

Chapter 2

Is the Patient at Increased Risk for Unsafe Driving?

Mr. Phillips, a 72-year-old man with a history of hypertension, congestive heart failure, Type II diabetes mellitus, macular degeneration, and osteoarthritis, comes in for a routine check-up. You notice that Mr. Phillips has a great deal of trouble walking to the exam room, even aided by a cane. You also notice that he has trouble seeing the room numbers by the exam room doors, even with his glasses. While taking a social history, you ask him if he drives, and he says that he drives to do errands, go to appointments, and meet with his bridge club.

Mr. Bales, a 60-year-old man with no significant past medical history, presents at the emergency department (ED) with an acute onset of substernal chest pain. He is diagnosed with acute myocardial infarction. Following an uneventful hospital course, he is stable and ready to be discharged. On the day of his discharge, he mentions that he had driven himself to the ED and would now like to drive himself home, but cannot find his parking ticket.

In this chapter, we will discuss the first step of the *Physician's Plan for Older Drivers' Safety* (PPODS). In particular, we will provide you with a strategy for answering the question, "Is this patient at risk for medically impaired driving?"

To answer this question, first—

Observe the patient throughout the encounter.

Careful observation is often the initial step in diagnosis. As you observe the patient, be alert to:

- Poor hygiene and grooming
- Difficulty walking or getting into and out of chairs
- Difficulty with visual tasks
- Difficulty with attention, memory and comprehension

In the example above, Mr. Phillips has difficulty walking and seeing the room numbers. This raises the question of whether he can handle vehicle foot pedals properly or see well enough to drive safely.

Be alert to red flags in the patient's history, list of medications, and review of systems.

As you take the patient's history, be alert to 'red flags'—any medical condition, medication or symptom that can impair driving skills, either through acute effects or chronic functional deficits (see *Red Flags for Medically Impaired Driving* on page 28). For example, Mr. Evans in Chapter 1 presents with lightheadedness associated with atrial fibrillation. This is a red flag, and he should be counseled to cease driving until control of heart rate and symptoms has been achieved. Similarly, Mr. Bales' acute myocardial infarction is a red flag. Prior to his discharge from the hospital, his physician should counsel him about driving according to the recommendations in Chapter 9. (See Figure 2.1 for further discussion of counseling in the inpatient setting.)

Figure 2.1 Counseling the driver in the inpatient setting

When caring for patients in the inpatient setting, it can be all too easy for physicians to forget about driving. In a survey of 290 stroke survivors who were interviewed 3 months to 6 years post-stroke, fewer than 35% reported receiving advice about driving from their physicians, and only 13% reported receiving any type of driving evaluation.¹ While it is possible that many of these patients suffered such extensive deficits that both the patient and physician assumed that it was unlikely for the patient to drive again, patients should still receive driving recommendations from their physician.

Counseling for inpatients may include recommendations for permanent driving cessation, temporary driving cessation, or driving assessment and rehabilitation when the patient's condition has stabilized. Such recommendations are intended to promote the patient's safety and, if possible, help the patient regain his/her driving abilities.

Figure 2.2 Health Risk Assessment

A health risk assessment is a series of questions intended to identify potential health and safety hazards in the patient's behaviors, lifestyle, and living environment. A health risk assessment may include questions about, but not limited to—

- Physical activity and diet
- Dental hygiene
- Use of safety belts
- Presence of smoke detectors and fire extinguishers in the home
- Presence of firearms in the home
- Episodes of physical or emotional abuse

The health risk assessment is tailored to the individual patient or patient population. For example, a pediatrician may ask the patients' parents about car seats, while a physician who practices in a warm-climate area may ask about the use of hats and sunscreen. Similarly, a physician who sees older patients may ask about falls, injuries, and driving.

Mr. Phillips does not have any acute complaints, but his medical history is filled with red flags. His macular degeneration may prevent him from seeing well enough to drive safely. His osteoarthritis may make it difficult for him to operate vehicle controls or turn to view traffic. Regarding his hypertension, diabetes, and congestive heart failure, does he experience any end-organ damage, sensory neuropathies, or cognitive decline that may affect his driving ability? Could any of his medications impair his driving performance?

