

PROVIDING DELIRIUM PREVENTION IN AGE-FRIENDLY CARE

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Delirium is defined as an acute, fluctuating syndrome with disturbance in attention, awareness and cognition that has an underlying cause. It is usually reversible. It is common in older persons in the hospital and may indicate a life-threatening condition or a medical emergency.^{1,2} Because of the condition's prevalence, basic questions arise: Should we screen older adults in the hospital for delirium, and does the evidence support doing this? In the face of this debate as well as the need for careful planning, we will show that there is both a business case and a more important human case for screening and preventing delirium.

Delirium is common, occurring in more than 20% of older adults in the hospital. It leads to poor clinical outcomes and burden for the older adult who experiences delirium and increases the burden and distress for the nurses and caregivers. Secondly, the costs associated with managing complications of delirium — such as falls, aspiration pneumonia, skin breakdown and increased length of stay — is high to the hospital; several studies reported that the costs were double compared to those without delirium while controlling for other factors.^{3,4} A 2011 study found delirium costs the U.S. health system \$164 billion a year.⁵ Finally, the evidence is strong that delirium prevention actually works. A comprehensive review by Ester Oh and colleagues found that delirium prevention decreased delirium incidence in 11 of 14 studies. In two of the studies, prevention of delirium decreased falls by 64%.⁶

Two experiences with older adults illustrate the human case. At our university, we have an ongoing study with researchers from Boston on delirium screening with a rapid delirium screen called the two-item Ultra Brief Screener (called the UB-2), followed by the 3-Minute Diagnostic Interview for CAM (the 3D-CAM).⁷ In this study, we are testing the screening only. But in most cases, the screening seems to increase awareness in preventing delirium, as illustrated by this real story.

During the screening process, an 86-year-old woman in the study asked the registered

nurse in the second day of the screening how she could avoid getting confused in the hospital (her words!). The nurse immediately reassured her, explaining that the staff was already doing things to help with her delirium, such as making sure that she was staying active; getting out of bed and walking with her every day; making sure her nutrition and her hydration were good; knowing her as a person; and making sure that she didn't get any medications that made her worse. They would also watch for electrolyte imbalances and signs of infection, since sepsis can be a medical emergency and older adults sometimes may present with atypical presentations. In some cases, the first or only sign is acute confusion/delirium. This woman was positive for delirium and was improving when she asked the nurse this question. Older adults want and deserve "Age-Friendly" care, and this case illustrates how the 4Ms of an age-friendly health system are connected and how it is important to both assess and act on What Matters, Medications, Mentation and Mobility.

Another story, previously published in its entirety, focused on a woman and her daughter, who came to a talk that author Donna M. Fick gave in a local retirement community. The daughter afterwards thanked the speaker because no one had ever used the phrase "delirium superimposed on dementia" before. Because of the presentation, she realized that was what her mom had experienced when hospitalized. She also stated that the experience was frightening to both of them and

Nonpharmacologic Approaches for Delirium Prevention and Support Using the 4Ms of Age-Friendly Care*

Orientation and cognitive stimulation activities	<ul style="list-style-type: none"> ■ Provide lighting, signs, calendars, clocks ■ Reorient the patient to time, place, person ■ Use validation if they have dementia and consider use of an “All About Me Board” ■ Introduce cognitively stimulating activities (e.g., reminiscing, familiar phrases) ■ Assess and document “What Matters” ■ Facilitate regular visits from family, friends ■ Consider a video from familiar friends or family
Fluid repletion and nutrition	<ul style="list-style-type: none"> ■ Encourage patients to drink; consider parenteral fluids if necessary and have an easy-to-hold drink container with markings so older adults can see their intake ■ Seek advice regarding fluid balance in patients with comorbidities (heart failure, renal disease)
Medications	<ul style="list-style-type: none"> ■ Avoid inappropriate and central-nervous system medications that may cause or worsen delirium (see AGS Beers Criteria[®]) ■ Review the type and number of medications ■ Consider deprescribing (taper) if needed and offer non-drug or safer alternatives
Early mobilization	<ul style="list-style-type: none"> ■ Encourage early mobilization (every older adult/everyday) ■ Keep walking aids (canes, walkers) nearby at all times ■ Ensure all older adults have a daily mobility goal
Vision and hearing/sensory enhancement	<ul style="list-style-type: none"> ■ Resolve reversible cause of the impairment ■ Ensure working hearing and visual aids are available and used by patients who need them
Sleep enhancement	<ul style="list-style-type: none"> ■ Avoid medical or nursing procedures and vital signs during sleep, if possible ■ Schedule medications to avoid disturbing sleep ■ Reduce noise at night ■ Teach about good sleep hygiene during the stay, such as staying active, avoiding alcohol, and avoiding caffeine after 11 a.m.
Infection prevention	<ul style="list-style-type: none"> ■ Look for and treat infections ■ Avoid unnecessary catheterization or tubes ■ Implement infection-control procedures
Pain management	<ul style="list-style-type: none"> ■ Assess for pain, especially in patients with communication difficulties or dementia ■ Begin and monitor pain management in patients with known or suspected pain
Hypoxia protocol	<ul style="list-style-type: none"> ■ Assess for hypoxia and oxygen saturation
Web resources for tools and prevention	<ul style="list-style-type: none"> <li style="width: 50%;">■ idelirium.org <li style="width: 50%;">■ deprescribing.org <li style="width: 50%;">■ americandeliriumsociety.org <li style="width: 50%;">■ icudelirium.org <li style="width: 50%;">■ ihi.org <li style="width: 50%;">■ World Delirium Day 2nd Wednesday in March <li style="width: 50%;">■ hospitalelderlifeprogram.org <li style="width: 50%;">■ deliriumnetwork.org

