Neurocognitive Disorders: Delirium and Dementia Clinical Practice Guidelines

Overview of the Conditions/Diseases

Definitions:

Neurocognitive disorders (NCD): These are mental disorders in which the brain's functioning is adversely affected by the disruption of its functioning in one or more of a number of domains:

> **Complex attention:** paying attention; blocking distractions; focusing; processing speed
>
> **Executive functioning:** abstract thinking, planning, and implementing plans (starting, sustaining, completing tasks); organization and sequencing; effective set-shifting (e.g., from one task to the next); evaluating (judgment)
>
> **Memory and learning:** immediate recall; recording, storing, and retrieving information
>
> **Language:** expressive speech and understanding others use of words
>
> **Perception and motor functioning:** recognizing familiar people and places; motor skills
>
> **Social interacting:** effective monitoring and appropriate modulating of attitude and behavior

Delirium: The most characteristic neurocognitive features of a delirium are (1) significant impairments in level of awareness and complex attention (as described above) which have 2) developed suddenly (usually over hours or days), (3) fluctuates over the course of the day, (4) involves impairment in at least one other neurocognitive domain, and (5) can be attributed to an acute medical illness, injury, medication or substance use.

Dementia: This is a general term (which continues in common usage with geriatric patients) to designate a major NCD, in which the decline in neurocognitive domains from an individuals' previous baselines is severe enough to interfere significantly with their daily lives, specifically in the abilities required for living independently and safely (e.g., managing medication, paying bills, cooking meals, maintaining hygiene). The diagnosis requires significant impairment in one or more of the above neurocognitive domains, and is excluded when the neurocognitive deficits can be ascribed primarily to other serious mental illnesses such as severe depression or schizophrenia . While with mild dementias, affected individuals may be able to get by with the supervision and coaching of others, with moderate dementias, they require some degree of hands-on assistance with their daily tasks. A diagnosis of severe dementia applies to those who have become entirely dependent on others to meet their needs for "care and custody."

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Note that with individuals with pre-existing disorders involving neurocognitive problems (e.g., chronic schizophrenia, recurrent mood disorders, neurodevelopmental disorders acquired earlier in life), if their current neurocognitive symptoms represent a significant further decline from their previous levels of impairment, they may have developed a superimposed dementia. When only one such domain is affected, the problem may be referred to as a minor NCD. Note also that dementia is a risk factor predisposing individuals to developing anxiety and/or mood problems, as well as psychosis and delirium.

Pathophysiology: Delirium and dementia are both caused by illnesses, trauma, and/or substances leading to a disruption of the functioning of brain cells and their interconnections, impairing the ability of brain cells to communicate effectively with each other. The difference between them is that delirium most often is characterized by a sudden onset together with a highly fluctuating course, while most kinds of dementia tend to develop more gradually. The brain has distinct regions responsible for different functions. The manifestation of symptoms of delirium and dementia may vary according to which regions are most affected, and, unless a specific organic cause (e.g., brain trauma) is readily evident, this is how the different types are usually categorized.

Types of delirium:

- Hyperactive (e.g., agitated); hypoactive (e.g., quiet); mixed
- Acute; persistent
- Substance intoxication or withdrawal
- Medication-induced
- Induced by one or more medical problems

Common types of dementia:

- Neurodegenerative disease: Alzheimer's, Huntington's, Parkinson's, Lewy body disease
- Vascular dementia: due to single or multiple infarcts, subdural hematoma
- Mixed dementia: due to multiple etiologies
- Frontotemporal dementia (FTD)
- Traumatic brain injury (TBI)
- Dementia due to other medical condition(s)
- Human immunodeficiency virus (HIV)
- Prion disease (Creutzfeldt-Jakob disease)
- Normal Pressure Hydrocephalus (NPH)
- Substance/medication induced (e.g., alcohol-related Wernicke-Korsakoff syndrome)

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Best Practice Standards for Prevention and Management

Education: Stress importance of reporting to treating physician significant changes from usual baseline in cognition, mood, anxiety and/or behavior; continue to implement plans for monitoring, re-assessing, and treating comorbidities, for maintaining routines and hobbies, and for modifying advanced care plans.

