**SUMMARY**

**GOALS**
- Early identification of affected patients
- Prevention of victimization
- Reduce symptom severity
- Improve quality of life

**ALERTS**
- Victimized patients
- Increase in rules violation behaviors
- Worsening personal hygiene
- Anxiety and agitation, especially at night
- Complete Advance Directive-Durable Power of Attorney for Health Care (DPAHC) early in course of disease
- Prison environment may mask symptoms

**DIAGNOSTIC CRITERIA/EVALUATION**

**Definition - Mild Cognitive Impairment (MCI)**
- Cognitive decline greater than expected for age and education level without significantly interfering with activities of daily life.
- Evidence of memory impairment
- Preservation of general cognitive and functional abilities
- Absence of diagnosed dementia

**Definition - Dementia**
Cognitive impairment with:
- Significant decline from previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, social cognition, perceptual motor)
- Interference with independence in daily activities
- Not occurring exclusively with delirium
- Not better explained by another disorder
- Neurobehavioral abnormalities

**History - MCI and Dementia patients may have similar historical findings which contribute to the ultimate diagnosis:**
- Poor adherence to rules and routines
- Personal hygiene problems
- Impaired comprehension
- History of head injury, substance abuse, or other medical contributors

**Differential Diagnosis – Mild Cognitive Impairment (MCI)**
- Medication effects
- Depression/other psychiatric disorders
- Brain lesion
- Hypothyroidism
- B12 deficiency

**Differential Diagnosis - Dementia**
- Medication effects
- Hypothyroidism
- B12 deficiency
- Tertiary syphilis (extremely rare in US)
- Brain lesion
Depression/other psychiatric disorder

Risk Factors – Mild Cognitive Impairment (MCI)
- >50% of MCI patients progress to dementia within 5 years.
- Consider screening of MCI patients
- May consider screening for MCI/dementia in patients > 65 years

Risk Factors – Dementia
- Age: Alzheimer’s Disease (AD) incidence 1% age 70, increasing to about 50% in those > 85 years
- Family History: 10-30% AD risk in first degree relatives of AD patients
- Vascular Disease Risk Factors

Symptoms – Mild Cognitive Impairment (MCI)
- Anxiety over memory impairment
- Difficulty with decision-making
- Able to perform most tasks but these may be more difficult and require more time
- May be ‘amnestic’ when memory domain affected or ‘nonamnestic’ when impairment is in a nonmemory domain

Symptoms - Dementia
- Memory loss, neurobehavioral abnormalities: aggressive or inappropriate behavior, poor self control, anxiety, agitation, denial, confabulation
- AD is the most common form of dementia. Other types: Vascular, Lewy Body Dementia, Parkinson’s Disease Dementia, etc. (see page 4)
- Symptoms often first noted by others: cellmate, custody staff, others
- Universal screening not recommended

Evaluation – Mild Cognitive Impairment (MCI)
- TSH, vitamin B12. Other screening labs show little evidence of benefit (CBC, CMP, HIV serology, lipids, ESR, RPR, drug screen)
- Cognitive assessment – Mini-Cog, MOCA, Clock Drawing Test
- Mental Health evaluation to identify:
  - Pseudodementia (depression)
  - Underlying mental health diagnosis impairing cognition
  - Cognitive impairment due to substance abuse
  - Suicide risk

Evaluation - Dementia
- TSH, B12. Other screening labs show little evidence of benefit (CBC, CMP, HIV serology, lipids, ESR, RPR, drug screen)
- Imaging: Consider MRI w/o contrast (1st choice). [MRI with contrast if vascular or mixed dementia suspected]
- Consider CT w/o contrast to exclude structural causes of dementia (may be used to assess hippocampal atrophy to support AD diagnosis)
- Cognitive assessment with Mini-Cog, MOCA, Clock Drawing Test
- Adaptive needs evaluation by DDP clinician for functional capacity or accommodation needs
- Mental Health evaluation to identify:
  - Pseudodementia (depression)
  - Underlying mental health diagnosis impairing cognition
  - Cognitive impairment due to substance abuse
  - Suicide risk

