Managing Dementia in Primary Care: From Diagnosis to Driving to Dangerous Medications

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Goals for Today

- Confidently diagnose mild cognitive impairment and dementia, and determine if your patient with dementia has Alzheimer’s, Vascular, Lewy Body, Frontotemporal, or Mixed.
- Gain some tools to assist in driving cessation when older patients are no longer safe to drive.
- Review medications that might be high risk for people with cognitive impairment.
Mrs. Atkinson

Mrs. A is a delightful 82 year old whose husband died 6 months ago.

Today, her daughter reports increasing “forgetfulness” in the past 2-3 years which has gotten worse since her father died. She notices that her mom quickly forgets conversations they had had and has had trouble paying the bills since the death of her husband.

More recently she has also been neglecting her appearance and has been unable to keep up on the housework.

She takes HCTZ, a baby aspirin, a daily multivitamin and occasional diphenhydramine for insomnia.
More on Mrs. Atkinson

-No trouble with ADLs other than occasional lack of grooming
-No trouble with walking or mobility
-Initially very sad over the death of her husband, but now has “come to terms” with her grief
-No wandering, or agitation
-No loss of appetite or weight loss
-Never smoked, rarely drinks
-Studied romance languages in college
-Still practices Italian once a week with a friend
Screening for Cognitive Impairment in Older Adults

Annals of Internal Medicine, Nov 5, 2013

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Rationale for Screening

- ~29–76% of patients with dementia are not diagnosed by PC clinicians
- Early identification may have benefits even if treatment cannot alter natural history of disease
  - Optimize clinical care (e.g., treatment of reversible causes, management of co-morbidities, patient safety)
  - Facilitate decision-making (e.g., health care, financial, legal)
  - Reduce patient and caregiver stress/burden
Treatment Evidence in Dementia

- AChEi and memantine can improve global cognitive function and global function in the short term
  - Discontinuation of AChEi is common and serious harms of medications can include CNS, CV, and GI symptoms
- Complex interventions aimed at caregivers and patients can improve caregiver burden and depression
- Cognitive stimulation can improve global cognitive function
Still an “I” (insufficient evidence) for screening for cognitive impairment

Screening tools ARE good enough

Drugs, cognitive therapy, and caregiver interventions provide some benefit, but clinical relevance uncertain

Not enough studies on how diagnosis of dementia affects decision making for overall care
Summary Task Force Recommendation

“...while the overall evidence on routine screening is insufficient, clinicians should remain alert to early signs or symptoms of cognitive impairment and evaluate as appropriate”

Recommendations are in draft form till Dec 2-
comments welcome at:
http://www.uspreventiveservicestaskforce.org/draftrec.htm
New DSM-V Terminology: Major Neurocognitive Disorder (MCD)

Patient/informant/clinician report of decline in abilities

Clear deficits in objective assessment of:

- **Complex attention** (sustained attention, divided attention, selective attention, processing speed)
- **Executive ability** (planning, decision making, response to feedback/error correction, mental flexibility)
- **Learning and memory** (immediate or recent)
- **Language** (expressive and receptive)
- **Visuoconstructional perceptual ability**
- **Social cognition** (emotions, behavioral regulation)

Deficits interfere with independence (IADLs)

Not delirium, psychotic disorder, etc
Minor Neurocognitive Disorder (Mild Cognitive Impairment)

- Minor cognitive *decline from a previous level of performance in one or more of the domains*
- No interference with function but greater effort and compensatory strategies may be required to maintain independence.
- Not delirium, depression, etc
- *50% progress to dementia in 7.6 years*
A quick, accurate dementia screening test

**MINI-COG**  
- 99% Sensitivity

**3-Item recall**  
- ask the patient to remember the names of three objects (pencil, truck, book)  
- the patient fails the screen if she is unable to remember at least 2 of 3 objects in one minute