Interventions: The most important steps in determining if an individual has any significant neurocognitive impairment are (1) gathering corroborating evidence from available others who can reliably describe the neurocognitive problems the member is having, (2) assessing any risks to the member's safety because of these problems, and (3) completing an assessment using an appropriate assessment tool, as feasible. (Patients may decline or refuse any cognitive screening.) For individuals with sensory or communication impairment (including visually impaired, hearing impaired, cannot speak but can write or cannot write but can speak), supplement assessments with the use of assistive devices and/or written or spoken testing instructions as needed.

- Confusion Assessment Method (CAM): A brief diagnostic tool to assess for delirium, checking for indicators such as altered level of consciousness, inattention, disorganized thinking, acute onset, and fluctuating course
- Animal Naming Test (ANT): A test of verbal fluency and ability to assess knowledge learned across a lifespan.
- Mini-Cog: A tool that incorporates three-word verbal recall and the Clock Drawing Test (CDT) to assess a person's registration, recall and executive function.
- AD8 Dementia Screening Interview (AD8): An alternate screen that can be completed with a family member, caregiver or the individual when the use of other screens is not feasible
- National Task Group- Early Detection Screen for Dementia (NTG-EDSD): An instrument designed to screen adults with an intellectual disability who may be showing early signs of mild cognitive impairment or dementia. This tool is designed to note functional decline, health problems and record information useful for further assessment.

Lifestyle changes: Heart healthy diet; physical activity; sleep hygiene; quit smoking; avoid drinking alcohol or use of illicit substances

Additional conditions that negatively impact the condition/disease:

- Depression, other pre-existing psychiatric illness
- Medication side effects
- Poor swallowing/dentition/aspiration risk
- Thyroid problems
- Osteoporosis
- Pain

- Incontinence
- Diabetes
- History of stroke
- Cardiovascular disease
- High blood pressure
- Substance use
- Falls

Anticipating, Recognizing, and Responding to Symptoms

Seek timely medical attention when current interventions and/or medications are not managing symptoms.

Potential symptoms: Neuropsychiatric symptoms (sometimes referred to as BPSD—Behavioral & Psychological Symptoms of Dementia) include agitation, aggression, delusions, hallucinations, wandering, depression, apathy, disinhibition, sleep disturbances, distressing repetitive behaviors, and careless or reckless actions .

Interventions to manage symptoms:

- Identify and treat potential medical causes for altered mental status (e.g., UTI, pneumonia, drug-drug interactions, metabolic disorders, pain, adverse reaction to new medication); note that with older adults, such medical problems may present themselves atypically— e.g., with only changes in mental status and without their usual physical signs or symptoms
- Seek routine neurological/neuropsychiatric evaluation to assess baseline, reassess changes from baseline
- Review sleep hygiene, encourage consistent sleep-wake schedule, maximize morning light exposure
- Evaluate medical or physical factors that may exacerbate symptoms (e.g., pain, discomfort, an unmet need)
- Participate in an adult day program; implement a daily exercise program; meaningful skills assessment by an occupational therapist to develop a set of individual-specific meaningful activities; set up or complete a cognitive rehabilitation program
- Evaluate and optimize communication, address any hearing or vision deficits
- Complete advance care planning while individual still retains the capacity to indicate preferences
- Identify environmental and/or behavioral triggers and develop an individualized behavior support plan, including coaching and supporting caregiver(s)
- Caregiver education to include, but not be limited to: distraction & redirection vs. confrontation, validation of feelings, maintain eye contact, speak at eye level and allow space; speak slowly and calmly in a normal tone of voice, evaluate environmental considerations & modifications,

explore sensory factors that may present as triggering/ therapeutic, watch for nonverbal cues that may indicate distress or confusion, increase opportunities for a meaningful & purposeful routine, identify causes of anxiety (e.g., potential incontinence, an unmet basic need, etc.) and address accordingly.

