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Strategies for Medical Advisory Boards and Licensing Review

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16. Abstract

The objectives of this project were: (1) to document the medical review practices of Medical Advisory Boards (MABs) and other medical review units within the 51 driver-licensing agencies in the United States with respect to determining fitness to drive; and (2) to develop recommended strategies for the identification, assessment, and disposition of drivers with medical conditions and functional impairments, and related customer service goals.

This information regarding medical review practices was obtained through requests of licensing officials to complete an extensive mail-back survey on behalf of the American Association of Motor Vehicle Administrators (AAMVA) and to participate in follow-up telephone calls with the Principal Investigator to expand their responses. Information from the telephone conversations; the written survey responses; and medical forms, guidelines, and statutes provided by survey respondents was summarized into a 5- to 10-page narrative for each of the 51 jurisdictions. A Task Report titled, *Summary of Medical Advisory Board Practices in the United States*, was prepared that includes the State summaries and multiple appendices presenting summary tables; this document is currently posted on AAMVA's Web site at www.aamva.org.

An in-depth study was also conducted to determine which activities currently applied by one or more jurisdictions deserve priority for consideration as recommended strategies and how to implement them. Two activities were undertaken to assist in this determination. The first activity involved completion of a Relative Value Assessment exercise by key licensing officials and medical staff in 45 jurisdictions. The second activity was accomplished through a 1½-day meeting with Medical Advisory Board physicians and administrative medical review unit supervisors in 11 jurisdictions to discuss recommended strategies for medical review and overcoming barriers to their implementation.

This report summarizes the activities conducted in this project, and provides recommendations for recommended strategies for licensing drivers with medical conditions and functional impairments.

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SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yards	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
NOTE: Volumes greater than 1000 l shall be shown in m^3.				
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5(F-32)/9 or (F-32)/1.8	Celcius temperature	°C
		ILLUMINATION		
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m^2	cd/m^2
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.71	cubic feet	ft^3
m^3	cubic meters	1.307	cubic yards	yd^3
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
		TEMPERATURE (exact)		
°C	Celcius temperature	1.8C + 32	Fahrenheit temperature	°F
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	candela/m^2	0.2919	foot-Lamberts	fl
		FORCE and PRESSURE or STRESS		
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

* SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.

(Revised September 1993)

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EXECUTIVE SUMMARY

The objectives of this project were as follows:

(1) To document the activities of the Medical Advisory Boards (MABs) and/or medical review units in the 50 United States plus the District of Columbia with respect to determining fitness to drive.

(2) To determine which activities currently applied by one or more jurisdictions deserve priority for consideration as recommended strategies, and how to implement them.

The research products include reports summarizing key project activities, described below, plus recommendations for licensing agencies for the identification, assessment, and disposition of drivers with medical conditions and functional impairments, and related customer service goals.

The information obtained about medical review practices in the 51 driver-licensing agencies in the United States was obtained through requests of licensing officials to complete a survey, and then to participate in a follow-up telephone interview with the project principal investigator at TransAnalytics to clarify and expand the responses. The survey was developed jointly by the American Association of Motor Vehicle Administrators (AAMVA), the National Highway Traffic Safety Administration (NHTSA), and TransAnalytics project staff. The data collection instrument was designed using the information about drive-licensing medical review practices presented in AAMVA (1999) and Petrucelli and Malinowski (1992) as a starting point.

The survey was mailed by AAMVA, under cover signed by the AAMVA senior vice president of the Programs Division. Survey respondents were asked to mail forms, guidelines, and statutes used in their medical program operations. As surveys were received by the project principal investigator, quantitative data were entered into summary tables and qualitative data were reviewed for thoroughness. Survey respondents were then telephoned by the principal investigator, and asked to provide more detail for identified survey questions. Information obtained from the three sources (telephone conversations; the written survey responses; and State guidelines, procedures, and statutes) was used to produce a narrative detailing the procedures employed in each jurisdiction for dealing with drivers who have functional impairments and medical conditions. The draft narratives were e-mailed to the survey respondents, who reviewed the information for errors or omissions. Respondents' comments were incorporated into the final narratives, which along with three appendices of summary tables, comprise the project deliverable titled, *Summary of Medical Advisory Board Practices in the United States.* This research product is posted on AAMVA's Web site at the following address:

www.aamva.org/drivers/drvProblemDriversMedicalAdvisoryBoardPractices.asp.

