Screening in the Office for Cognitive Impairment – Really?

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Overview

- Why look for cognitive impairment?
- How do you do it?
- What do you do if you find it?

Screening for Cognitive Impairment

- How important is cognitive function?
  - Arguably, the most important of functions
    - Patients have a right to expect their doctors to identify and diagnose serious medical conditions.
    - Patients often lack awareness of sx and signs.
  - Essential to making a plan of care.
Screening for Cognitive Impairment

- Assessing the mental status is necessary to:
  - Ensure a reliable history
  - Ensure that the patient is able to comply with recommended treatment
- We routinely screen for many problems through the Review of Systems and Physical Exam.

Screening can improve case-finding.
- But unproven if it will produce better outcomes.
- Screening not recommended w/o "warning signs"
  - Dementia is common; age is #1 risk factor.
  - Problems with recent memory is #1 warning sign.
    - Testing recent memory is easy, objective.
    - Detecting other "warning signs" is more difficult, often less reliable.

Screening for Cognitive Impairment

- Myths about screening:
  - Screening = AD (dementia) diagnosis
  - Screening causes depression
  - Screening stigmatizes patients
  - Screening undermines individual rights
  - Screening demands expensive workups
Screening for Cognitive Impairment

- Can early identification and intervention for cognitive impairment improve outcomes?
- Can overlooking or ignoring symptoms of cognitive impairment lead to poor outcomes?

Morbidity of Dementia

- Medication, financial mismanagement
- Safety: Driving, power tools; wandering, falls
- Increased risk of delirium
- Social Isolation
  - Physically—deconditioning, poor diet
  - Mentally—boredom, agitation, paranoia

Morbidity of Dementia

- Inefficient use of HC resources; poor outcomes
  - Comorbid illnesses not controlled
  - Caregiver/family burnout
  - Frequent calls, unscheduled visits
    - In the VA, the "pop drop"
  - More frequent and longer hospitalizations
  - NH placement
- Poor quality of life for patients and families
Phases of the Family Journey
(Caron, Pattee & Otteson, 2000)

- Prediagnostic – Is there a real issue?
- Diagnosis – Trauma of the diagnosis
- Role Changes – Taking away rights/activities
- Chronic Caregiving – Engagement / Exhaustion
- Shared Care – Obtaining respite
- Long Term Care – Moving patient into LTC
- End of Life – Prolonging life vs. a good death

Veterans Health Administration

- VHA is divided into Veterans Integrated Service Networks (VISNs).
- VISN 23 provides funds for chronic disease management initiatives.
  - DM, COPD, CHF, Depression
- In 2006, a VISN 23 Task Group addressed dementia as a chronic disease.

VISN 23: Demographics for 2005

- > 200,000 Veterans ≥ 65 y.o. followed
  - estimated >20,000 with dementia
- 32 different ICD-9 Codes used
  - 5,350 pts identified with cognitive impairment
    - Total cost in 2005 = $87 Million
    - Average = $16,262 per Veteran
Task Group Assessment

- Dementia is:
  - Underdiagnosed.
  - Associated with predictable problems.
  - Costly.
- Recommendation: Diagnose early to improve care, avoid crises, and reduce cost.

The Dementia Demonstration Project (DDP)

- APRNs trained in dementia led care teams:
  - SW, Pharm, OT, Mental Health, Clerk
- Primary Care MD identified at each site
- Teams integrated into typical Primary Care Clinics at 7 VA Medical Centers.
- Project Coordinator monitored teams to assure consistency across sites.

