

# Managing delirium in hospitalized older adults

Prompt recognition and early intervention can improve patient outcomes.

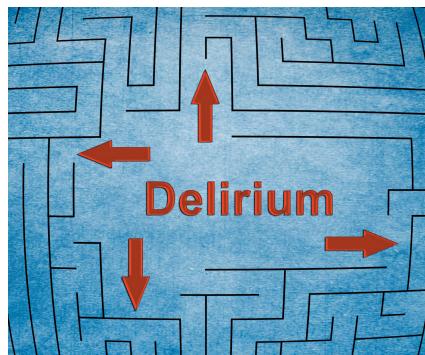
By Margaret J. Bull, PhD, RN

**LAWRENCE JEFFRIES**, age 78, is admitted to the hospital for an arthroplasty of the left hip. A retired roofer, he lives with his wife and son in a two-story home. He has a history of arthritis and type 2 diabetes, which has been controlled with tolazamide 100 mg daily. On the second post-op day, his nurse, Jessica, notes that he slept most of the morning and fell asleep after physical therapy in the afternoon.

When his wife visits at lunch time, she tells Jessica her husband is picking at the bedding and complaining of feeling cold. Jessica has the nursing assistant give him a warm blanket. Later in the afternoon, Mr. Jeffries puts on his call light. When you respond, he states, "I can't figure out how to get my TV on." You remind him you explained how to use the TV remote yesterday, and ask if he has trouble remembering things. He states he didn't have trouble until he came to the hospital. He complains of pain in his left hip and says he doesn't think he has had any pain medication today. However, you know he received morphine 4 hours ago. He asks again about getting his TV working.

When Mr. Jeffries' son visits later, you question him about his father's memory. He confirms his father had no trouble with his memory before.

In a scenario like this, the nurse should ask herself if delirium could be causing the patient's signs and symptoms. A medical emergency that occurs in up to 56% of hospitalized older adults, delirium is marked by sudden onset of confusion (over a few hours or days),



inattention, illogical thinking or incoherent speech, altered sleep-wake cycle, and changes in psychomotor behaviors. Signs and symptoms fluctuate over time, with the patient seeming to float in and out of confusion. Delirium manifestations may go unrecognized in hospital patients because most healthcare professionals aren't familiar with the patient's usual behaviors or baseline cognitive status.

Consequences of delirium for older adults may include increased mortality, functional decline, nursing home placement, and decreased quality of life. Longer duration of delirium is linked to poorer health outcomes among older adults, underscoring the need for early detection and intervention.

Delirium also exacts a high economic price. Estimated annual U.S. healthcare expenditures range from \$143 to \$152 billion, with increased hospital stays contributing heavily.

Delirium can be frightening for both patients and for family members who observe it in their loved ones. As a nurse, you can play a key role in identifying risk factors, detecting symptoms early, implementing nonpharmacologic interventions promptly, and educating family members about the disorder.

## Who's at risk

Older adults, particularly those over age 70, are more likely than younger adults to develop delirium when hospitalized. Other factors that place older adults at risk include dementia, alcohol abuse, impaired physical function, sensory impairment, sleep deprivation, poor oxygenation, uncontrolled pain, and taking four or more medications. Mr. Jeffries in our case scenario has some of these risk factors.



## LEARNING OBJECTIVES

- Identify the impact of delirium on patients and medical costs.
- State risk factors for delirium.
- Describe how to assess a patient for delirium.
- Discuss interventions for managing delirium.

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Expiration: 10/1/18

## Causes and types of delirium

Factors that can cause or contribute to delirium include:

- dehydration
- infection
- drug toxicity
- polypharmacy

## Classifying delirium

Delirium can occur in three types—hyperactive, hypoactive, and mixed.

- In *hyperactive* delirium, the patient becomes agitated and may experience hallucinations. This type of delirium is easier to recognize than the others.
- In *hypoactive* delirium, the patient is unusually sleepy or lethargic. This type of delirium may go unrecognized, especially during the postoperative period.
- With *mixed* delirium, the patient has signs and symptoms of both hypoactive and hyperactive delirium. These may include changes in vital signs, restlessness, agitation, pulling at tubes or curtains, picking at the air, hallucinations, poor appetite, nausea, lethargy, and excessive drowsiness.

- adverse drug reactions
- immobility (including restraint use)
- severe pain
- urinary retention
- metabolic or electrolyte imbalances. In a patient with dehydration, the serum sodium level may rise, causing increased blood pressure.

Delirium occurs in three types.  
(See *Classifying delirium*.)

