Differentiating Delirium, Dementia, and Depression

Elderly patients are at high risk of mood and cognitive impairments such as depression, delirium, and dementia. *Delirium* is an acute, transient, and reversible cause of brain dysfunction, usually triggered by one or more precipitating factors, including infection, medications, pain, and dehydration. *Dementia* is usually subtle in its onset and may not be recognized until it has affected one or more cognitive domains. *Depression* is characterized by low mood, loss of interest or pleasure in most activities, sleep disturbance, anxiety, and social withdrawal.

Delirium, dementia, and depression have overlapping characteristics, and patients may experience more than one of these conditions at the same time. It is essential to differentiate between these conditions, particularly if delirium is present, because this is an acute medical emergency that requires rapid assessment and appropriate clinical management. Nurses in both outpatient and hospital settings can have a significant role in the early identification, assessment, and management of patients with dementia, delirium, and depression.

Dementia

Signs and Symptoms

Dementia is the most common disorder of cognition, and is characterized by a **decline** in one or more of these cognitive domains (Larson, 2022):

- Memory (remote memories versus recent memories)
- Language (word retrieval, comprehension)
- Learning new skills (following linear instructions, with ability to repeat skills)
- Executive function (ability to shop, do laundry, write a check)
- Complex attention (completing multi-step tasks)
- Social cognition (remembering family connections, names)
- Perceptual-motor skills (dressing, bathing)

The **decline** in function must not be attributable to other organic disease or due to an episode of delirium and must be severe enough to interfere with independence or daily functioning.

Dementia Syndromes/Causes

While the majority (60-80%) of cases of dementia are related to Alzheimer's disease (AD), other major dementia syndromes include (Larson, 2022):

- Dementia with Lewy bodies (DLB)
- Frontotemporal dementia (FTD)
- Vascular dementia (with or without prior stroke)
- Parkinson disease with dementia (PDD)

Less common syndromes that may present with dementia are:

- Alcohol-related dementia
- Progressive supranuclear palsy (PSP)
- Normal pressure hydrocephalus
- Chronic subdural hematoma
- Huntington disease
- Creutzfeldt-Jakob disease
- HIV-associated neurocognitive disorders (Larson, 2022)

Frequently, dementia has more than one cause or contributing factor and the elderly patient may also be suffering from other medical illnesses or comorbidities that exacerbate the course and progression of their underlying dementia.

Clinical Presentation
Given its gradual progression over time, the subtleties of dementia may be difficult to detect during routine clinical practice. Often, the best assessments come from family or caregivers involved with the patient's daily life. Family or caregivers will offer clinicians a glimpse into the patient's historical baseline and current state of cognitive function related to:

- Forgetfulness/memory difficulty is the most common chief complaint
- Ability to retain new information
- Behavior and how patient manages new situations
- Language skills
- Orientation to place and spatial abilities, such as getting lost in familiar places
- Reasoning skills and how the patient manages unexpected events

Diagnosis
A comprehensive assessment by a neurologist or neuropsychiatrist is required for definitive diagnosis of dementia. The assessment will include clinical history (taken from patient and caregiver separately), physical exam, cognitive testing, neuroimaging (MRI is preferred over CT), and metabolic evaluation. All patients being evaluated for dementia should be screened for depression. Cognitive decline is often a primary complaint in a patient with depression (Larson, 2022). As most cases are progressive, close follow-up in several months can help to confirm the diagnosis. Offer ongoing treatment and close monitoring (Larson, 2022).

Delirium

In stark contrast to the insidious and gradual onset of dementia, delirium is an acute change often associated with inattention, confusion, and/or a clouding of the senses (Larson, 2022) and should be considered a medical emergency. Delirium is a complex neuropsychiatric syndrome which tends to develop over a period of hours or days and may fluctuate throughout the course of a day, typically worsening at night. Delirium is characterized into three different types: hyperactive, hypoactive, and mixed (Hamilton et al., 2022).

Signs and symptoms may include:
Hyperactive:

- Inability to focus, sustain attention, or shift attention between tasks
- Hypervigilance
- Agitation and restlessness
- Tremulousness
- Hallucinations (visual, auditory, tactile)

Hypoactive:

- Somnolence, sleepiness, decreased mental status, and hypoactivity (Hamilton, 2022)

Mixed:

- Waxing and waning between hyperactive and hypoactive (Hamilton, 2022)

Delirium may be precipitated by (Francis, 2022)**:**

- Side effects of anesthesia, medication, or interactions of medications
    - Common drugs that precipitate delirium: benzodiazepines, anticholinergics, opioids, corticosteroids (Francis, 2022)
- Intoxication with prescribed medication due to accumulated doses and polypharmacy
- Infections, such as sepsis, pneumonia, or urinary tract infections
- Dehydration
- Electrolyte imbalances, including hypoglycemia
- Metabolic disturbances including hypoxemia and hypercarbia
- Sleep disturbances, insomnia due to hospitalization and disruption of sleep/wake schedule
- Immobilization, altered care setting, lack of usual assistive devices for mobilization
- Sensory impairment, not having glasses or hearing aids available

Treatment and Management

Avoiding delirium in the elderly is the best approach. Preventive measures include avoiding factors known to precipitate episodes, such as hypoxia, polypharmacy, untreated pain, lack of sleep, and dehydration. Promote situational awareness and cognitive stimulation in hospitalized patients by providing clocks, a room with a window, family visits, early mobilization, and hearing and visual aids if needed.