**TREATMENT OPTIONS**
**BEHAVIORAL INTERVENTIONS**

- Exercise
- Social interaction
- Skills to promote good sleep hygiene
- Engagement in simple tasks
- Cognitive stimulation therapy (e.g. physical games, sound and word association)

**ENVIRONMENTAL/SOCIAL**

- Safe Housing will be provided for patients with adaptive needs.
- Assistance with ADLs and for other activities as needed.
- Ensure timely completion of Advance Directive-DPAHC/POLST
  - Assess decision-making capacity (consult with Care Team, Medical Management, Mental Health, and/or institution or headquarters Ethics Committee).
  - Custody Counseling Staff may be of assistance in locating family or friends who may serve as surrogate decision-maker.

**PHARMACOLOGIC MANAGEMENT**

- Review all prescribed medications to determine potential for medication-related cognitive impairment.
- Dementia specific medication (donepezil, galantamine, rivastigmine, memantine) may delay progression of disease by several months, but providers must be aware of marginal benefit and potential adverse effects of these medications. Donepezil is preferred formulary agent (page 10).
- For behavior disturbances in dementia:
  - Attempt to minimize anticholinergic burden if clinically appropriate
  - Dementia specific agents (e.g., cholinesterase inhibitors, glutamate antagonists), SSRIs, oxcarbazepine, buspirone, or valproic acid may be effective for mild behavior disturbances associated with dementia.
  - Antipsychotics may be indicated to manage more severe aggressive behavior or psychosis but may exacerbate cognitive deficit. Increased stroke risk is reported with any antipsychotic in the elderly. Used only with careful consideration of the risks and if no reasonable alternative behavioral management options are available.
- Cardiovascular risk reduction as indicated (low dose aspirin, lipid lowering agents, antihypertensives, etc.)

**MONITORING**

- Assess status of cognitive function (MOCA or Mini-Cog or other tool)
- Medication monitoring
  - Ask patient and/or caregiver about medication effectiveness and side effects
  - Reassess 6–8 weeks after initiating any dementia-specific medications, and at least every 6 months
  - Reassess for continued need of every medication(s) and discontinue any medication without clear benefit to patient
- Evaluate mood and behavior with input from caregivers and observers.
- Reassess appropriateness of housing with consideration of behavior problems and safety concerns.
- Assess for sleep dysfunction.
- Follow-up frequency will vary. Well controlled patients may be seen by PCP at 90-180 day intervals.

**MEDICATIONS WHICH MAY IMPAIR COGNITION**

*Anticholinergics - Ipratropium, tiotropium, benztropine*

*Muscle relaxants - Methocarbamol, cyclobenzaprine, carisoprodol*

*Antihistamines - Diphenhydramine, chlorpheniramine, promethazine, hydroxyzine*

*Antimuscarinics - Oxybutynin, tolterodine, darifenacin, trospium, fesoterodine (Used for urinary urge incontinence and overactive bladder)*

*Antidepressants - Tricyclic antidepressants, mirtazapine, trazodone, bupropion, SSRIs, lithium, MAO inhibitors*

*Antiepileptic Drugs - Valproate, phenytoin, carbamazepine, gabapentin, levetiracetam, topiramate, lamotrigine, pregabalin, clonazepam*

*Antipsychotics - Chlorpromazine, haloperidol, prochlorperazine, fluphenazine, risperidone, quetiapine,*
ariprazole, olanzapine, ziprasidone
Sedatives - Benzodiazepines, buspirone, barbiturates
Opiates - Codeine (cough syrup), morphine, oxycodone, hydrocodone, methadone, etc.
Antiparkinson Meds - L-dopa, bromocriptine, amantadine
Other - Hyoscyamine, cimetidine, clonidine, azapirone

*Not a complete list. See prescribing information for prescribed medications in individual patients to assess risk of cognitive impairment from medications.