DDP Screening

- Soo Borson’s Mini-Cog™ (5 points)—16 versions
  - 5 point scale - 3 word registration (0 points)
    - banana  sunrise  chair
  - clock drawing test (CDT: 2 points)
    - 11:10
  - 3 word recall (3 points)
DDP patients ≥ 70 years old (10/1/2007)

Followed in a typical PCC = 43,023
- Non-DDP = 29,728
- DDP clinics = 13,295

Identified for screening = 12,323
- Dementia/CI Dx = 1,379 (4.6%)
- Dementia/CI Dx = 873 (6.6%)

DDP = Dementia Demonstration Project
PCC = Primary Care Clinic
CI = Cognitive Impairment

DDP patients through 12/31/09

Identified = 12,323
- Offered screening = 8342 (67.7%)
- Refused screen = 279 (3.3%)
- Passed = 5962
- Accepted = 8063 (96.7%)
- Failed = 2081 (25.8%)

Requested eval = 118
- Refused eval = 1501
- Dementia = 82 (69.5%)
- CI = 21 (17.7%)
- No CI = 19 (17.7%)

Completed eval = 580
- Dementia = 432 (74.5%)
- CI = 108 (18.6%)
- No CI = 40 (6.9%)

Mini-Cog Score | No. (%) of Patients | Mean Age (+ SD)
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0 | 132 (1.6) | 82.3 (5.6)
1 | 256 (3.2) | 81.5 (5.9)
2 | 542 (6.7) | 80.7 (5.5)
3 | 1151 (14.2) | 79.5 (5.5)
4 | 2854 (34.7) | 78.5 (5.1)
5 | 3128 (39.1) | 77.8 (5.1)
### Word Lists for Delayed Recall

**GRECC**
- BABY
- DAUGHTER
- KITCHEN
- VILLAGE
- CAPTAIN
- GARDEN
- RIVER
- NATION
- HEAVEN
- SEASON
- LEADER
- TABLE
- PICTURE
- FINGER
- MOUNTAIN

**DDP**
- DAUGHTER
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**McCarten et al., JAGS 59:309, 2011**

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Screening for Cognitive Impairment

- The Mental Status in Psychiatry vs. Neurology
  - Neurology: Is the vehicle in good working order? If not, where is the problem?
  - Psychiatry: Tries to answer, “How’s my driving?”

Neurological Localization: Mental Status

- **Alert**: Reticular Activating System (RAS)
- **Attentive**: Thalomocortical circuits
- **Memory**: Hippocampi (archicortex)
- **Neocortical Functions**
  - Language (dominant temporal/parietal)
  - Visuospatial (non-dominant temporal/parietal)
  - Executive (frontal)
The Mental Status Exam Screen

- **A, O x 3** - inadequate to misleading
  - Often used as short-hand
  - Orientation does not localize, is insensitive
- Many standard tools available, e.g., MMSE, Mini-Cog; AA Family Questionnaire:
  - Intake personnel can administer (6th vital sign).
  - Scores are NOT diagnostic.

What do you do if recall is poor?

- **Test it again!**
  - As with any abnormal exam finding, double check.
    - Give the 3 words again.
      - Have another interference task ready.
        - “Count backwards from 100 by 7s.”
        - “Recite the months of the year in reverse.” [Start w/ Jan.]
    - Give cues (letter or category) or multiple choice if needed.
      - Have cues and MC ready. ‘Don’t make them up on the fly’

What do you do if recall is poor?

- Patient remembers, but works too hard.
  - Given a 2nd list of 3 words.
    - Struggling to register all 6 words is concerning.
    - Poor recall on repeated trials is concerning.
  - Ask about recent (non-personal) events.
What is abnormal?

- Like any other exam finding, abnormal is what you decide it is. What is your expectation?
  - The patient looks pretty good! [for an older adult]
    - “S/he did really well on the MMSE.” Medical Student
  - The patient is someone who is capable of doing the job I give them.
    - S/he can understand my explanations and follow advice.
      - How valuable is your time and advice?

- You must convince yourself that there either is—or is not—a problem.
  - You are not trying to convince the patient.

- Test recent memory early (in exam) and often.
  - If there is a question, you have time to re-test.

- Make mental status testing routine.
  - You can only identify an abnormality confidentially if it is part of your routine evaluation.

Conclusions:

- The mental status is important and should be tested in all patients.
- Recent memory is easy to test and is the cognitive deficit most often seen in dementia.
- Identifying cognitive impairment will lead to better care.