**Clock Draw**  
- ask patient to draw a large circle, fill in the numbers on a clock face, and set the hands at 11:10
Abnormal Face

Clock Draw - tests memory, visual-spatial, executive function, abstraction

Abnormal Numbers

Abnormal Hands

Bottom Line - if not PERFECT, patient has some cognitive impairment
SLUMS

Validated for MCI and dementia, Free and fairly quick to perform
MoCA

Good test for vascular Dementia, Parkinson’s patients, and if you are concerned about driving
MMSE- use for following dementia

- Tests orientation, memory, visual-spacial, verbal fluency
- Correct for age and educational level- when you document the patient’s score, also note the normal value for that patient. Be sure to ask the patient how far they progressed in school!
- The MMSE doesn’t test all areas of cognitive function, so other cognitive testing must be done to determine what type of dementia a patient has
- ONLY TEST VALIDATED FOR FOLLOWING ALZHEIMER DISEASE OVER TIME
Alzheimer’s Dementia

Impairment in learning and retaining new information plus at least one:

- **Complex attention** (sustained attention, divided attention, selective attention, processing speed)
- **Executive ability** (planning, decision making, response to feedback/error correction, mental flexibility)
- **Language** (expressive and receptive)
- **Visuoconstructional-perceptual ability**
- **Social cognition** (emotions, behavioral regulation)
Vascular Dementia

Remember: vascular insults are very common in Alzheimer’s disease (20% of patients have both vascular and Alzheimer’s pathology)

DSM IV: dementia; focal neurological signs and symptoms or brain imaging evidence of cerebrovascular disease judged to be etiologically related to the dementia
- focal neurologic signs: hemiparesis, babinski, hemianopia, dysarthria, gait disturbance
- CVD evident on brain imaging: multiple large vessel infarcts, single strategic infarct, or multiple basal ganglia or extensive WMH
- relationship: a) dementia within 3 months of stroke or b) abrupt or fluctuating or stepwise deterioration
Lewy Body Dementia

- Parkinsonian findings: shuffling gait, rigidity, trouble swallowing (tremor may not be prominent)
- Fluctuation in LOC and cognition
- Well formed visual hallucinations
- Attention, executive function and visual-spatial abnormalities may be more prominent than memory problems
- REM sleep disorders (ie frightening dreams)
Lewy Body Dementia

- Very sensitive to the effects of neuroleptics- DON’T use Haldol for visual hallucinations
- May markedly worsen with Parkinson’s drugs and not recover after discontinuation of the medicine- DON’T use Sinemet for rigidity
- Very responsive to Acetylcholine esterase inhibitors: best treatment for the hallucinations
- Can be very rapidly progressive
Frontotemporal Dementia

- Decline in personal or social interpersonal conduct
  - loss of empathy, socially inappropriate behaviors (rude, irresponsible, sexually explicit), mental rigidity, inflexibility in relationships or severe apathy

- Impaired reasoning and difficulty with tasks out of proportion to impairments in memory, visual-spatial skills

- May have marked language, gait abnormalities

- May have younger age of onset
Differential diagnosis of dementia

- Alzheimer’s Disease (40%)
- Mixed AD & Vascular (15%)
- Mixed AD & Lewy body (16%)
- Lewy body dementias (10%)
- Vascular dementias (3%)
- Frontotemporal (5%)
- Others (11%)
  - PSP, EtOH, infectious, TBI, NPH, CJD, etc.
Mrs. Atkinson

Disheveled, hard of hearing
Non-focal neuro exam, gait ok
SLUMS- fully oriented, registers 5 items, but able to recall only 3 of 5, Able to name 12 animals in one minute, clock poor, misses items on story
In total she scored 18/30
What is her diagnosis?
Cholinesterase Inhibitors and Dementia

