Section 8

Delirium CAP

Problem

The Delirium CAP focuses on issues of delirium (acute cognitive loss) and the related differential diagnosis of chronic cognitive loss and dementia. Identifying problems and their intertwined causation is central to person's lives. The notions of decline and chronicity need to be taken into account. If the troubles are fluctuating or of recent onset, it is more probable that the issue to be addressed is delirium.

Delirium is a serious condition that is usually caused by an underlying acute health problem such as an infection, dehydration, or drug reaction. It is associated with high mortality and morbidity (for example, development of pressure ulcers, functional decline, persistence of behavioral symptoms, hospitalization). This CAP presents an approach to addressing the needs of persons who present with these symptoms.

Delirium is common among inpatients or those recently discharged from a health care setting, including large numbers with pre-existing cognitive impairment. Approximately 25% of persons admitted to a long-term care facility from an acute-care setting will have a measure of delirium that restricts their success in rehabilitation and prolongs their stay. Rates increase from 25% to 80–90% among persons who are at the end of life, causing discomfort for the dying person and his or her family.

Early recognition and treatment of delirium is crucial. Clinicians who are in regular contact with the person are in the best position to recognize, assess, and collaborate with physicians and other primary care providers in instituting a plan of care.

Delirium is never part of normal aging. Some of its classic signs are often mistaken for the progression of dementia, particularly in the later stages of this condition. Unlike dementia, delirium has a rapid onset (hours to days). Typical signs include difficulty paying attention; fluctuating behavior or cognitive function throughout the day; restlessness; sleepiness during the day; rambling; nonsensical speech; and altered perceptions, such as misinterpretations (illusion), seeing or feeling things that are not there (hallucination), or a fixed false belief (delusion).

Successful management depends on an accurate identification of the clinical condition, correct diagnosis of specific cause(s), and prompt nursing and medical intervention. Delirium is often caused and aggravated by multiple factors. If one cause is identified and addressed, but delirium continues, reassess for other potential causes. The focus is on addressing the underlying clinical problems such as treating infections, addressing dehydration, relieving pain and depression, managing medications, ensuring optimal sensory input (for example, with the use of glasses and hearing aids), and promoting as normal as possible the social and functional status in the environment within which the person is staying.

Even when the delirium is identified and interventions are implemented in the hospital setting, the delirium often will still be present when the person is discharged to another setting (for example, home, a long-term care facility, or supportive housing). Both family and formal caregivers need to be aware of interventions that have been successful in starting to reverse the delirium. Family members and caregivers must ensure the person's safety in the home. A person discharged home while still in a delirious state should not be driving a car or operating machinery and should not be responsible for the care of others while in the delirious state. In some

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cases, the person will not be able to be left alone due to safety issues, and will need supervision in taking medications, cooking, and other ADLs. Discharging staff should discuss this with the person and his or her family. Staff can be instrumental in helping family support any activity restrictions until the person's delirium has cleared.

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Overall Goals of Care

- Identify and treat underlying cause(s) of delirium.
- Monitor and care for delirium symptoms and other delirium-related health, mood, and behavioral symptoms (for example, pulling out tubes, unsafe climbing).
- Prevent secondary complications (for example, those associated with physical restraints, falls, dehydration, inappropriate use of psychotropic drugs that may cause or exacerbate delirium).
- Prevent a recurrence of delirium.

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Delirium CAP Trigger

This CAP is triggered when a person has active symptoms of delirium. The goal of treatment is to return the person to his or her baseline status.

TRIGGERED

This group includes persons who exhibit any of the following symptoms:

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- Behavior in the following areas appears different from usual functioning, either new onset or worsening or different from recent times: easily distracted, episodes of disorganized speech, mental function varies over the course of the day.
- Acute change in mental status from person's usual functioning.

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- Behavior present over the last 7 days appears different than the person's usual functioning: easily distracted, periods of altered perception or awareness of surroundings, episodes of disorganized speech, periods of restlessness, periods of lethargy, mental function that varies over the course of the day.
- Sudden or new onset change in mental function over the last 7 days.

This triggered group includes about 1 to 20% of persons in long-term care facilities, 3 to 15% of persons receiving home care, and less than 1% of older persons living independently in the community.

NOT TRIGGERED

This group includes persons who have none of the previously noted symptoms.

Physician Communication and Involvement in Assessment and Care Planning

Initial management. Assessment and initial treatment of delirium rests with nursing staff and physicians. When this CAP is triggered, it suggests that the person may have delirium. Referral to an appropriately qualified health professional, proficient in the diagnosis of delirium, is an important first step in responding to this triggered CAP.

However, if it is not possible to secure a referral within hours, it should be assumed that delirium is present and the person's care should be managed accordingly, while waiting for further advice.