*For table source information, see Note 10.

was not recognized or acted upon. She went on to say that her mom is much better and realized the hospitalization could have been less traumatic if the staff had known how to help her mom, how to prevent it and how to talk with the family about delirium.⁸

These cases illustrate several key issues:

1. Screening should be paired with prevention, but screening alone often raises the awareness of delirium for prevention.

2. Older adults and their family members who have increased burden and suffering from delirium often want to know what is going on and sometimes can be helpful in recognizing an acute change and helping with management.⁹

3. We have many delirium tools and resources available.

4. Assessing delirium and other M's of an Age-Friendly Health System must always include documenting and acting on them with best practices. In the case of delirium, the evidence is strongest for delirium prevention, so we should always have a plan in place when we assess for delirium. (See **Table on p. 59.**)

5. Caregivers should be educated on preventive measures as well as signs and symptoms of delirium and conditions that would indicate an urgent health problem.

If delirium does occur, clinicians should understand, remove or treat the underlying cause, if possible. These can include medications, infection, dehydration and pre-existing cognitive impairment. They can use non-drug approaches to manage any behaviors associated with delirium, keep the patient safe, prevent complications and maintain or restore function by having daily mobility goals that are informed by the older adult's concerns and goals for care and life. When assessing and recognizing delirium, they then can reassure and educate older adults and their family or significant others, identified by assessing What Matters. Clinicians should be aware of the stress of delirium and encourage caregivers to talk about how it feels when your loved one has delirium and suddenly you see them in a way you've never seen them before or may have to make decisions that you've never made before regarding their health care.

In summary, these stories from older adults are the why of what we do and are a call to action to think about delirium for every older adult who is hospitalized or has a change in physical or mental functioning. They compel us to think every day

about the 4Ms for an age-friendly health system that all older adults need and deserve.

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NOTES

1. Virginia B. Kalish, Joseph E. Gillham, and Brian K. Unwin, "Delirium in Older Persons: Evaluation and Management," *American Family Physician* 90, no. 3 (August 2014): 150-58.
2. Esther S. Oh et al., "Delirium in Older Persons: Advances in Diagnosis and Treatment," *Journal of the American Medical Association* 318, no. 12 (2017): 1161-74.
3. Oh et al., "Delirium in Older Persons."
4. Donna M. Fick, Melinda R. Steis, Jennifer L. Waller, and Sharon K. Inouye, "Delirium Superimposed on Dementia Is Associated with Prolonged Length of Stay and Poor Outcomes in Hospitalized Older Adults," *Journal of Hospital Medicine* 8, no. 9 (2013): 500-505.
5. Douglas L. Leslie and Sharon K. Inouye, "The Importance of Delirium: Economic and Societal Costs," *Journal of the American Geriatrics Society* 59, no. S2 (2011): S241-S243.
6. Oh et al., "Delirium in Older Persons."
7. Donna M. Fick et al., "Pilot Study of a Two-Step Delirium Detection Protocol Administered by Certified Nursing Assistants, Physicians, and Registered Nurses," *Journal of Gerontological Nursing* 44, no. 5 (2018): 18-24.
8. Donna M. Fick, "The Critical Vital Sign of Cognitive Health and Delirium: Whose Responsibility Is It?" *Journal of Gerontological Nursing* 44, no. 8 (2018): 3-5.
9. Christine M. Waszynski et al., "Using Simulated Family Presence to Decrease Agitation in Older Hospitalized Delirious Patients: A Randomized Controlled Trial," *International Journal of Nursing Studies* 77 (2018): 154-61.
10. Information for the Table is modified from Oh et al., "Delirium in Older Persons;" Fick, "The Critical Vital Sign" and Nina M. Flanagan and Donna M. Fick, "Delirium Superimposed on Dementia. Assessment and Intervention," *Journal of Gerontological Nursing* 36, no. 11 (2010): 19-23.

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