An in-depth study was conducted next, to determine which activities currently applied by one or more driver-licensing agencies in the United States deserve priority for consideration as recommended strategies, and to provide suggestions that may facilitate the implementation of the recommended strategies. Two activities were undertaken to assist in this determination:

(1) A qualitative summary and comparison ("Relative Value Assessment") of medical review program activities in the United States.

(2) The identification of barriers to implementing specific, selected practices, and strategies to overcome those barriers.

The first of these activities involved 45 of the 51 licensing jurisdictions, sampled through a mailed survey to key licensing officials and medical staff. The second was accomplished through a 1½-day meeting held in Washington, DC, that included representatives from NHTSA and AAMVA; TransAnalytics project staff; and medical review staff from a subset of States chosen with the assistance of NHTSA and AAMVA. The 11 jurisdictions represented at the meeting included: the District of Columbia, Florida, Iowa, Maryland, North Carolina, Ohio, Oregon, Utah, Virginia, Washington, and Wisconsin.

The Relative Value Assessment (RVA) exercise involved an assignment of weights among related groups of potential components of a medical review program, to determine how important each component is in relationship to the other components in the group. Representatives from all 51 jurisdictions sampled in the earlier survey conducted in this project were contacted again through AAMVA with a request to participate in the RVA exercise. As the first step in developing the RVA, medical review program components were identified as viable candidates for driver medical review recommended strategies. This was done through review of the project deliverable titled *Summary of Medical Advisory Board Practices in the United States* by the TransAnalytics principal investigator and senior analyst. Sixty-four candidate recommended strategies were identified. These components were arranged in a hierarchy, moving from the most general to the most specific. Respondents were asked to assign weights to subsets of medical review program components, at each level of the hierarchy. Instructions emphasized that when assigning relative values to each set of components, respondents should consider only how important each component element would be to the success of a model medical evaluation program, *without regard to current feasibility of implementation.*

Licensing agency medical review department personnel in 45 jurisdictions completed and returned RVA exercises. Mean weightings were calculated and were used to help pinpoint which components are considered most important to the effectiveness of a *model medical review program.* Components with high weightings were used as the starting point in discussions with licensing agency personnel and NHTSA and AAMVA representatives at the 1½-day meeting to identify recommended strategies and barriers to their implementation.

The meeting began with a brief overview of project activities conducted to date and a discussion of the RVA exercise outcomes. The meeting then moved into a round-table format with discussions about what constitutes recommended strategies among the 64 components rated in the RVA and what legislative and budgetary barriers could preclude implementation.

A true consensus regarding recommended strategies for most medical program components discussed at the meeting was rarely achieved; however, substantial agreement among participants was reached on the following points:

- A Medical Advisory/Review Board is a necessary component of a medical review

program. Each jurisdiction should have an MAB staffed with physicians to provide advice to DMV medical review department staff regarding licensees' fitness to drive.