Keep in mind that many prescription and non-prescription medications have the potential to impair driving skills, either by themselves or in combination with other drugs. (See Chapter 9 for an in-depth discussion about medications and driving.) Older patients generally take more medications than their younger counterparts and are more susceptible to their central nervous system effects. Whenever you prescribe one of these medications or change its dosage, counsel your patient on its potential to impair driving safety. You may also recommend that your patient undergo formal assessment of function (the next step in PPODS) while he/she is on the medication.

The review of systems can reveal symptoms that may interfere with the patient's driving ability. For example, loss of consciousness, feelings of faintness, memory loss, and muscle weakness all have the potential to endanger the driver.

Perhaps the most glaring red flag of all is the patient's or family member's concern. If your patient asks, "Am I safe to drive?" (or if a family member expresses concern), find out the reason for the concern. Has the patient had any recent crashes or near-misses, or is he/she losing confidence due to declining functional abilities?

Please note that age alone is not a red flag! While many people experience a decline in vision, cognition, and motor skills as they grow older, people experience functional changes at different rates and to different degrees.

Ask about driving during the social history/health risk assessment.

If a patient's presentation and/or the presence of red flags lead you to suspect that he/she is at risk for medically impaired driving, the next step is to ask whether he/she drives. You can do this by incorporating the following questions into the social history or health risk assessment (see Figure 2.2):

- "How did you get here today?"
- "Do you drive?"

If your patient drives, then his/her driving safety should be addressed. For acute events, this generally involves counseling the patient. For example, Mr. Bales should be counseled to temporarily cease driving for a certain period of time after his myocardial infarction. If Mr. Phillips is started on a new medication, he should be counseled about the side effects and their potential to impair driving performance.

For chronic conditions, on the other hand, driving safety is addressed by formally assessing the functions that are important for driving. This is the next step in PPODS, and it will be discussed in the following chapter.

Please note that many chronic medical conditions have both chronic and acute effects. For example, a patient with insulin-dependent diabetes may experience acute episodes of hypoglycemia in addition to chronic complications such as diabetic retinopathy. In this case, the physician should counsel the patient to avoid driving during acute episodes of

hypoglycemia and to keep candy or glucose tablets within reach in the car at all times. The physician should also recommend formal assessment of function if the patient shows any signs of functional decline. (See Chapter 9 for the full recommendation on diabetes and driving.)

If your patient does not drive, you may wish to ask if he/she ever drove, and if so, why he/she stopped driving. If your patient voluntarily stopped driving due to medical reasons that are potentially treatable, you may be able to help him/her return to safe driving. In this case, formal assessment of function can be performed to identify specific areas of concern and measure the patient's improvement with treatment.

Gather additional information.

To gain a better sense of your patient as a driver, ask questions specific to driving. The answers to these questions can help you determine the level of intervention that is needed.

If a collateral source such as a family member is available at the appointment or bedside, consider addressing your questions to both the patient and the collateral source. If this individual has had the opportunity to observe the patient's driving, his/her feedback may be valuable.

Questions to ask include:

- “How much do you drive?” (or “How much does [patient] drive?”)
- “Do you usually have any passengers?”
- “Do you have any problems when you drive?” (Ask specifically about day and night vision, ease of operating the steering wheel and foot pedals, confusion, and delayed reaction to traffic signs and situations.)
- “Do you think you are a safe driver?”

- “Do you ever get lost while driving?”
- “Have you gotten any tickets in the past two years?”
- “Have you had any near-misses or crashes in the past two years?”

Understand your patient's mobility needs.

At this time, you can also ask about your patient's mobility needs and encourage him/her to begin exploring alternative transportation options. Even if alternative options are not needed at this time, it is wise for the patient to plan ahead in case he/she ever retires from driving. Some questions you can use to initiate the conversation include:

- “How do you usually get around? Does this work well for you?”
- “If your car ever broke down, how would you get around?”

Encourage your patients to plan a safety net of transportation options by telling them, “Mobility is very important for your physical and emotional health. If you were ever unable to drive for any reason, I'd want to be certain that you could still make it to your appointments, pick up your medications, go grocery shopping, and visit your friends.” In the event that your patient must retire from driving, the transition from driver to non-driver status will be less traumatic if he/she has already created a transportation plan. The handout in Appendix B, *Getting By Without Driving*, can help your patient get started.

