**Approach to Cognitive Disorders in Primary Care**

What can reasonably be done in an office visit?

What about screening for cognitive disorders?

- **USPSTF (2014)** doesn't recommend screening: magnitude of clinically relevant benefit of medications and counseling is uncertain
- Medicare Annual Wellness Visit requires screening, but not testing: direct observation with consideration of information from patient or family
- **Diagnostic evaluation is not screening:** assessment is appropriate when clinician, patient or family have concerns

Patients may resist assessment due to

- Impaired insight: not worried about memory
- Competing agenda, other priorities
- Fears:
  - Loss of independence
  - Impact on family and relationships
  - Loss of occupation, driving
  - Need to move from home
  - Being barred from entering into contracts, executing legal documents

Clinicians may avoid assessing due to

- Opportunity costs: limited time, competing agenda
- Exposure to fraught, time-intensive issues:
  - Driving
  - Family conflicts
  - Patient resistance to recommendations
- Potential iatrogenic harms
- Nebulous diagnostic entities
- Lack of definitive diagnostic test
- Lack of effective treatment

But there are potential benefits...

- Detect treatable disorders
- Modify care plan: with cognitive disorders, there is reduced:
  - Adherence to medications and lifestyle recommendations
  - Ability to navigate health care system (appointments, preps, etc)
  - Life expectancy, especially quality-adjusted LE, with reduced value of screening, prevention

And other non-medical benefits

- Protect patient from
  - Entering into harmful contracts
  - Driving-related harms
- Alert family to risks of
  - Medication errors
  - Financial errors
  - Victimization
  - Wandering
  - Injury in home
From the practice perspective

- Demand for proficiency in basic E+M of cognitive disorders will grow
- Specialty sector (neurology and others) will not be (is not) able to meet demand
- If effective disease-modifying drugs for Alzheimer’s disease emerge from on-going studies, ability to assess, identify and refer candidates for treatment will be highly valued

Questions you might address

- Does patient have cognitive disorder?
- If so, is it Mild Cognitive Impairment or dementia?
- If dementia, what may be cause?
- Are there behavioral complications?
- Are there support system, caregiving issues?
- Is further evaluation needed?
- What interventions might help?

Prerequisites for adequate assessment

- Knowledgeable informant
- Clear visit goals:
  - Diagnosis vs help with behaviors, caregiving
  - Assist in determining:
    - Disability (IADL, BADL dependence)
    - Capacity (insight, judgment, reasoning)
    - Eligibility for services (IADL, BADL status, finances)
- Adequate time to address visit goals

Assess Insight

- Insight: capacity to accurately assess one’s own status
- Essential for:
  - providing reliable history (not status quo ante)
  - cooperating with assessment
  - accepting recommendations
- Asking re purpose of visit can open window into insight
- Erosion of insight begins may begin in MCI

Involve informant...tactfully

- Engage patient throughout interview
- Ask informant to amplify, validate, correct
- If informant’s input causes undue patient distress, consider having informant complete instrument such as Assessing Dementia 8 (AUC 0.908)
- Assess informant’s ability to provide reliable history...

Patient has cognitive disorder if

- Clinician, patient or reliable informant perceives cognitive deficits
- Patient performs below age and education-adjusted expectations on cognitive screening test
- And absence of evidence (on testing) is not necessarily evidence of absence...
Subjective cognitive concerns

- Patient reports concerns, but functions independently
- Patient test performance in normal range for age and education

What to do about subjective concerns

- May not warrant labeling as disorder, but should not be dismissed
- Assess possibility of medical, medication, psychosocial causes
- Offer neuropsychological testing
- Offer to reassess in 6 months

If cognitive disorder, dementia or MCI?