- The role of the MAB should include review of individual cases for fitness to drive determinations (as opposed to a board that only hears appeals once a license has been denied by the DMV) and development of medical criteria/guidelines for licensing.
- Case review and initial licensing recommendations should be provided by individual MAB members, as opposed to requiring consensus by a panel of board members.
- The use of in-person and video interviews between MAB physicians and drivers under review should be explored to assist in making an initial fitness to drive determination.
- Physicians serving on an MAB should be compensated. The best scenario is to employ physicians as full-time DMV staff members. If members cannot be employed as full-time DMV staff because of cost constraints, then they should serve as paid consultants to the DMV. Compensation should be commensurate with physicians' hourly rates (and not the $6 per case reviewed or the $25 per diem rate indicated in some State DMV statutes).
- Medical/functional guidelines should be used to treat drivers with consistency, but should not replace case review by MAB physicians for more complicated cases. Functional Ability Profiles are useful when administrative personnel are making licensing decisions based on information received in treating physicians' medical reports.
- The rules written for medical review of drivers should not be in statute, but should be in the Code of State Regulations, so that changes can be made quickly as new medical data become available.
- National medical/functional guidelines for driver licensing should be developed in close consultation with the medical community, and adopted by States.
- The AMA/NHTSA *Physician's Guide for Assessing and Counseling Older Drivers* is a useful starting point for developing National guidelines.
- Drivers should be required to appear in-person for license renewal when they reach a certain age, and the renewal cycle should be shortened based on driver age.
- Drivers should be required to self-report medical conditions for initial and renewal licensure.
- Physicians who report drivers in good faith (whether voluntarily or by mandate) should be immune from liability by their patients (Note: physician-reporting requirements and confidentiality of reports could not be agreed upon).
- The AMA/NHTSA *Physician's Guide for Assessing and Counseling Older Drivers* should be used to educate physicians about medical/functional conditions and driving safety. Physicians should receive Continuing Medical Education (CME) credits for participation in the training.
- Continuing education for police officers in identifying potentially at-risk drivers with medical conditions and functional impairments, and procedures for referring drivers to the DMV for reevaluation, should be a priority activity for the DMVs and police departments.
- Consideration should be given to the use of functional screening at license renewal *for drivers over a specified age* to identify drivers with impairments. Where time and budget constraints limit the ability of its application within the DMV for the renewal population, its use should be considered for the population of reexamination drivers (drivers referred

into the medical program by some mechanism). DMVs that cannot implement it on a designated population of renewal or reexamination drivers should join with an approved/credentialed outside organizations/associations to provide such screening and relay the results to the MAB.

- Customized/restricted licenses should be issued to allow drivers to maintain driving privileges under safe conditions (i.e., daytime, speed-restricted, area-restricted).
- Drivers with mild dementia who are deemed fit to retain driving privileges should be required to undergo reexamination driving tests at 3- to 6-month intervals, and should be required to take and pass multiple road tests for each reexamination.
- First-time DUI/DWI offenders should undergo review by the MAB/medical review department for an assessment of chemical dependency and fitness to drive (as opposed to having their cases disposed of through administrative action only or waiting for multiple DUI/DWI offenses to trigger medical review) based on statistics indicting that they have driven under the influence at least 200 times before their first legal pickup, 80-85 percent of such first-time offenders have an alcohol dependency problem, and 1 out of 3 first-time offenders will recidivate.
- The mission of DMVs should be expanded beyond the traditional role of ensuring public safety, to supporting the continuing safe mobility of drivers with medical conditions and functional impairments.
- The opinions of driving-rehabilitation specialists are important in the determination of fitness to drive. Treating physicians should be educated about the role driving specialists play in assessing fitness to drive and providing rehabilitation and retraining. Mechanisms should be put into place for DMVs and treating physicians to refer drivers to these specialists.
- Lists of services provided by DMVs for counseling, education, remediation, and retraining should be community-based (locally-based and not State-based).

Conclusions from the meeting with experts and outcomes from the RVA exercise serve as the rationale for development of recommended strategies for the identification, regulation, and continuing safe mobility of drivers with medical conditions and functional impairments.

This report summarizes the activities conducted in this project. Recommendations for a model medical review program—given realistic constraints—are presented at the end of this report. It should be noted that, while this report includes recommendations for recommended strategies, and attempts to identify key barriers to their implementation, it was beyond the scope of this project to address any timelines for implementing recommended practices. Also, while participating physicians advised the project team that State attorneys general have in some cases ruled that a Motor Vehicle Administration/Department of Motor Vehicles is exempt from the Health Insurance Portability and Accountability Act (HIPAA) to the extent that the public welfare depends upon its medical review of drivers, this report does not explicitly address the issue of whether compliance with this or other regulations will or will not be an issue in a given jurisdiction.

IDENTIFICATION OF STATE LICENSING CONTACTS

The American Association of Motor Vehicle Administrators (AAMVA) provided assistance in the identification of the most appropriate licensing agency officials to receive surveys and follow-up contacts, with additional input from the Governor's Highway Safety Representative in each jurisdiction, as follows. AAMVA mailed a letter to its primary driver license contact in each of the 51 jurisdictions that explained the project objectives, and provided advanced notice that their assistance would be requested in the upcoming months. A request was made in the letter to contact AAMVA to provide the name of the person in the motor vehicle agency with the most knowledge regarding the day-to-day activities surrounding drivers with medical conditions and functional impairments, if the position of the addressee was too far removed from such activities.

