



Assess for physiologic causes and risk factors for delirium:

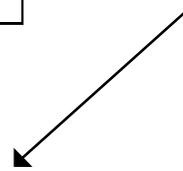
- Medication(s) (See *Try This*: Beers Criteria)
- Fecal impaction
- Urinary retention
- Infection (urine, lungs, skin)
- Hypoxia
- Dehydration
- Hypo/hyperglycemia
- Pain (See *Try This*: Assessing Pain)
- Immobility
- Sensory loss

Prevent injury:

- Room near nurse's station (monitor for excessive noise and stimulation due to location)
- Motion sensor alarm
- Fall risk: low bed, hip pads, etc.
- Remove/camouflage tubes when possible
- Use of sitters

Modify other risk factors:

- Environmental stimuli
- Level of activity
- Nonpharmacologic treatments
- Sensory aides



Follow-up assessment

- Continue to assess cognition using CAM and observing behaviors
- Monitor hydration and nutrition
- Educate and counsel family regarding signs of re-occurrence and duration (2 weeks to 6 months) of delirium



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between nurses and other staff is integral in managing this complex care.

Little is known about what delirium does to the underlying course of dementia and how it affects the long-term slope of cognitive decline and quality of life in people with dementia. Improved understanding of the course of delirium and further research into delirium superimposed on dementia should enhance the care of these patients.

COMMUNICATING THE RESULTS

Discussing the results should be done sensitively: the patient and family may be hearing this information for the first time. Also, the long-term effects of delirium in people with dementia are unknown. Both the family and caregivers should be made aware of the suspected cause of the patient's delirium and of all potential causes of delirium in people with dementia. Warn them of the signs of delirium to watch for, and explain the need to treat symptoms of delirium as a medical emergency. They should also be given teaching materials with practical tips to avoid delirium after discharge—such as avoiding problematic medications; keeping the patient active, well hydrated, and nourished; and being alert for signs of a urinary tract infection or pneumonia.

The patient may need additional care at home, including nursing care and physical or occupational therapy. A follow-up appointment should be scheduled for 15 to 30 days from discharge. Caregivers should be instructed to call a clinician if the patient's mental status changes abruptly—especially if accompanied by a change in physical functioning or by increased sleepiness. (To view the portion of the online video discussing the creation of a care plan, go to <http://links.lww.com/A350>. )

CONSIDER THIS

What's the evidence to support the use of the Delirium Superimposed on Dementia Algorithm?

Much of what is known about the management of delirium in people with dementia is based on randomized clinical trials in people with delirium. The algorithm in the *Try This* model (page 58) incorporates current published evidence on the assessment and treatment of delirium in patients with and without dementia.

The CAM is central to this algorithm and has been used in clinical practice and research for over 15 years. It has established reliability and validity in people with dementia. Sensitivity ranges from 94% to 100% and specificity from 90% to 95%.²³ The use of the CAM by bedside nurses not trained in its use has been less effective than its use by trained research nurses, particularly when it comes to assessing the features of acuteness, fluctuation, and altered level of consciousness.²⁴ Thus,

For more information on assessing and managing delirium in older adults with dementia and other geriatric assessment tools and best practices, go to www.hartfordign.org, the Web site of the John A. Hartford Foundation–funded Hartford Institute for Geriatric Nursing at New York University College of Nursing. The institute focuses on improving the quality of care provided to older adults by promoting excellence in geriatric nursing practice, education, research, and policy.

For more information on the teaching of geriatrics, go to the Fundamental Geriatric Curriculum Resources Web site at the Hartford Institute: www.hartfordign.org/resources/education/bsnPartners.html. Slides are featured that can be used in any educational setting.

Go to www.nursingcenter.com/AJNolderadults and click on the *How to Try This* link to access all articles and videos in this series.

introduction of the algorithm will require education of staff nurses. (For more on understanding a tool's psychometric properties, see "Define Your Terms," October 2007. For more on the psychometric properties of the CAM, go to <http://links.lww.com/A333>. ) And for a list of online resources, go to <http://links.lww.com/A354>. )

Is this method useful in detecting delirium in people with dementia? Yes. Though we could find no published controlled trials focusing on delirium in people with dementia,² this algorithm is based on the strongest available evidence for assessing and managing delirium superimposed on dementia. ▼

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Routine use of a Try This tool may require formal review and approval by your employer.

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GENERAL PURPOSE: To present registered professional nurses with information to guide them in the assessment and treatment of delirium superimposed on dementia.

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

- outline the characteristics of delirium and management strategies for hospitalized patient with this condition.
- discuss the use of the algorithm presented here to identify patients with delirium superimposed on dementia.

TEST INSTRUCTIONS

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