

# OkDCN Nursing Home ECHO Project Medication Effects: Delirium/Dementia

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# Learning Objectives

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- Describe differences in clinical features of Delirium and Dementia
- Describe risk factors for Delirium
- Identify common medications that precipitate delirium
- Describe measures to prevent and manage delirium

# Definitions

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## Dementia

- Acquired syndrome of irreversible significant decline in memory and other cognitive functioning sufficient to affect daily living

## Delirium

- Rapidly developing, yet fluctuating, behavioral change that is characterized by inattention and altered arousal , incoherent speech, thought and action
- Memory and intellectual impairments
- Perceptual disturbances – delusions and hallucinations
- Reversible

# DELIRIUM vs DEMENTIA

## Delirium vs. Dementia

	DELIRIUM	DEMENTIA
<b>ONSET</b>	Acute	Insidious (months to years); may be abrupt in stroke/trauma
<b>VITAL SIGNS</b>	Typically, abnormal (fever, tachycardia)	Normal
<b>COURSE</b>	Rapid, Fluctuating	Progressive
<b>DURATION</b>	Hours to weeks	Months to years
<b>CONSCIOUSNESS</b>	Altered	Usually clear
<b>ATTENTION</b>	Impaired	Normal except in severe dementia
<b>ALERTNESS</b>	Impaired	Normal
<b>BEHAVIOR</b>	Usually agitated, withdrawn, or depressed; or combination	Intact early
<b>SPEECH</b>	Incoherent; rapid/slowed	Problems in finding words
<b>PSYCHOMOTOR CHANGES</b>	Increased or decreased	Often normal
<b>REVERSIBILITY</b>	Usually	Irreversible



# Delirium: Risk Factors

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## Predisposing factors

- Advanced Age
- **Dementia**
- Functional impairment in ADL
- High medical comorbidity
- Hx of alcohol abuse
- Male gender
- Sensory impairment (blindness, deafness)

## Precipitating Factors

- **Medications**
- Acute illness
- Postoperative
- Infections
- Fluid and electrolyte imbalance
- Bed rest/hospital admission
- Pain/discomfort
- Intracranial events
- Severe Anemia
- Use of Restraints



# Why is Delirium Important?

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- Common
- 1 in 3 hospitalized older adult
- 1 in 7 patients on admission to PA/LTC
- Poorer prognosis
- Higher 30-day mortality
- Higher hospital readmission rate
- Lower likelihood of discharge home
- Lower likelihood of physical function improvement