In addition, project staff mailed letters to each of the 51 offices of the Governor's Highway Safety Representative, advising them of the project objectives and requesting that they also provide contact information for the most appropriate contact in their State's licensing agency for assistance in completing the survey. AAMVA reviewed new contact information and maintained and updated the list of contacts for the project.

Appendix A lists the survey and telephone interview respondents identified through this process.

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SURVEY OF MEDICAL REVIEW PRACTICES IN THE UNITED STATES

The survey instrument developed by TransAnalytics project staff with the assistance of AAMVA and NHTSA is presented in Appendix B. Respondents completed the survey between January and March 2003. The survey contained three sections as follows:

- Section 1, containing 25 questions, was completed by all jurisdictions regardless of whether they had an MAB when this survey was completed.

- Section 2, containing 23 questions, was completed by the 35 States that had an active MAB when this survey was completed.

- Section 3, containing 7 questions, was completed by the 14 States that did not have an MAB, plus the 2 States that had an inactive/on-paper-only MAB when this survey was completed.

A cover letter for the survey was drafted by AAMVA and project staff that explained how the survey was structured, and provided a due date for survey completion and return to TransAnalytics. The cover letter also included a checklist of additional information to be returned with the completed survey (e.g., license application forms; medical and visual forms; and agency guidelines, procedures, and statutes).

The survey was mailed by AAMVA, under cover signed by the AAMVA senior vice president of the Programs Division. As surveys were received by the project principal investigator, quantitative data were entered into summary tables and qualitative data were reviewed for thoroughness. Survey respondents were then telephoned by the principal investigator, and asked to provide more detail for identified survey questions. Information from the telephone conversations was recorded manually, and was used with the written survey responses to produce a narrative detailing the procedures used in each jurisdiction for dealing with drivers who have functional impairments and medical conditions. Survey respondents were asked to mail forms, guidelines, and statutes used in their medical program operations. These materials were reviewed and incorporated into each State summary. The draft summaries were then e-mailed back to the survey respondents, who reviewed the information for errors or omissions. Respondents' comments were incorporated into the final summaries, which comprise the project deliverable titled *Summary of Medical Advisory Board Practices in the United States*. This research product is posted on AAMVA's Web site at the following address:

www.aamva.org/drivers/drvProblemDriversMedicalAdvisoryBoardPractices.asp.

The document summarizes the activities of the Medical Advisory Boards (or other administrative units performing medical review functions) in the 50 United States plus the District of Columbia that determine fitness to drive for operators of personal or private vehicles not for hire. For each jurisdiction, a 5- to 10-page summary describes the organization of the medical program; mechanisms used to identify drivers with medical conditions and functional impairments; procedures and medical guidelines used to evaluate drivers for fitness to drive; evaluation outcomes, appeal of licensing action, availability of counseling and public

information and educational materials; and administrative issues such as training of employees, driver-tracking systems, and barriers to implementing more extensive screening, counseling, and referral activities. Appendices that accompany the report present summary tables showing responses by State for each question on the survey, for ease of comparison across jurisdictions.

Similarities and differences in practices across the United States are highlighted in the following discussion.

Depth of Questioning Regarding Medical Conditions on Renewal Application Form

Self-reporting of medical conditions during license renewal procedures is a common mechanism for bringing drivers with medical conditions and functional impairments to the attention of the licensing agency. All but two States (Arkansas and New Hampshire) require drivers to answer questions about medical conditions as they complete their license application, and four jurisdictions said only first-time applicants were required to answer such questions.

There are large differences across jurisdictions in the depth of this questioning. The depth of questioning ranges from one simple question such as, “Do you have any medical conditions that may affect your ability to drive safely?” to very detailed, specific questions as are presented in Utah and Maryland, that list conditions. One State (Washington) revised its (single) question in response to American Civil Liberties Union criticism for requiring too much information from applicants.

Tests Conducted At Renewal

Another mechanism for identifying drivers with functional impairments is screening/testing at license renewal. Departments of Motor Vehicles (DMV) often perform vision screening upon license renewal, and some DMVs also require renewal applicants to pass a knowledge test. Two jurisdictions currently require renewing drivers 75 and older to pass a road test.