### Signs and symptoms

Depending on the type of delirium, signs and symptoms may include:

- agitation
- hallucinations
- sleepiness
- lethargy

### Assessing for delirium

To detect a change in the patient's cognition, you need to know his or her baseline status. Acute delirium poses a challenge to nurses who didn't meet the patient before admission or haven't cared for him or her on consecutive days. To help determine if a sudden cognitive change has occurred, question family members about the patient's usual cognitive status.

Using a standardized assessment tool, evaluate the patient for delirium signs and symptoms during each shift or when you note cognitive changes. Several valid and reliable standardized tools exist for delirium screening. The Confusion Assessment Method (CAM) is an evidence-based tool you can use to identify delirium quickly, easily, and correctly. It's the most widely

used tool in published studies, with extensive reports on its validity and reliability in older adults.

Separate versions of CAM have been developed for use in clinical practice. The CAM short form (CAM SF) takes 5 minutes to complete. The 3D-CAM takes only 3 minutes and is recommended when a quick assessment is needed. Both forms assess for key characteristics of delirium, including sudden onset, fluctuating course, inattention, disorganized thinking, and altered levels of consciousness. Both CAM forms and their instructions are

available from Hospital Elder Life Program for Prevention of Delirium at <http://www.hospitalelderlifeprogram.org/delirium-instruments/confusion-assessment-method-long-cam>.

Sudden onset and inattention, plus either disorganized thinking or an altered level of consciousness, indicate a positive screen on CAM. Patients with a positive screen require further evaluation by a physician or an advanced practice nurse to identify the cause and initiate appropriate interventions.

*Nurse Jessica uses CAM to assess Mr. Jeffries for delirium, based on her observation of excessive drowsiness, his wife's report of him picking at his bedding, and his complaint of pain despite his medication. The test shows his attention span is limited. These results indicate a positive screen for delirium, so she immediately contacts the physician to ensure a more thorough evaluation.*

## Nursing strategies for managing delirium

Anticipating the patient's needs, providing a therapeutic environment, and teaching the family about the condition are crucial strategies for hospitalized older adults who have or are at risk for delirium.

Anticipate patient needs by:

- reviewing prescribed medications for adverse effects
- assessing for pain and providing analgesia as needed
- monitoring vital signs
- promoting hydration
- providing orientation
- encouraging mobility
- providing sensory aids as appropriate.

Provide a therapeutic environment by:

- reducing noise
- providing adequate light
- maintaining consistency and continuity of nursing staff
- avoiding patient relocation or transfer if possible
- orienting the patient to time, place, and self
- providing a soothing atmosphere
- promoting sleep by offering relaxation tapes or music before bedtime.

Teach family members about delirium by:

- providing education about signs, symptoms, and causes of delirium
- suggesting ways the family can work with the patient to reduce symptoms
- encouraging family visits.

## Clinician resources

### Nonpharmacologic interventions

Delirium may be reversible if detected and treated early. In some cases, it can be prevented by identifying risk factors and initiating evidence-based nonpharmacologic measures. These measures include:

- providing a therapeutic environment
- orienting the patient frequently
- anticipating the patient's needs
- ensuring that hearing aids and eyeglasses are available for patients who use them
- observing the patient's response to medications
- checking laboratory tests.

To provide a therapeutic environment, orient the patient to time, place, and self. Minimize noise and ensure appropriate lighting to reduce environmental stimuli and promote rest. (See *Nursing strategies for managing delirium*.)

Anticipating the patient's needs requires astute assessment and direct patient care. Assess the patient's cognitive status, vital signs, medications, and pain level. Monitor vital signs to help identify complications, such as infection and dehydration. For example, low blood pressure may suggest dehydration, irregular breathing may indicate hypoxia, and an elevated temperature might reflect dehydration or infection.

Review prescribed medications, as some drugs may cause adverse effects that increase delirium risk. Assess for pain regularly; severe pain can contribute to delirium. As needed and ordered, administer analgesics to promote effective pain management.

Other direct-care strategies include orienting the patient to time, place, and self and keeping a clock and calendar in the room. In addition, be sure to use clear, concise communication. For instance, tell the patient what you're going to do and why, speaking in short sentences because the patient might have a short attention span. En-

The Hartford Institute for Geriatric Nursing offers comprehensive information on preventing, identifying, and treating delirium. Its "Try This" series highlights best practices on caring for older adults.

Visit [www.hartfordign.org/Practice/ConsultGeriRN](http://www.hartfordign.org/Practice/ConsultGeriRN).

On its website, the Hospital Elder Life Program (HELP) provides information about delirium and related resources to clinicians and family members. The website also features an extensive bibliography for clinicians.