- Studies done in patients with mild to moderate Alzheimer's disease
- Most studies found a statistically significant difference favoring cholinesterase inhibitors
  - Slowing of decline approximately equivalent to a delay in disease progression of up to 7 months in a person with mild dementia, or a delay of 2 to 5 months in a person with moderate dementia
- In general, little or no effect on functional decline after 6 months of treatment, and small difference from placebo after 12 month

Memantine

- Indicated for moderate to severe dementia. Patient should be able to perform at least one ADL with minor assistance

- **Monotherapy** or in addition to a cholinesterase inhibitor

- **Dose:** 5mg - 10 mg bid

- For creatinine clearance of 40-60, max dose is 10 mg. Not to be used for patients requiring dialysis.
Supplements

- Vitamin E
- Vitamin B
- Gingko
- NSAIDS

None have shown any slowing of progression to Alzheimer's, but...
Exercise and diet

Several prospective cohort studies have shown that adherence to a Mediterranean diet and physical activity were associated with a reduced risk for Alzheimer’s Disease.

Feart et.al. “Adherence to a Mediterranean diet, cognitive decline and risk of dementia”. JAMA. Aug 12; 302(6) 638-48
Tools for Caregivers

Give all patients and family members the phone number to the Alzheimer's Association 24 hour help line:
1-800-272-3900
Alz.org

Also consider referral for a research study:
Alz.org/trialmatch
Dementia Advance Planning

- Allow natural death if patient has dementia
- Eventually patients with dementia cannot eat or swallow on their own; feeding tubes do not prolong life or improve quality of life
- Hospice eligibility in dementia: Patient can no longer perform own ADLs, plus can speak no more than 6 words at a time, plus have another dementia related comorbidity (aspiration pneumonia, weight loss >10% body weight, etc).
- Consider memory units, home caregiving, other options
Strategies for Specific Types of Dementia

- People with Alzheimer’s disease and vascular dementia maintain social graces until late; family underestimate & need to know what the person’s deficits are.

- LBD course may progress from “normal” to very impaired over a few years; family need to understand delusions, waxing and waning, and affective Sx.

- FTD behavior and disinhibition predominate early (for most other dementia these are late)
Summary

- If you suspect cognitive impairment, use the history and physical to determine type of cognitive disorder as this will guide your care
- Offer medications with patient and family goals of care in mind; often value is marginal
- Support the patient and the family
- ALZ.ORG
Mr. Hart

Mr. Hart is 86 and a healthy, retired university professor who just moved to Portland from Boston. He is rather proud that he has already learned to drive to my office at OHSU. His SLUMS score is 22. He states he will “never give up driving.” His wife is a little worried by several “near misses.”

What would you do?
The Importance of Driving to Older Adults

- Driving defines independence and provides a sense of self-esteem.
- Over 88% of older Americans rely on a private automobile for their transportation needs.
- Driving cessation often leads to decreased ability to freely participate in social opportunities or engage in IADLs.
<table>
<thead>
<tr>
<th>Conditions</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypharmacy</td>
<td>Anticholinergics, some antidepressants, anti-convulsants, sedatives-narcotics</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>Unstable angina, heart failure</td>
</tr>
<tr>
<td>Neurological disease</td>
<td>Parkinsons, dementia, seizures, vertigo</td>
</tr>
<tr>
<td>Psychiatric disease</td>
<td>Depression, substance abuse</td>
</tr>
<tr>
<td>Metabolic disorders</td>
<td>DM with hypoglycemia</td>
</tr>
<tr>
<td>Visual disease</td>
<td>Cataracts, macular degeneration</td>
</tr>
<tr>
<td>Respiratory disease</td>
<td>COPD, sleep apnea</td>
</tr>
<tr>
<td>Musculoskeletal disease</td>
<td>Arthritis</td>
</tr>
</tbody>
</table>
Triggers for Driver Screening

Subjective
- Family Concerns
- Poor Driving History
- Visual Changes
- Cognitive Impairment
- Neuromuscular Changes