- Dementia (major neurocognitive disorder): significant decline in one or more cognitive domains resulting in loss of independence in at least some IADL's (not due to delirium or other mental disorder)
- Mild Cognitive Impairment (minor neurocognitive disorder): modest decline in one or more domains with preserved independence in ADL's

To distinguish dementia from MCI

- Sensitive IADL probes:
  - Work responsibilities
  - Managing finances
  - Managing medications
- More cognitive domains more severely affected in dementia (test scores > 2 SD's below norms) vs MCI (1-2 SD's below norms)

More about MCI

- Patient may report needing more time or other accommodations, using compensatory strategies, experiencing more stress
- Score 1.5-2.0 SD below age-adjusted norm in test of one domain, milder abnormalities in 1-2 other domains
- MOCA score ~ 21 to 23 for persons <76, ~ 18 to 21 in persons >75

MCI Q+A

- Cause? Many potential causes including neurodegenerative diseases, but also medical, medication, psychiatric disorders
- Prognosis? Depends on setting, but most remain stable over several years, 10-15% progress to dementia, smaller fraction reverts to normal
- Subtypes? Amnestic vs other domains; amnestic subtype often prodrome of Alzheimer disease
Cause of dementia? Data needed

History (after medical problem list and medication list):
- Initial cognitive or behavioral sign(s) or affected domain(s), subsequent course
- Neurologic disorders
  - cerebrovascular disease (or atherosclerotic burden)
  - movement disorder
- Risk factors:
  - family history
  - substance use
  - head injury
  - sleep disorder (OSA, REM sleep behavior disorder)

Cognitive domains
- Learning and memory, especially delayed recall
- Language
- Executive function
- Perceptual-motor (visual-spatial)
- Complex attention
- Social
- Behavioral

More necessary data...

Exam:
- Vascular: signs of atherosclerosis, atrial fibrillation
- Neurologic: focal signs, abnormal movements (tremor, rigidity, gait), autonomic signs (orthostatic hypotension)

Lab:
- CBC, CMP, TSH, B12 (HIV, syphilis, paraneoplastic ab panel, etc)

Imaging:
- CT or MRI to assess for cerebrovascular disease, tumors, hematomas, NPH
- Functional imaging (perfusion or metabolism) to support specific diagnoses (AD vs FTD, possibly Lewy body)

Value in identifying disease?
- No effective disease-modifying treatments
- Management does not depend on diagnosis with exception of NPH and Lewy body
- Prognosis generally not significantly different (with exception of prion disease)
- Diagnostic error rate 10-15% in expert hands
- Mixed causes common, especially older old

Dementing disorders
- AD: domains affected must include memory
- Primary progressive aphasia: initial domain language
- Posterior cortical atrophy: initial domain visual
- Dementia with Lewy bodies: cognitive deficits precede/coincide with parkinsonian signs and psychotic symptoms; often preceded by REM sleep behavior disorder
- Dementia with Parkinson's disease: cognitive deficits follow motor signs by at least a year
- FTD behavioral variant: onset with new psychiatric disorder
- NPH: triad of urinary incontinence, gait disorder, cognitive deficits
- Very long list of other disorders

Efficient en passant exam
- Grooming, clothing selection
- Minimizing, rationalizing deficits
- Onychogryphosis, old bandages
- Head-turning sign
- Repetitive statements
- Word-finding difficulty, circumlocution, vague
- Irritable, suspicious, disinhibited, disengaged
- Tremor, posture, gait
Choose cognitive test based on

- Time available
- Tolerance of patient
- Goal of detecting early/mild deficits
- Tests previously taken by patient
- Tests familiar to examiner

Suggested tests

- Mini-Cog if time limited, patient impatient, and question is dementia: assesses delayed recall, executive and visuospatial domains
- Montreal Cognitive Assessment if time permits and goal is to detect early deficits, especially in executive function; suggested cut-off score 26

Non-cognitive factors may affect test performance

- Sensory deficits
- Motor deficits
- Low level of education
- Language: testing in second language
- Motivation, cooperation
- Anxiety
- Pre-existing learning disorder
- Bad day: not well, sleep-deprived, stressed, took Ambien or Benadryl last night, etc

Neuropsychiatric complications

- Mood disorders
- Apathy
- Sleep-wake dysregulation
- Agitation and aggression; resistance to care
- Delusions, hallucinations
- Disinhibition
- Wandering, hoarding, repetitive behaviors

Managing agitation and psychosis

- Non-pharmacologic strategies are first line
- Be alert to potential medical/physical causes, such as pain, urinary retention, constipation
- No highly effective, side effect-free pharmaceuticals
- Consider need to protect well-being of caregiver

Non-pharmacologic approaches

- Maintain regular routines, schedules
- Reduce exposure to unfamiliar environments
- Provide sufficient, not excessive, stimulation
- Allow choices, but don’t present too many
- Encourage independence to limit of tolerance
- Don’t confront, correct, over-control
- Provide regular exercise
- Provide dispensation for caregiver lapses
Pharmacologic approaches