Visit [www.hospitalelderlifeprogram.org](http://www.hospitalelderlifeprogram.org).

Nurses Improving Care for Healthsystem Elders (NICHE) aims to help nurses improve their clinical skills and promotes nursing competence in the care of older adults.

Visit [www.nicheprogram.org/program\\_overview](http://www.nicheprogram.org/program_overview).

courage mobility to the extent allowed, and ensure adequate food and fluid intake to prevent dehydration. If the patient uses dentures or sensory aids, such as a hearing aid or eyeglasses, keep these available and clean.

### Educating family members

Teaching the patient's family about delirium can aid its detection and management. When a family member reports a loved one isn't acting like himself or herself or "just isn't acting right," take this information seriously.

Remember—delirium signs and symptoms can elicit fear and anxiety in family members, who typically lack knowledge about the disorder, its causes, and how to help their loved one. To reduce their anxiety, educate them about delirium, potential causes, and manifestations. Enlist the family's help to promote early recognition of the disorder. Encourage them to visit the patient and bring diversional activities he or she enjoys, such as newspapers, magazines, or puzzles. Urge them to provide reassurance to their loved one and engage the patient in conversation about current events. To help promote a safe environment, ask family members to contact the nurse if their loved one tries to get out of bed without assistance, pulls at tubes or dressings, or needs pain medication.

### The nurse's vital role

You can play a vital role in detecting delirium early and promoting comfort for older adults with this condition. To provide evidence-based care, assess and anticipate the patient's needs. Teach family members about delirium symptoms and causes, and suggest ways for them to promote comfort during their loved one's stay. (See *Clinician resources*.)

*After learning of Mr. Jeffries' positive delirium screen, the attending physician replaces morphine with tramadol 50 mg P.O. every 4 to 6 hours. Jessica explains to the patient's family that delirium symptoms can reflect an adverse drug reaction and the physician thought morphine might have caused Mr. Jeffries' symptoms. She encourages them to alert her if they notice that he seems confused. She also teaches them that tramadol shouldn't be stopped abruptly and that Mr. Jeffries should avoid alcohol when taking the medication.*

*Two days after discontinuing morphine, Mr. Jeffries' delirium resolves. On the fifth day after surgery, he's transferred to inpatient rehabilitation.*



Margaret J. Bull is a professor at Marquette University College of Nursing in Milwaukee, Wisconsin. Names in the clinical scenario are fictitious.

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### Please mark the correct answer online.

1. Delirium occurs in up to what percentage of hospitalized older adults?

- a. 22%
- b. 33%
- c. 45%
- d. 56%

2. Which of the following patients is at highest risk for delirium?

- a. 55-year-old woman who has had a hysterectomy
- b. 78-year-old man who is sleep deprived
- c. 62-year-old woman who exercises three times weekly
- d. 70-year-old man whose only prescription is simvastatin

3. Which of the following does not contribute to delirium?

- a. Not using restraints
- b. Infection
- c. Urinary retention
- d. Severe pain

4. A patient with hallucinations only is most likely to be experiencing which type of delirium?

- a. Hyperactive
- b. Hypoactive
- c. Mixed
- d. Blended

5. A patient who is restless yet drowsy is most likely to be experiencing which type of delirium?

- a. Hyperactive
- b. Hypoactive
- c. Mixed
- d. Blended

6. Which statement about the Confusion Assessment Method (CAM) tool is correct?

- a. It takes 15 minutes to complete.
- b. Studies on the tool's reliability and validity are limited.
- c. An expert needs to complete the tool.
- d. It can be used during each shift or when cognitive changes occur.

7. A CAM finding that would prompt you to refer the patient for further evaluation is sudden onset and inattention, plus:

- a. disorganized thinking.
- b. unaltered level of consciousness.
- c. nonfluctuating course.
- d. normal sodium level.

8. Which of the following would promote a therapeutic environment for a patient with delirium?

- a. Dimmed lights
- b. Continuity of staff
- c. Providing noise for stimulus
- d. Frequent transfers

9. Which of the following is an example of anticipating the needs of patients at risk for delirium?

- a. Reducing fluid intake
- b. Limiting use of sensory aids
- c. Encouraging mobility
- d. Continuing all medications

10. Which statement about family members of patients with delirium is correct?

- a. Family members are unreliable in identifying signs of delirium.
- b. Family members can be helpful in early identification of delirium.
- c. Recommend that family members not bring diversional activities for patients.
- d. Recommend that family members don't engage patients in discussion of current events.