Exam and Minimum Ability Required for Safe Driving

Objective
- Vision:
  - Visual acuity at least 20/40 OU
  - Visual field grossly intact to confrontation
- Cognition:
  - Clock drawing test correct
  - Trail-Making Test B < 180 seconds & trail making test A&B
- Neuromuscular:
  - Extremity strength 4/5 ROM in neck & extremities without limitation
  - Get-up-and-go < 15 seconds
  - DTR and sensation intact

Deficits Identified - Intervention Required

Evaluate/treat underlying problems; review meds that raise driving risk

No Deficits:
- Review safe driving and repeat evaluation in 1 year or prn health status changes.
- Provide pt. instructions

Vision:
- Refer to optometry or ophthalmology

Cognition:
- Refer to occupational and/or speech therapy.
- Refer to out-of-pocket driver evaluation

Neuromuscular:
- Refer to physical therapy.
- Refer to out-of-pocket driver evaluation

A&P

No Deficits:
- Review safe driving and repeat evaluation in 1 year or prn health status changes.
- Provide pt. instructions

Vision:
- Refer to optometry or ophthalmology

Cognition:
- Refer to occupational and/or speech therapy.
- Refer to out-of-pocket driver evaluation

Neuromuscular:
- Refer to physical therapy.
- Refer to out-of-pocket driver evaluation

MILD DEFICITS: If ongoing concerns or rehabilitation failure, refer to OR DMV or WA DOT for driver evaluation

SEVERE DEFICITS: Advise retirement from driving.
- For OR drivers with severe and uncontrollable impairments, complete Mandatory Impairment Referral
Our EPIC dotphrase

Driving Evaluation
HPI:
Do you ever feel confused/disoriented while driving?: ***
Are you a daily or near-daily driver?: ***
Do you avoid driving alone?: ***
Do you have difficulty seeing the license plate of the car stopped ahead of you?: ***
Crashes/citations in last 12 months: ***
Family Concerns: ***

Exam:
Visual Acuity: 20/ OD, 20/ OS, 20/ OU {w-w/o:5700} corrective lenses (<20/70 passes)
Visual Field: grossly {INTACT/LIMITED:325059} on confrontation, (at 3 feet) {FIELD CUT:325091} field cut
MSK: {FULL/LIMITED:325060} active ROM in neck, {FULL/LIMITED:325060} ROM in finger curl, shoulder/elbow flexion, ankle dorsiflexion, and plantar flexion. Extremity strength ***/5 (score of 4/5 or higher passes). {ABLE/UNABLE:325092} to perform get-up-an-go (20 feet in 15 seconds), {ABLE:900340} to rise {w-w/o:5700} use of arms.
Neuro: Alert and oriented. Gait and speech normal. DTR ***, sensation {INTACT/IMPAIRED:325061}.
Cognition: SLUMS score in last 6 months {SLUMS SCORE/NOT DONE:325062}; Clock drawing test shows {NO DEFICITS/DEFICITS:325063}. Trail-Making Test B completed in *** seconds (less than 180 seconds passes).
Patient Instructions

OR DMV link for patients/families:  
http://cms.oregon.gov/ODOT/DMV/50plus/Pages/index.aspx
Impact of aging on driving  
When to stop driving  
How to talk about driving concerns  
Reporting an unsafe driver  
Alternative transportation options  
Family and community resources

WA DOT Resources for Senior Drivers:  
http://www.dol.wa.gov/driverslicense/seniors.html
Collision prevention courses

AARP Driving Resources:  
http://www.aarp.org/home-garden/transportation/driver_safety/

Family Conversations about Alzheimer’s Disease, Dementia, and Driving:  
Mr. Hart, continued

Mr. Hart is not unsafe to drive yet, but he may be in the next couple years.

You suggest he start thinking about alternatives to driving. He and his wife moved to an area of Portland that has good public transportation (we are not often so lucky!) so you suggest he start taking the bus.

