

Screening and Assessment of Medically At-Risk Drivers — Basic Principles

In our aging society, where most people remain dependent on private automobiles to maintain the mobility so essential to a good quality of life, identifying at-risk drivers is a priority for both public and personal safety. As some states move toward greater involvement by licensing authorities to ensure fitness-to-drive, and others encourage private sector initiatives in this arena, a common understanding of core concepts is useful.

Screening is the “first tier” in evaluating fitness-to-drive. Its distinguishing features include:

- Almost all drivers “pass,” with some getting an early warning of a mild or potentially impairing condition and others establishing a baseline against which later changes in key functional abilities can be measured. For a *few* individuals who appear to have a serious impairment, further, in-depth evaluation is recommended.
- Screening *may* lead to further testing, but *in itself does not lead to any licensing action*.
- Screening may be conducted by a qualified test administrator in any office or clinical setting affording a reasonable degree of privacy, and absence from distractions.
- A variety of manual and computer-based driver screening tools are available. Most important is that screening encompasses a *comprehensive* range of visual, mental, and physical abilities needed to drive safely; that test procedures are *standardized* and *reliable*; and that screening measures are *scientifically validated* as predictors of motor vehicle crashes.

Assessment is the “second tier” in evaluating fitness-to-drive. Key points include:

- Drivers may choose or be required to obtain a diagnostic evaluation of the underlying reason for a deficit identified during screening through more in-depth clinical testing, through laboratory testing, through in-car assessment, or through a combination of procedures.
- Assessments are typically performed by (or on behalf of) physicians, optometrists, occupational and physical therapists, and driving rehabilitation specialists.
- In most states, a formal driver assessment is necessary (and sufficient) to trigger a licensing restriction or other action.

It is the degree of impairment in one or more essential safe driving abilities that determines a person’s fitness to drive, *not* his or her medical diagnosis *per se*. For example, some symptoms of diabetes place individuals at great risk when they drive, while others do not; likewise, a person diagnosed with a progressive dementia may drive (within limits) safely in the earliest stages, given frequent reassessment to determine when there is a marked increase in the risk of impaired driving.

The most extensive and rigorous research to date linking crash risk to age-related functional decline, sponsored by the National Highway Traffic Safety Administration and the National Institute on Aging, points to just a handful of basic abilities that are most important for safe driving. In addition to having *good vision under both high and low contrast conditions*, certain aspects of physical fitness are also important—sufficient *head-neck flexibility* to quickly check to the sides and rear, and enough *leg strength* to control the pedals effectively in routine situations and when reacting to emergencies. A cluster of cognitive abilities also are highlighted: *working memory*, to retain and apply traffic rules and regulations, and remember directions while driving; *visual search*, especially under divided attention conditions, to spot all manner of signs, signals, hazards, landmarks, and other elements in or near the road that help one drive safely; *visualizing missing information*, to help drivers anticipate and recognize threats, even when only a part is in view; and *visual information processing speed*, which makes it possible to pay attention to what is happening directly ahead, while still perceiving threats at the edge of the “useful field of view.”

Early detection of changes in safe driving abilities helps people keep driving safely longer!