Is Miss Daisy still driving?

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CASE

- A concerned daughter calls you and wants you to tell her 85 year old mother to stop driving. "She has had some fender benders; I don't let my children drive with her."
- What are the issues?
- What are the resources available to address this situation?

We as health care providers really dislike this issue!

- Why? Almost invariably, the patient becomes angry
- We are not sure of the process of evaluation and "treatment" of the problem
- I hope to shed some light on this to make the situation somewhat easier

Is this the responsibility of health care providers?

- A survey asked the question "Should you be judging your older patients' fitness to drive?"
  - 24% Yes. I am the best judge of my geriatric patients physical and mental abilities
  - 61% No. This should be the responsibility of law enforcement and departments of motor vehicles
  - 15% No. this is the responsibility of the patient's family

Attitudes, barriers, opportunities

- Another survey showed:
  - 79% of the doctors saw evaluation of fitness to drive as an important issue
  - 30% of the doctors felt confident to evaluate a patient's fitness to drive
  - 40% felt the length of time needed to do this was 10-20 minutes; 41% felt the time would be 21-30 minutes
  - 89% of the physicians felt they would benefit from further education

What problems do older drivers have?

- More accidents per mile, not per driver (they drive less miles)
- 27% have trouble reading street signs in town
- 21% have difficulty driving across an intersection
- 19% have trouble with making a left hand turn at an intersection
- 17% are impaired in following pavement markings

More statistics

- Seniors have about the same number of accidents as teenagers
- Seniors wear seat belts more than younger persons
- There are more fatalities and serious injuries/accident among the elderly

Does age make a difference?

- Yes, in general
- Persons over the age of 55 begin to show a difference in driving skills and crash rates!
- Each person needs to be evaluated individually

Medical conditions: accident risk

- Epilepsy RR 1.95-7
- Narcolepsy RR 17
- Narcolepsy/sleep apnea RR 4-7.6
- Dementia RR 2.3
- Drivers >age 74 RR 1.48 (compared to drivers age 55-74)
- Drivers >age 85 RR 9

Age related variance in driving

- The following accounts for 70% of age related variance
  - Collisions
  - Inattention with missed stops
  - Slow or low speed, especially left turning time
  - Poor steering
  - Erratic speed

Driving and dementia

A potentially lethal combination…..

Do you agree with this statement?

- "A diagnosis of dementia should automatically mandate removal of a driver's license…"
  - Wesolowski 2010

Step by step evaluation and "treatment"

- As with other diagnoses, history, physical, tests and recommendations
- State laws and physician responsibility
- Resources: local and national

History

- Seizure disorder
- Syncope
- Hypoglycemia
- Alcohol
- Sedative meds
- Neuropathy
- Muscle weakness
- Obstructive sleep apnea
- Visual problems
- Dementia
- Accident record
- Traumatic brain injury

Visual problems

- 1. 20/40 = ability to read newspaper print is acceptable to DMV (no data on risk for crashes)
- 2. Contrast and depth of perception is tested by the DMV (again, no data)
- 3. Specialized test, the Useful Field of View does correlate with increased risk of crashes

Musculoskeletal problems

- Think not only weakness but reaction time
- Deficit here does correlate with accidents
- See tests next slides

Physical examination

- Arm reach and neck rotation: this tests ability to turn the steering wheel quickly and look behind when changing lanes
- Strength should be 4/5 UE bilaterally and 4/5 RLE
- Rapid pace: walk 10 feet away and return in 7 seconds; this tests lower limb endurance and coordination

Cognitive evaluation for driving

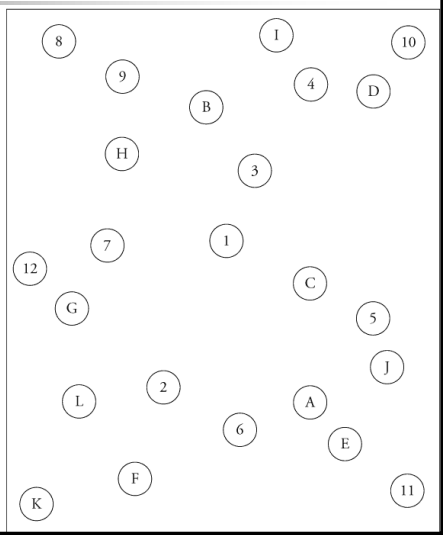
- MMSE
- Trails B
- Clock drawing
- Neuropsychological evaluation
- Clinical Dementia Rating (CDR)

MMSE

- MMSE has poor correlation with driving skills except at the most severe levels
  - MMSE focuses on orientation and memory, not perception, attention, and motor skills
  - Practical issue: this takes 5-7 minutes to administer
  - Possibly useful: if the MMSE score is <24, consider further investigation

Trail-Making Test, Part B

- Assesses working memory, visual processing, visual-spatial skills, selective and divided attention, and psychomotor coordination



More on Trails B

- A test of executive control functions
- Should be able to complete in <3 minutes
- One study showed that if >147 seconds, 2x as likely to have MVC

Clock drawing and neuropsych testing

- Clock drawing will give you a sense of whether the patient has a problem with spatial orientation
- Neuropsychological testing explores issues of depression as well as dementia