To coordinate effective care approaches, nurses must be prepared to communicate signs of delirium, CAP guideline assessment findings, and concerns to the physician. The more thorough and factual the communication with the physician, the easier it will be to determine an appropriate course of action in a timely fashion. The absence of significant findings should also be communicated to the physician. For example, observations that the person has stable vital signs, has no fever, has no obvious signs of infection or dehydration, has been eating and drinking adequately, and has been receiving no new drugs will help to formulate the next course of action.

Nursing Observations

Changes in vital signs:

- Take and record vital signs (temperature, pulse, respiration, and blood pressure).
- Compare these vital signs to the person's usual/baseline pattern. The following measures are clinically significant and should prompt an evaluation for possible causes:
  - Rectal temperatures above 100º F (38º C) or below 95º F (35º C).
  - Pulse rate less than 60 or greater than 100 beats per minute.
  - Respiratory rate over 25 breaths per minute, or less than 16 per minute. For accuracy, count breaths for 1 full minute.
  - Hypotension or a significant decrease in blood pressure:
    - a systolic blood pressure of less than 90 mm Hg, **or**
    - a decline of 20 mm Hg or greater in systolic blood pressure from the person's usual baseline, **or**
    - a decline of 10 mm Hg or greater in diastolic blood pressure from the person's usual baseline.
  - Hypertension:
    - a systolic blood pressure above 160 mm Hg, **or**
    - a diastolic blood pressure above 95 mm Hg.

Signs of infection:

- Fever suggesting a possible urinary tract infection, pneumonia, or other infection.

- Because fever may be absent in an immunocompromised person with an infection, pay attention to other signs, including cloudy or foul-smelling urine, congested lungs or cough, dyspnea, diarrhea, abdominal pain, purulent wound drainage, or erythema (redness) around an incision.

Indicators of dehydration. [See Dehydration CAP.] If the Dehydration CAP is triggered, proceed under the assumption that this is a problem. If it is not triggered, the following review may help to identify persons not identified by that CAP.

- Recent decrease in urine volume or more concentrated urine than usual
- Recent decrease in eating habits — skipping meals or leaving food uneaten, weight loss
- Nausea, vomiting, diarrhea, or blood loss
- Receiving intravenous drugs
- Receiving diuretics or drugs that may cause electrolyte imbalance

Person in pain. [See Pain CAP.]

- Review pain frequency, intensity, and characteristics (time of onset, duration, quality).
- If the person is receiving an analgesic (pain medication), is the dosing adequate to avoid pain breakthrough? If the analgesic is suspected as the cause of the delirium, the person should have a trial on another analgesic medication from a different drug classification.

Are there indicators of a flare-up of a known chronic condition? Common problems include the following:

- Congestive heart failure
- Diabetes
  - Signs of hypoglycemia include weakness, sweating, tachycardia, nervousness, hunger, and headache.
  - Signs of hyperglycemia include weakness, thirst, greater urine output than usual, and confusion.
- Emphysema/COPD with shortness of breath, wheezing
- CVA (stroke) or TIA (transient ischemic attack): any **new** slurring of speech, limb weakness or numbness, vision changes, new or worsening incontinence, new facial asymmetry
- Thyroid disease
- Gastrointestinal bleeding
- Review any recent changes in physician orders and new laboratory values

Signs of recent functional decline. [See ADL CAP.]

- Recent decline in overall ADL status — assess why ADLs have declined and the likelihood of recovery following reversal of the delirium.

- Is the ADL decline secondary to delirium?

- In what ADL area(s) is the decline present — hygiene, locomotion, eating?
  - Are there associated falls? [See Falls CAP.]

Drug Review

Review the medications the person is taking to identify drugs or regimens that might be associated with delirium. A consulting pharmacist can be invaluable in this review.

- Is (are) there new medication(s) or dosage increase(s)? Review the length of time from medication change(s) to the onset of symptoms. The person could have been on delirium- inducing medications while in acute care and the effects may still be present on discharge to a subacute unit or long- term care facility.
- Is there any specific medication known to contribute to delirium? Almost any drug can cause delirium, but common medications include
  - Drugs with anticholinergic properties (for example, some antipsychotics, antidepressants, antiparkinsonian drugs, antihistamines)
  - Opioids (narcotic pain drug), especially Demerol (meperidine), which is often used postsurgically
  - Benzodiazepines, especially long-acting agents
  - Recent abrupt discontinuation, omission, or decrease in dose of short- or long-acting benzodiazepines. Benzodiazepine withdrawal is important to consider in recent (re)admissions from home, hospital, or other institution.
  - Drug interactions (pharmacist review may be required)
  - It is important to note that drug errors or adverse drug reactions resulting from drug or dosage changes (intended or inadvertent) during transfer from hospital to a long-term care facility are a common problem in older persons. Communication with the hospital to minimize these problems may be critical.
- Is the person taking more than one drug from a particular class of drugs? A pharmacist may be helpful in this review.
- Consider drug toxicity, especially if the person is dehydrated or has renal insufficiency. Does the person have a history of drug toxicity? Review the record. Serum drug level should be considered for some drugs.