Administration of the knowledge test varies across the States when used as a tool for identifying drivers with possible impairments. In some States, all renewing drivers are required to take a knowledge test. In other States, a knowledge test is given to all reexamination drivers (drivers referred into the medical program by some mechanism). In other States, a knowledge test is used as a surrogate mental status test, and is given only to drivers who are suspected of having cognitive impairment (e.g., Connecticut and Virginia). One respondent said the practice of giving the knowledge test only to drivers suspected of cognitive impairment would not be acceptable in his State because it treats handicapped drivers differently and would run afoul of the Americans with Disabilities Act (ADA).

Level of In-Person Contact (Hearing, Interview) of DMV with Referred Driver Prior to Initiation of Reexamination Process

In most cases when the licensing agency receives a complaint or letter of concern regarding a driver's ability to operate a motor vehicle safely, the agency begins the reexamination process by sending the driver a medical form that must be completed by the driver's treating physician and returned to the licensing agency. Based on the information obtained in the physician's report, the driver's operating privilege may be continued without restriction; continued with restriction; continued based on the results of a DMV vision, knowledge, and/or road test; or withdrawn. But in any case, the reexamination procedure always requires receipt of a medical report from the driver's treating physician.

However, in several jurisdictions, the driver is first called into a motor vehicle office for an interview or hearing to gather more information about the driver's condition. The information gathered during the interview is used to determine whether the driver needs to undergo medical reexamination (a physical examination by the treating physician), or DMV reexamination (vision testing, knowledge testing, and/or road testing).

Breadth of Medical Criteria for Licensing Determinations

There is great variability in the medical criteria used to make licensing determinations. Some jurisdictions rely solely on the treating physician's opinion regarding fitness to drive, while others employ very specific medical and functional criteria for several medical conditions (i.e., oxygen saturation levels for pulmonary disease; American Heart Association classifications for heart disease, etc.). Other jurisdictions have guidelines only for loss of consciousness/seizure disorders.

Three States use Functional Ability Profiles (Maine, North Carolina, Utah), where physicians classify their patients with medical conditions into specific levels of severity. The DMV uses a matrix and the input of the MAB to determine license restrictions, periodic retesting or medical review requirements, or loss of driving privileges.

With regard to seizure-free periods for loss-of-consciousness disorders, a few States have no set requirements, while other States have a 3-month, 6-month, or 12-month seizure-free period. There is also variability in whether States will waive a seizure-free requirement, such as when seizures result from physician-initiated changes in prescription seizure medications, or for seizures that occur only at night, or when there is sufficient warning of the onset of an episode.

Medical review of passenger vehicle drivers in the United States is currently conducted under 51 separate sets of criteria for fitness to drive. One survey respondent remarked that some older drivers could use the differences in policies as a basis of where to relocate for retirement, and live in a State with more permissive medical/functional requirements.

All jurisdictions have, at the very least, criteria for visual acuity. However, there is also wide variability in the absolute minimum visual acuity level allowed for driving (e.g., 20/50 to 20/200), although all States require 20/40 or better for unrestricted licenses. Some States allow

drivers to meet the acuity standard through the use of binocular telescopic lenses (although most do not), and not all States allow driving with binocular telescopic lenses. In addition, not all States have a peripheral-visual-fields standard. Not all States test the vision of renewing drivers.

Physician Reporting Laws

Physicians who treat drivers with medical conditions and functional impairments are a mechanism outside of the DMV that may serve to bring potentially unsafe drivers to the attention of a licensing agency. Although all 51 jurisdictions accept reports of potentially unsafe drivers from physicians, only 6 jurisdictions require physicians to report drivers to the motor vehicle agency who have medical conditions or functional impairments that may affect safe driving ability. In four of these jurisdictions (California, Delaware, New Jersey, Nevada), loss of consciousness/epilepsy is presently the only condition that is required to be reported, but, in one of these States (California), the definition of "loss of consciousness" is broad. In California, "disorders characterized by lapses of consciousness" are defined as medical conditions that involve the following:

(1) A loss of consciousness or a marked reduction of alertness or responsiveness to external stimuli;
(2) The inability to perform one or more activities of daily living; and
(3) The impairment of the sensory motor functions used to operate a motor vehicle.