Clinical Dementia Rating Scale

- Rating scale based on the following functions
  - Memory
  - Orientation
  - Judgment and problem solving
  - Participation in the community
  - Home function and hobbies
  - Personal care

CDR (2)

- Caregiver can answer
- Scale is 0=No dementia, 0.5=questionable dementia,1=mild dementia,2=moderate dementia,3=severe dementia
- CDR of 0.5-1 are at intermediate risk for unsafe driving; CDR of 2 are at high risk

Quality Standards *

- American Academy of Neurology (2010)
  - CDR: level A
  - Caregiver rating: level B
  - History of crashes or traffic citations: Level C
  - Reduced driving/situational avoidance: Level C
  - Interventional strategies: Level U

*Level A = useful; level B = probably useful; level C = possibly useful; level U = insufficient evidence

State laws

- Mandatory/Permissive/No written statute
- Mandatory reporting states
  - California
  - Delaware
  - New Jersey
  - Oregon
  - Pennsylvania
  - Nevada

State restrictions (examples)

- Virginia: normal renewal (8 years), vision test after age 80
- District of Columbia: normal renewal (8 years), no other restrictions
- West Virginia: normal renewal (5 years), no other restrictions
- North Carolina: renewal is usually at 8 years but > age 66 at 5 years, AND for the road test you do not have to parallel park > age 60!!!

Voluntary reporting

- Virginia: the name of the person reporting IF a relative or a physician, will be kept confidential (may differ between states)
- Your DMV website for your state will give you forms to download for reporting
- For most, you can request a vision, road, written test, or all three; the patient MUST go to this test or their license will be revoked

Legal aspects

- It is possible for the patient's family, or the family of person injured to sue the doctor if there is no documentation of advice to NOT drive in a person who is found to have caused an injury due to a medical condition
  - A form you might consider would be "You have been told not to drive because of …..."; have the patient sign it; keep a copy in their permanent record
  - 2 cases: failure to advise seizure patient not to drive; failure to advise patient of possible impairment due to high risk med

Testing by the DMV

- Unless the person is VERY impaired and sure to fail, there are problems with this
  - Subjectivity of the examiner
  - Risk to the examiner
  - Inability to mirror high risk situations
  - Permissive attitude "That's ok, Miss Daisy, I know you didn't mean to get so close to that parked car"

Simulators

- They are not standardized in terms of design of the equipment; but are computer driven with standards of "pass/fail" and high and low risk thus eliminating subjectivity of the on-road examiner
- Results correlate well with accident rates; in one study, patients who were "low risk" and "high risk" on the simulator were contacted 3 years later; the rate of crashes was 7x greater in the latter group

Simulators (2)

- Excellent for complex and high risk maneuvers such as a left turn at a busy 4 way intersection (note that with the DMV testing in Charlottesville, the test involves 4 right turns, and a left at a green arrow….)

Simulators (3)

- Patients may be uncomfortable, dizzy, or have motion sickness with the simulator
- Patients are rehearsed with the equipment before the formal test which usually helps
- Anti-motion sickness device with an electrical impulse may overcome this problem

One best test?

- No one test will tell you if the patient should stop driving
- BUT, to quote one researcher: "Impaired performance on more than one measure affords…the primary care physician a greater degree of confidence" (Ball p.82)

Cost of evaluation

- Your time if an office visit
- DMV: free
- Centers that do a full evaluation, 2-4 hours, which includes history, paper testing, and either on road or simulator testing:about $300-500; this is NOT covered by insurances

CPT Codes for Driving Assessment

- When selecting the appropriate CPT® codes for driver assessment and counseling, first determine the primary reason for your patient's office visit, as you would normally.
- Driving assessment will most often fall under Evaluation and Management (E/M) services.
- Use initial or established comprehensive preventive codes, adding modified –25 if there is assessment and counseling
- Can use 99401-99404 for counseling and/or risk factor reduction and intervention (similar to smoking cessation)
- If you do the entire assessment (visual fields/acuity, motor, rapid pace, ROM, Trails B and clock drawing) code is 99420

Physician's Guide to Assessing and Counseling Older Drivers; AMA/NHTSA/USDOT June 2003

Adaptive equipment

- If decreased ROM of the neck, put in wide angle mirrors or extra side and rear view mirrors
- Left foot accelerators if weak right foot
- Hand controls
- Right hand turn signals if left hand weak

Strategies for helping the impaired drivers: no studies!

- Retraining
  - AAA, AARP have programs
- Co-pilot
- On-board navigation device/crash warning
- Restricted licenses
- Family restricts type of driving
- Cognitive enhancers (Donepezil, others)

Home grown strategies

- Disable the car: ok if dementia severe; if mild, person will call the garage to fix it
- Remove the car: results in anger, loss of independence; removes the danger; need to be aware of community resources for transportation (cost and availability)
- Persuasion: may work;usually does not

Summary

- It is still hard (patient angry) but there are concrete steps to take – and it is better to have the patient angry with you than with their family, and better for all (societal benefit) that they not harm someone on the road if you feel that they should not drive.

Questions?