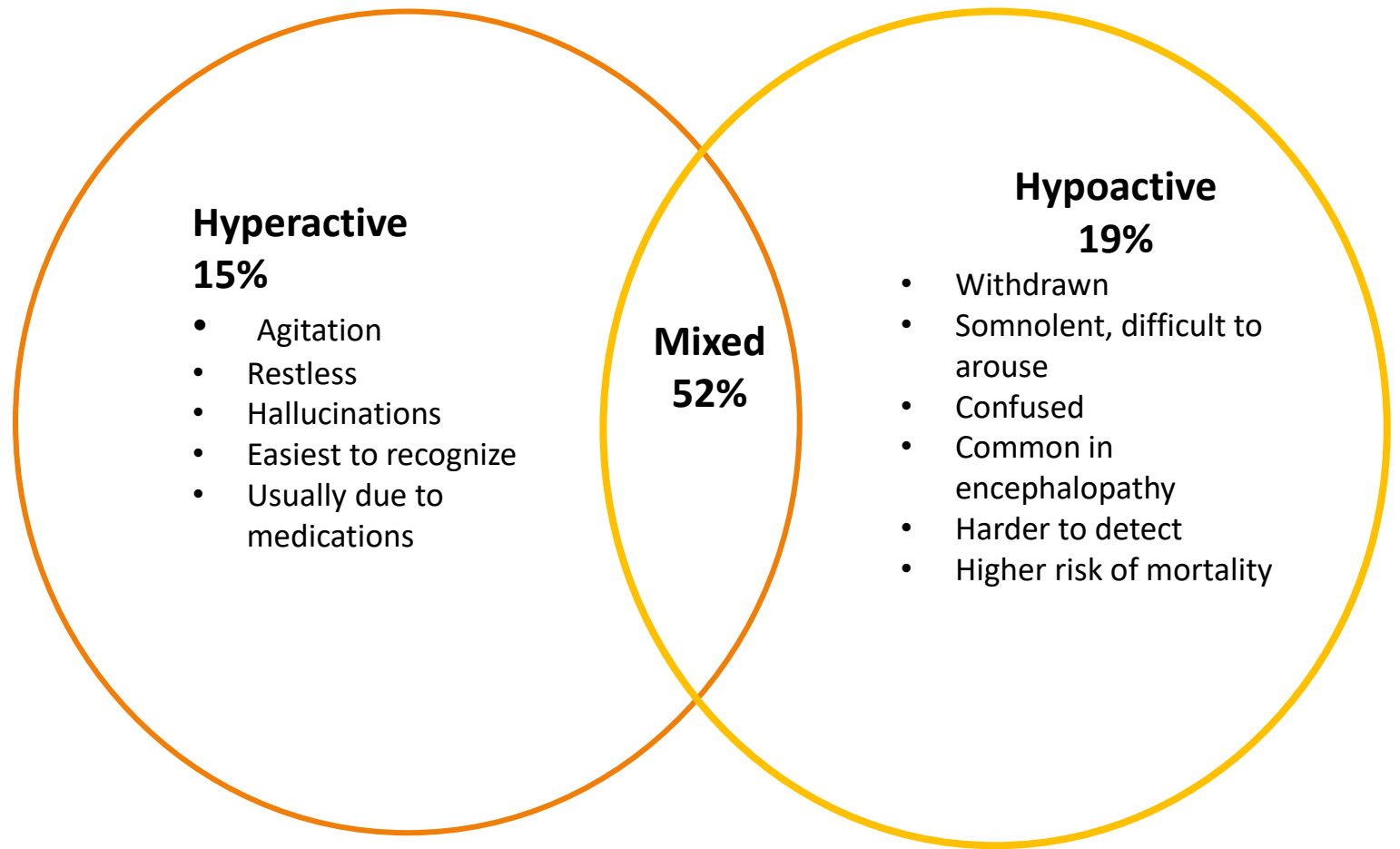
# Diagnosis

## Confusion assessment method (CAM) for the diagnosis of delirium\*

Feature	Assessment
1. Acute onset and fluctuating course	Usually obtained from a family member or nurse and shown by positive responses to the following questions: <ul style="list-style-type: none"><li>▪ "Is there evidence of an acute change in mental status from the patient's baseline?"</li><li>▪ "Did the abnormal behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity?"</li></ul>
2. Inattention	Shown by a positive response to the following: <ul style="list-style-type: none"><li>▪ "Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said?"</li></ul>
3. Disorganized thinking	Shown by a positive response to the following: <ul style="list-style-type: none"><li>▪ "Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?"</li></ul>
4. Altered level of consciousness	Shown by any answer other than "alert" to the following: <ul style="list-style-type: none"><li>▪ "Overall, how would you rate this patient's level of consciousness?"<ul style="list-style-type: none"><li>• Normal = alert</li><li>• Hyperalert = vigilant</li><li>• Drowsy, easily aroused = lethargic</li><li>• Difficult to arouse = stupor</li><li>• Unarousable = coma</li></ul></li></ul>

\* The diagnosis of delirium requires the presence of features 1 AND 2 plus either 3 OR 4.