When delirium is present, the primary objective is to identify the instigating factor(s) and provide definitive treatment. While caring for the patient with acute delirium, non-pharmacologic measures offer the safest care options allowing the primary cause time to resolve. Providing a supportive and restorative setting, with respect for hours of sleep, limiting sensory overload, and creating a home-like setting are known to decrease the incidence and duration of delirium in the highest risk patients (Francis, 2022).

<u>Nonpharmacologic Interventions</u>

- Altering patient environment, decreasing ambient noise, improving lighting
- Providing frequent reassurance through touch and verbal reorientation
- Using familiar staff or family to reassure and observe patient
- Neither endorsing nor challenging hallucinations or delusions
- Attempt to normalize sleep/wake cycle
- Provide adequate nutrition and hydration when possible
- Remove unnecessary lines/tubes/catheters when possible

It is recommended that physical restraints are avoided, as they contribute to poor physical outcomes (aspiration, lost mobility, pressure ulcers), prolonged duration of delirium, and are not proven to be effective (Francis, 2022).

<u>Pharmacologic Interventions</u>

When delirium is manifested by disruptive behavior, especially agitation, symptom control may be necessary to allow for evaluation and treatment. A trial of psychotropic medication such as haloperidol, quetiapine, risperidone, and olanzapine may be warranted. Prescribers are urged to use the lowest dose possible of the shortest acting pharmacologic agent available. Benzodiazepines should be avoided because of their tendency to worsen confusion and delirium (Francis, 2022).

Depression

Depression can present as a confounding factor when examining elderly patients suffering from cognitive decline. Elderly patients with depression will often be able to self-report that they are experiencing memory problems, and may make weak attempts to perform cognitive exams, stating "I just can't do this" (Larson, 2022). Depression may affect anyone, and the elderly population is no exception. Those with baseline dementia may also suffer from depression, and it is therefore recommended that clinicians screen for depression in the elderly, as it is a treatable/reversible comorbid condition that can contribute to dementia and cognitive decline.

Risk Factors for Depression in the Elderly (Espinoza & Unutzer, 2024)

- Female sex
- Social isolation
- Widowed, divorced, or separated marital status
- Comorbid medical conditions
- Functional or cognitive impairment
- Insomnia
- Uncontrolled pain

Signs and symptoms may include:

- Decreased concentration or attention span
- Impaired judgement
- Self-reported memory loss
- Feelings of hopelessness, often worse in morning
- Impaired sleep

Depressive Syndromes

- Pathologic grief reactions (loss of spouse)
- Major or minor depression
- Dysthymic disorder

Management and Treatment (Espinoza & Unutzer, 2024)

- Psychotherapy
- Antidepressant medications
- Neurostimulation therapies
- Bright light therapy
- Exercise
- Family support

Special Considerations

The family or caregivers of those suffering with dementia may also need support, particularly during an acute illness or a combined bout of delirium. Seeing a loved one in acute delirium may leave caregivers feeling frustrated, frightened, and depleted. Consider that delirium may need weeks or months to resolve fully, and this will require care to continue in other less acute settings. Communication with family, care team, and anticipated long-term care facilities should include details about the patient's mental status and cognitive needs.

Comparing Dementia, Delirium, and Depression (Dening, 2019)			
	Dementia	**Delirium**	**Depression**
Onset and duration	• Slow and insidious onset • Deterioration is progressive over time • Permanent	• Sudden onset – over hours or days • Duration – hours to less than one month, but can be longer • Fluctuating clinical features • Usually reversible with treatment of underlying cause	• Recent change in mood persisting for at least two weeks – may coincide with life changes; can last for months or years • Usually reversible with treatment
Psychomotor activity	• Wandering/exit seeking • Agitated • Withdrawn (may be related to coexisting depression)	• Hyperactive delirium: agitation, restlessness, hallucinations • Hypoactive delirium: sleepy, slow-moving • Mixed: alternating features of the above	• Usually withdrawn • Apathy • May include agitation
Attention	• Generally normal	• Impaired or fluctuates, difficulty following conversation	• May appear impaired
Mood	• Depression may be present in early dementia	• Fluctuating emotions, for example: anger, tearful outbursts, fear	• Depressed mood • Lack of interest or pleasure in usual activities • Change in appetite (increase or decrease)
Thinking and speech	• Difficulty with word-fluency, word-retrieval, and abstraction	• Disorganized, distorted, fragmented, incoherent	• Intact; themes of helplessness and hopelessness present

References:

Espinoza, R. & Unutzer, J. (2024, October 2). Diagnosis and management of late-life unipolar depression. *UpToDate.* https://www.uptodate.com/contents/diagnosis-and-management-of-late-life-unipolar-depression

Francis, J. & Young, G. (2022, July 8). Diagnosis of delirium and confusional states. *UpToDate*. https://www.uptodate.com/contents/diagnosis-of-delirium-and-confusional-states

Hamilton, W., O'Neel, N., Lacuzong, M., Lazarus, A., Johnson, P., Gupta, A., (2022). Early recognition, prevention, and management of delirium in the acute care setting: a quality improvement initiative. Clinical Nurse Specialist 36(3):p 169-174, 5/6 2022. https://doi.org/10.1097/NUR.0000000000000674

Larson, E. (2022, November 2). Evaluation of cognitive impairment and dementia. *UpToDate*. https://www.uptodate.com/contents/evaluation-of-cognitive-impairment-and-dementia