After about 18 months of care and discussion, Mr. Hart is still driving safely, but has learned the bus system- and uses it at during high traffic times
Dr. M (Retired Medical School Dean)

92 year old admitted to your assisted living with his wife

- Mild memory decline- SLUMS 17/30
- BPH and nocturia 6-7 times per night; usually has at least one incontinent episode per night
- Losing weight, not interested in exercise
- Falls at least twice per week
- Would you start medications for cognition and/or bladder symptoms?
What is known about dementia drugs and incontinence?

Patients who are started on an acetylcholinesterase inhibitor had a 49% increased risk of having a bladder agent added within 6 months.

NO good data on exact risk of UI with ACEIs but if your patient already has UI, consider using memantine first if you are going to try a dementia medication.
Concomitant use of ACHIs and Anticholinergics

- Retrospective cohort study of 5625 patients age 50 and older who began an ACHI
- 37% of people who got started on an ACHI were also on an anticholinergic, and 25% of them had both drugs continued for at least 12 months
- STOP the anticholinergic before considering an acetylcholinesterase inhibitor!

Boudreau, JAGS 59: 2069-2076, 2011
So what is the bottom line?

- Improve environmental factors for both dementia and incontinence
  - Scheduled toileting
  - No fluids after 6 pm, leg elevation before bed
  - Regular daily activity to reduce edema and improve sleep
  - Lighted path to the bathroom at night
So what is the bottom line?

Focus on Quality of Life

– If memory most frustrating for resident, try a medication; do repeat SLUMS/MMSE to determine effectiveness

– Consider memantine instead of acetylcholinesterase inhibitor if incontinence is an issue

– If incontinence most frustrating, do a good family PARQ and consider trospium
So what is the bottom line?

Do your best NOT to treat a medication side effect with another medication - if the side effect lowers quality of life, discontinue the original medication (remember, none of these drugs are miracle cures!)
Fred, age 87, is admitted for GI illness and dehydration

<table>
<thead>
<tr>
<th>Fred’s issues</th>
<th>Fred’s Meds</th>
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<tr>
<td>Probable Alzheimer’s</td>
<td>Donepezil</td>
</tr>
<tr>
<td>CHF/CAD</td>
<td>Furosemide, metoprolol, lisinopril, ASA, simvastatin</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>Acetaminophen, tramadol</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Calcium, D, alendronate</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Zolpidem</td>
</tr>
<tr>
<td>Type 2 Diabetes</td>
<td>Metformin, glyburide</td>
</tr>
<tr>
<td>BPH</td>
<td>Tamsulosin</td>
</tr>
<tr>
<td><strong>CRF- eGFR 28</strong></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Medical Treatment</td>
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FREE Beers Criteria Apps

Table 2. Potentially Inappropriate Medications

Amitriptyline

Recommendation, Rationale, Quality of Evidence & Strength of Recommendation

Avoid, highly anticholinergic, sedating, and cause orthostatic hypotension; the safety profile of low-dose doxepin (≤60 mg/day) is comparable to that of placebo.

OE = High; SR = Strong

Abbreviations

- OE, Quality of Evidence
- SR, Strength of Recommendation
- TCAs, tricyclic antidepressants

Footnote

Contents  Tools  About  Bookmarks  My Account

AGS iGeriatries

Beers Criteria

Geriatrics Cultural Navigator

GeriPsych Consult

Guide to Common Immunizations

Management of Atrial Fibrillation

Contents  Tools  About  Bookmarks  More
“Choosing Wisely” for Patients with Dementia

- DON’T recommend feeding tubes in patients with advanced dementia; instead offer oral assisted feeding
- DON’T use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia
- AVOID using medications to achieve HbA1C<7.5
- DON’T use benzodiazepines or other sedative hypnotics as first choice for insomnia, agitation or delirium
- DON’T use antimicrobials to treat bactiuria unless specific urinary tract symptoms are present
Questions?

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