Reference

- 1 Fisk GD, Owsley C, Pulley LV. Driving after stroke: Driving exposure, advice, and evaluations. *Archives of Physical Medicine and Rehabilitation*. 1997;78:1338-1344.

Red Flags for Medically Impaired Driving

Acute Events

Prior to hospital or emergency department discharge, patients and appropriate caregivers should be counseled as needed regarding driving restrictions and future assessment and rehabilitation. Acute events that can impair driving performance include:

- Acute myocardial infarction
- Acute stroke and other traumatic brain injury
- Syncope and vertigo
- Seizure
- Surgery
- Delirium from any cause

Patient's or Family Member's Concern

Has your patient approached you with the question, "Am I safe to drive?" (Alternatively, a family member may express concern about the patient's driving safety.) If so, find out the cause of concern. Note that age alone does not predict driving fitness—function, not age, is the determining factor. Ask for specific causes of concern, such as recent crashes, near-misses, traffic tickets, becoming lost, poor night vision, forgetfulness, and confusion.

Medical History: Chronic Medical Conditions

Patients may require formal assessment to determine the impact of these conditions on their level of function:

- *Diseases affecting vision*, including cataracts, diabetic retinopathy, macular degeneration, glaucoma, retinitis pigmentosa, field cuts, and low visual acuity even after correction
- *Cardiovascular disease*, especially when associated with pre-syncope, syncope or cognitive deficits, including unstable coronary syndrome, arrhythmias, congestive heart failure, hypertrophic obstructive cardiomyopathy, and valvular disease
- *Neurologic disease*, including dementia, multiple sclerosis, Parkinson's disease, peripheral neuropathy, and residual deficits from stroke
- *Psychiatric disease*, including mood disorders, anxiety disorders, psychotic illness, personality disorders, and alcohol or other substance abuse
- *Metabolic disease*, including Type I and Type II diabetes mellitus and hypothyroidism
- *Musculoskeletal disabilities*, including arthritis and foot abnormalities
- Chronic renal failure
- *Respiratory disease*, including chronic obstructive pulmonary disease and obstructive sleep apnea

Medical History: Medical Conditions with Unpredictable/Episodic Events

The patient should be counseled not to drive during any of the following acute events:

- Pre-syncope or syncope
- Angina
- Seizure
- Transient ischemic attack
- Hypoglycemic attack
- Sleep attack or cataplexy

Medications

Many non-prescription and prescription medications have the potential to impair driving ability, either by themselves or in combination with other drugs. Combinations of drugs may affect drug metabolism and excretion, and dosages may need to be adjusted accordingly. (See Chapter 9 for a discussion of each medication class.) Medications with strong potential to affect the patient's driving performance include:

- Anticholinergics
- Anticonvulsants
- Antidepressants
- Antiemetics
- Antihistamines
- Antihypertensives
- Antiparkinsonians
- Antipsychotics
- Benzodiazepenes and other sedatives/anxiolytics
- Muscle relaxants
- Narcotic analgesics
- Stimulants

Review of Systems

The review of systems can reveal symptoms or conditions that may impair driving performance. In addition to further work-up, driving safety should be addressed.

- **General:** fatigue, weakness
- **HEENT:** headache, head trauma, visual changes, vertigo
- **Respiratory:** shortness of breath
- **Cardiac:** chest pain, dyspnea on exertion, palpitations, sudden loss of consciousness
- **Musculoskeletal:** muscle weakness, muscle pain, joint stiffness and pain, decreased range of motion
- **Neurologic:** loss of consciousness, feelings of faintness, seizures, weakness/paralysis, tremors, loss of sensation, numbness, tingling
- **Psychiatric:** depression, anxiety, memory loss, confusion, psychosis, mania

Assessment and Plan

As you formulate a diagnosis/treatment plan for your patient's medical conditions, remember to address driving safety as needed. You may need to counsel your patients about driving when you:

- Prescribe a new medication, or change the dosage of a current medication
- Work up a new-onset disease presentation or treat an unstable medical condition. This includes many of the medical conditions listed above.