



Medication Education: Delirium

Teresa DeLellis, PharmD, BCPS, BCGP, AGSF
Geriatric Clinical Pharmacy Specialist
Chair and Associate Professor of Pharmacy Practice
Manchester University

THE GERIATRICS **5Ms**

MMULTICOMPLEXITY

...describes the whole person, typically an older adult, living with multiple chronic conditions, advanced illness, and/or with complicated biopsychosocial needs



Geriatrics health professionals focus on these 4Ms...

MMIND

- Mentation
- Dementia
- Delirium
- Depression

MOBILITY

- Amount of mobility; function
- Impaired gait and balance
- Fall injury prevention

MEDICATIONS

- Polypharmacy, deprescribing
- Optimal prescribing
- Adverse medication effects and medication burden

WHAT MMATTERS MOST

- Each individual's own meaningful health outcome goals and care preferences

Delirium

- Common, life-threatening acute decline in attention and global cognitive functioning
- Acute brain failure; could still be present 1 month later in 1/3 of patients who had it while hospitalized.
- Fluctuating in nature
 - Hypoactive, hyperactive, or mixed

Hyperactive

- Agitation, restlessness, attempting to remove catheters, and emotional lability
- Rare
- Associated with better outcomes

Hypoactive

- Withdrawal, flat affect, apathy, lethargy, decreased responsiveness
- More harmful in the long-term
- Unrecognized in approximately 75% of ICU patients

Mixed

- Fluctuate between hyperactive and hypoactive presentations

Delirium Consequences

Increased
mortality

Longer duration
of ICU stays

> 10 day
increase in
hospital stay

3 x increased
risk of re-
intubation

Increased costs

Long-term
cognitive and
physical
impairment

Risk Factors

- Less controllable
- Advanced age
- Pre-existing dementia
- Multimorbidity/chronic disease

Precipitating Factors

- Anticholinergics
- Benzodiazepines
- Opioids
- Uncontrolled pain
- Hypo/Hyperglycemia
- Infection
- Surgery
- Any alteration from homeostasis

Most Common Causes in Older Adults

- **Infections:** respiratory, skin, urinary
- **Anticholinergics** (OTC sleep aids, incontinence medications, muscle relaxers)
- **Metabolic disorders:** dehydration, electrolyte imbalance, hypoglycemia, hypoxia
- **Cardiovascular:** heart failure, MI
- **Misc:** postoperative state



Delirium Prevention and Treatment

Orientation and
environment

Melatonin

Address risk
factors

Identify and
manage
precipitating
factors

If harm to
self/others: sitter
or Seroquel or
Haldol if necessary

Orientation and Environment Examples

- Visual and hearing aids
- Encourage visitors
- Familiar objects from home in the room
- Consistency in nursing staff
- Allow TV during the day with daily news,
- Talk about what day it is and the weather
- Sleep hygiene – lights off and quiet at night but lights on during the day
- Mental stimulation during the day
- Early mobilization (so less instrumentation)



Summary



Delirium is a common but serious and potentially life-threatening condition in older adults, characterized by an acute decline in attention and global cognitive function, with symptoms that fluctuate and can manifest as hypoactive, hyperactive, or mixed states.



Several factors can precipitate delirium in older adults, with the most common causes including infections, anticholinergic medications, metabolic disorders, cardiovascular events, and the postoperative state.



Delirium prevention and treatment strategies focus on both non-pharmacological interventions, such as environmental and orientation support (e.g., visual and hearing aids, familiar objects, consistent nursing staff, sleep hygiene) and promoting mental stimulation and early mobilization.