- Atypical antipsychotics: caution in Lewy body disease (quetiapine may be safest), Black Box warning re mortality, QTc prolongation, try tapering and D/C’ing
- SSRI’s: some evidence for citalopram 30 mg, but recommended dose not over 20 mg
- Dextromethorphan-quinidine (Nuedexta): need more experience

Presenting your impression

- When status marginal, err on conservative side, for example, MCI instead of dementia
- Be tentative:
  - when assessing after recent acute illness, surgery, chemotherapy: recommend follow-up
  - when do not have blood work or imaging results
- Admit lack of definitive diagnostic test: “probable AD”
- Explain single disorders less common in advanced age
- Explore interest in more diagnostic evaluation
- Offer follow-up in 6-12 months to reassess

Be ready to answer

- What is difference between dementia and Alzheimer’s disease?
- Remember that absence of dementia does not preclude presence of AD in a preclinical stage

What is the prognosis?

- Highly variable: LE for AD dementia is 3-20 years from onset of symptoms, mean 8-10 years
- LE with dementia roughly 50% of LE same age without dementia
- Competing morbidities may govern LE
- Astute observers may observe decline over 6 month period; acute or more rapid decline signals supervening co-morbid disorder

What will happen next?

- Gradual functional loss, from most demanding to simplest tasks:
  - IADL’s lost before Basic ADL’s, with complex tasks (finances) lost before simpler tasks (running sweeper)
  - BADL loss begins with showering and dressing -> continence and toileting -> walking and transferring -> feeding
  - New behavioral issues may emerge...as current behaviors subside

What stage is this?

- Simple intuitive staging system:
  - Mild/early: dependent for some IADL’s
  - Moderate: dependent for most IADL’s, plus showering
  - Advanced: dependent for most BADL’s
  - End-stage: completely dependent
- More complex system: Functional Assessment Staging Test with 7 stages, multiple sub-stages
- Basis for staging is capacity for specific tasks
Can progression be slowed?

• No proven interventions, but can recommend:
  – Regular exercise (walking)
  – Games, puzzles, reading
  – Socialization
  – Mediterranean diet
  – Optimal management of vascular risk factors

Should specialist see patient?

• Neuropsychologist if:
  – Cognitive concerns where brief test is normal
  – Need to determine capacity, potential competency determination
  – Attempt to clarify diagnosis by characterizing pattern of affected domains
• Neurologist if:
  – Patient under 65 years old
  – Atypical presentation or course
  – Movement disorder or other neurologic signs

Other specialists

• Psychiatrist for intractable mood or behavioral problems
• Social worker to assess eligibility for services, direct to resources, assist planning change in living arrangements
• Elder law lawyer to organize finances, execute POA’s, pursue guardianship
• Neurosurgeon to assess NPH triad with ventriculomegaly

Medications for cognition?

• No proof of efficacy for any but cholinesterase inhibitors and memantine
• Efficacy of FDA-approved drugs is statistically significant but marginally clinically meaningful
• Cholinesterase inhibitor side effects are not rare:
  – GI (weight loss, nausea, diarrhea)
  – Sleep disturbance, vivid dreaming
  – Bradyarrhythmias
• Disease-modifying treatments are in clinical trials; may want to look for trials enrolling subjects

Should he/she be driving?

• Early dementia may be compatible with adequate safety; if no reported concerns, ask family to observe as passengers; begin planning for driving cessation
• Early dementia with concerns: questionably safe: require testing (Penn DOT or OT program)
• Not safe: revoke license and ask family to take steps to prevent driving
• Assume responsibility for actions taken

How do we cope?

• Ascertaining adequacy of living situation, support system; weight loss can be “vital sign”
• Inquire about caregiver(s): health, physical limitations, emotional state, competing demands
• Mediate compromises between patient wish for autonomy and family concerns about safety
• Direct to resources: social worker, Area Agency on Aging, Alzheimer’s Association
Summary

• Assessment of cognitive disorders presents unique challenges
• Generally not an emergency, so can complete assessment over time
• Longitudinal follow-up often clarifies whether disorder present or not
• Develop a referral network with specialty expertise
• Prepare for growing demand for this service