# Types of Delirium







# Medications and Older Adults

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- **Physiologic changes due to aging**

- Pharmacokinetics
- Pharmacodynamic effects

- **Drug - disease interactions**

- **Polypharmacy**

- Drug-Drug interactions
- Increased risk for an adverse drug effects
- Meds >5 (OR, 2.0)
- 7 to 8 medications, (OR, 2.8)
- 9 or more (OR, 3.3)
- Antipsychotics (OR, 3.2)
- Antidepressants (OR, 1.5)
- Other classes (warfarin, insulin, oral antiplatelet agents, oral hypoglycemic agents)

# Medications Associated with Delirium

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## Action on Central Nervous System

- Antipsychotics
- Opiates
- Barbiturates
- Benzodiazepines
- Nonbenzodiazepine hypnotics (eszopiclone, zolpidem)
- Antidepressants

## Anticholinergic Agents

- First generation antihistamines (promethazine, diphenhydramine, hydroxyzine)
- Antiparkinson agents (benztropine)
- Antispasmodics (scopolamine, dicyclomine, hyoscyamine)
- Muscle relaxants (cyclobenzaprine, methocarbamol)

## Cardiovascular

- Alpha-1 blockers (Doxazosin)
- Central alpha agonists (Clonidine, methyldopa)
- Diuretics
- Other Hypertension drugs

# ARE THEY DIFFERENT TODAY?

## Behaviour

- Provide reassurance
- Be calm and patient
- Make instructions simple
- Do not challenge their abnormal beliefs
- Are they over stimulated?
- Do they have specific triggers for challenging behaviour e.g. sounds, certain people
- Do they have the choice to make their own decisions e.g. food, clothes, bathing
- Avoid making residents do something they don't want to do
- Does the person have any unmet needs? e.g. thirsty, in pain

## Physical Review

- Have they had a change in medication or started medication?
  - Hot swollen skin?
  - A cough?
  - Dark smelly urine?
- Check temperature
- Check blood pressure
- Are they constipated?
- Are they bathing regular?
- Are they mobilisation regular?

## Environmental

- Lighting
- Noise
- Do they know where they are?
  - Too hot or cold
- Is there clear signs? e.g. toilet
- Do they have space to move around?
- Do they have pictures to make it feel homely?
- Do they have access to the rooms they want to be in? e.g. bedroom, kitchen

## Mobility

- Have they had a recent fall?
- Are they at risk of falls?
- Follow falls care plan
- Activity and stimulation - is this being provided?
- Check foot care - do they fit?
- What footwear do they like to wear?
- Is their footwear too tight or too loose?



## Sensory

- Do they wear glasses?
  - Are they theirs?
  - Are they clean?
- Do they wear a hearing aid?
  - Is it switched on?
  - Is the battery flat?
  - Don't shout!
- Does the person like to be touched?
  - Hand massage - if appropriate

## Family & Social

- Work with the family
- Do they have contact with family? If not are they provided with social contact?
- Ask family to complete life story document - 'This is me'
- Work with family to promote personal care

## Food & Drink

- Encourage fluid intake
- Monitor fluid intake not fluid given
- Encourage food intake
- What do they like and dislike?
  - Discuss with family
- Check dentures are worn - do they fit?
- Do they have problems swallowing?

## Continence

- Have a toilet programme in place
- Hygiene - provide assistance
- Mobilise - use regular prompts

## Pain

- Ask if they are in pain and if so provide appropriate pain relief
  - Look for facial gestures
  - Look for body language

For more help and guidance go to the delirium resource box



# Delirium Prevention

# Delirium Management

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## Identify and treat underlying condition(s):

- Dehydration/electrolyte imbalance
- Infections
- Organ failure
- Hypoglycemia
- Pain
- Review medications

## Medical and Environmental Support

- Orientation protocols
- Cognitive Stimulation
- Facilitate physiologic sleep
- Early mobilization
- Aids for sensory impairment

## Manage Agitation

- Nonpharmacologic interventions
- Antipsychotic medications: severe symptoms and danger of harm to self or others, short term use