- Medications FDA approved for treatment of Alzheimer's Dementia include:
  - Cholinesterase inhibitors (donepezil, galantamine, and rivastigmine),
  - Memantine
  - IV Lecanemab and IV Aducanumab
- Therapeutic trial of an antidepressant may be considered to address signs of mood, anxiety and/or agitation
- Other medications, like antipsychotic agents (e.g., quetiapine, risperidone, olanzapine) may be employed for emergency or short-term use if, despite all non-pharmacological interventions, the person has become dangerous (to self and/or others) or developed significant subjective distress (e.g., stemming from delusions and/or hallucinations) . Monitor closely for adverse effects such as over-sedation, increased confusion, dystonic reactions (acute muscle spasms), akathisia (motor restlessness), Parkinsonian signs (muscle rigidity, slow movements, disturbed gait), or falls. In the face of adverse effects, modification or discontinuation of the medication should be considered.
- Facilitate data tracking (e.g., a behavioral diary or log) to evaluate behavioral patterns, including nature, frequency, duration, and severity of symptoms, and to identify any factors that may be aggravating or ameliorating the behavioral disturbance

Report Adverse Drug Reactions/Interactions to Treating Healthcare Provider: Common potential side effects of donepezil, galantamine, rivastigmine, and memantine include nausea, vomiting, diarrhea, weight loss, dizziness, headache, and muscle weakness/cramping. More serious side effects to watch for include increases in confusion, falls, sedation, sweating, saliva (e.g., drooling) and shedding tears.

Medications to avoid as feasible: Benzodiazepines (may cause falls and/or aggravate cognitive impairment, disinhibition); Antihistamines and anticholinergics (may contribute to increased neurocognitive impairment, blurred vision, dry mouth, urinary retention, constipation)

Guidelines and Process for Interdisciplinary Team

- The care team or dedicated screener will assess the member's cognitive status through use of the animal naming test (ANT) and the Mini-Cog assessment at least annually. These results will be reviewed against the previous testing and the member's PCP will be contacted if member has had any changes in their cognitive functioning.
- The care team will ensure the member has appropriate interventions in their Member Centered Plan (MCP) to manage any neurocognitive-related diagnoses and symptoms.

- The care team will also ensure the Caregiver Strain tool is used to assess the member's support team to identify and address any signs of caregiver stress.
- The care team may consider a dementia consult to evaluate member specific recommendations further.

Cultural Considerations

- In general, ethnic and cultural minority groups have continued to experience a disproportionate burden of disease, injury, premature death, and disability when compared to the white population
- Health disparities can mean lower life expectancy, decreased quality of life, loss of economic opportunities, as well as perceptions of injustice
- Health disparities result in decreased productivity, increased health care costs, and social inequities
- Contributing factors to ethnic and cultural disparities:
    - Mistrust in the health care system (stemming from current and historical mistreatment or neglect)
    - Personal and group experiences of discrimination
    - Varying degrees of health literacy
    - Provider prejudice and unconscious bias
    - Low cultural competency and clinical humility among health care providers
    - Discordance in patient-provider gender, race, and/or ethnic background
    - Under representation of minority health care providers (e.g., only 19% of RNs in the workforce are from racial or ethnic minorities)
- All ethnicities and genders are at risk for delirium and dementia. Like many other disease processes, in both of these neurocognitive disorders there are a complex combination of factors contributing to the outcomes seen in different groups of people. According to the Alzheimer's Association, socioeconomic traits like education level, poverty and exposure to adversity/discrimination may account for the increased *risks* seen in black/African American and Hispanic communities.

Quality Assurance Monitoring

Quality Management identifies members diagnosed with dementia. Cohort data will be analyzed at the one-year timeframe to monitor members' ability to remain in the least restrictive setting consistent with their needs following a dementia diagnosis.

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Additional Resources

Confusion Assessment Method (CAM) www.nursing.rutgers.edu/wpcontent/uploads/2021/04/keyes.pdf

Animal Naming Test (ANT) p01622c.pdf (wisconsin.gov)

Mini-Cog p01622d.pdf (wisconsin.gov)

AD8 Dementia Screening Interview (AD8) www.alz.org/media/Documents/ad8-dementia-screening.pdf

National Task Group-Early Detection Screen for Dementia (NTG-EDSD) www.the-ntg.org/ntg-edsd

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