Monitor for Associated or Progressive Signs and Symptoms

- Sleep disturbances (for example, up and awake at night/asleep during the day)
- Agitation and inappropriate movements (for example, unsafe climbing out of bed or chair, pulling out tubes). In these situations, the person may need one-on-one supervision. Physical restraint should only be

considered as a last resort and only if it is clinically justified (for example, if the person needs a lifesaving drug or fluid via intravenous tube and restraint alternatives, such as diversion, are ineffective). [See Restraint CAP.]

- Motor hypoactivity (for example, low or lack of motor activity, lethargy, or sluggish responses), increasing the risk of aspiration and pressure ulcers
- Perceptual disturbances common to drug withdrawal such as hallucinations (seeing or feeling things not present) and delusions (for example, mistaking a blowing curtain for a person climbing in a window)

Other Considerations

Psychosocial issues to consider:

- Any recent change in mood (for example, crying, social withdrawal). Remember that delirium is often a frightening experience for the person. He or she needs reminders that the condition is temporary.
- Any recent change in social situation (for example, isolation, recent loss of family member or friend). For persons who have experienced an environmental change, first rule out other causes of delirium.

Physical or environmental factors that could make confusion worse:

- Is the person's hearing or vision impaired? Impairment may have an impact on the person's ability to process information (directions, reminders, environmental cues). Make sure the person uses his or her glasses or hearing aids (if usually worn).
- Is the person **not** receiving frequent reorientation, reassurance, or reminders to help him or her make sense of things?
- Has there been a recent change in environment (for example, an intensive care unit stay, room or unit change, new admission, or return from hospital)? Avoid moving the person to a new setting unless indicated clinically.
- Is there anything that is interfering with the person's ability to get enough sleep (for example, light, noise, frequent disruptions)?
- Is the environment noisy or chaotic (for example, calling out, loud music, constant commotion, frequent caregiver changes)?

End of life considerations. Delirium is common at the end of life. However, it is not usually appropriate to begin an aggressive or invasive work-up to identify the cause(s) of delirium in persons who are actively dying or who have orders for "comfort measures only." A more focused evaluation to determine if current palliative measures are adequate in managing the person's, family's, or unit's (for example, the person is very noisy) comfort is warranted. Discussion with the family is key to establishing goals for care. A balance must be sought between the degree of pain control and the level of consciousness desired. The goals and approach of care should be directed to achieving maximum comfort. Consider the following:

- **Is the person in pain?** An increased dose or frequency of administration or a stronger or additional analgesic may be warranted.
- **Are the person's medications contributing to the delirium?** The drug review should emphasize opioids (narcotics), neuroleptics (antipsychotics), antiepileptics, nonsteroidal anti-inflammatory agents and other pain relievers, antibiotics, and drugs for constipation and diarrhea.
  - Would the person be more comfortable without the drug or with a lower dose, or does the benefit of comfort from the drug outweigh the side effect of delirium?
- **Does the person have "terminal agitation" (uncontrollable delirium)?** Sedation may be warranted to decrease fear and suffering and prevent accidental injury.

Additional Resources

American Psychiatric Association (APA). 2004. Practice guideline for treatment of patients with delirium. *American Journal of Psychiatry* (May). **Note:** This guideline provides a detailed general overview of the delirium syndrome and the role of the psychiatrist in delirium management. These guidelines are also available at the APA Web site: www.psych.org (click on "Clinical Resources" and then click on "Practice Guidelines"). This site also includes Patient and Family Guides that would also be useful in training nurse assistants.

American Psychiatric Association (APA). 2004. Practice guideline for treatment of patients with delirium. *American Journal of Psychiatry* (August).

Flacker JM, Marcantonio ER. 1998. Delirium in the elderly: Optimal management. *Drugs and Aging* 13: 119–30. **Note:** This article provides a detailed approach to treatment and monitoring of delirium.

Inouye SK. 2006. Current concepts: Delirium in older persons. *N Engl J Med*. 354: 1157–65.

Murphy KM, Levkoff S, Lipsitz LA. 1997. Delirium. In Morris JN, Lipsitz LA, Murphy KM, Belleville-Taylor P, eds. *Quality care in the nursing home.* St. Louis, MO: Mosby. **Note:** This chapter provides an overview of the syndrome particularly as it affects nursing home persons and staff. Detailed nonpharmacologic approaches and case examples are presented.

Rapp CG. 1999. Acute confusion/delirium (evidence-based protocol). The Iowa Veterans Affairs Nursing Research Consortium, University of Iowa Gerontological Nursing Interventions Center. **Note:** This protocol provides helpful information for developing a comprehensive care plan for persons with delirium. www.nursing.uiowa.edu

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