Examples of medical conditions that do not always, but may progress to the level of functional severity are provided in the Code of Regulations, and include Alzheimer's disease and related disorders, seizure disorders, brain tumors, narcolepsy, sleep apnea, and abnormal metabolic states, including hypo- and hyperglycemia associated with diabetes.

In the remaining two mandatory-physician reporting States, Oregon has recently moved from the requirement to report loss of consciousness only to "cognitive and functional impairments that are severe and/or uncontrollable to a degree that may preclude safe operation of a motor vehicle and are not correctable by medication, therapy, surgery, driving device, or technique." Pennsylvania requires physicians to report any person over the age of 15 diagnosed with any of the specified disorders or disabilities defined by the Medical Advisory Board that could impair the ability to drive safely, as well as any other condition which, in the opinion of the provider, is likely to impair the ability to control and safely operate a motor vehicle.

Although all States allow physicians to report potentially unsafe drivers, not all assure that the reports will be held as confidential, and only 30 provide immunity from civil liability. Physicians may choose not to report patients if they fear retribution in the form of lawsuits or the possibility of losing a patient's business. One or two States said increasing voluntary physician reporting by providing immunity may swamp already understaffed medical units.

Crashes and Points as Triggers for Retesting

A survey question asked whether a crash with a fatality, an accumulation of points, and/or an accumulation of crashes would prompt the licensing agency to require a driver to

undergo evaluation. Such adverse driving events are another mechanism that jurisdictions use to identify drivers who may have medical conditions or functional impairments. Twenty-five jurisdictions reported that a crash with a fatality could trigger reevaluation, 3 said an accumulation of points could trigger reevaluation, and 15 said an accumulation of crashes could trigger reevaluation.

Presence of MAB and Scope of Activities

While 37 jurisdictions have MABs, there is variability in the scope of their activities. In one of these States, the MAB exists on paper only, and in another, the MAB is currently inactive. MAB physicians most frequently conduct reviews of medical reports submitted by drivers' treating physicians to make fitness to drive determinations (33 States). However, in some jurisdictions, MAB physicians interview referred drivers (in 5 States, either in person or indirectly through the use of video), and even fewer (only 3) conduct hands-on screening or assessment functions. Some MABs review all cases referred to the DMV, while other boards review only those cases that cannot be handled through the application of medical guidelines by personnel in the DMV (because the case falls outside of the guidelines or physician reports are conflicting, etc.). In some jurisdictions, MAB review is reserved for cases where the driver appeals the DMV's decision. Across the jurisdictions with MABs the number of case reviews performed by the MABs ranges from less than 5 cases annually to 36,000 cases annually.

Other functions of MABs in some jurisdictions include:

- Advising on medical criteria and vision standards.
- Developing report forms.
- Developing educational material.
- Recommending training courses for driver license examiners in medical fitness to drive.
- Apprising the agency on new research on medical fitness to drive.

Employment and Compensation of MAB Members

Most States that have an MAB have voluntary board physician membership. Twenty-five jurisdictions have board physicians who are volunteer consultants; 11 have board physicians who are paid consultants, 1 has a board physician who is a part-time employee of the licensing agency, and 2 have board physicians who are full-time employees of the licensing agency. It was pointed out by one respondent that voluntary membership makes it difficult to maintain membership, and another respondent said it often results in a long turn-around time for fitness to drive recommendations.

DMV Employee Awareness of Medical Conditions and Functional Ability

DMV licensing personnel who interact with the public are in a position where, if adequately trained, they may be a "first line of defense" in identifying original and renewal applicants who may have physical impairments and medical conditions that could impair safe driving ability. They may serve as a reliable source of referrals of drivers to the agency's medical program, based on their observations and questions during the licensing process. Jurisdictions

were asked whether they provide training for their personnel in how to observe applicants for impairing conditions. Jurisdictions were also asked whether their licensing personnel received specialized training relating to older drivers. Twenty jurisdictions responded that their licensing personnel receive training in how to observe for impairing conditions, and five jurisdictions (4 from the set of 20) responded that they provide specialized training for licensing personnel relating to older drivers.

Availability of Extended/Tailored/Home-Area Drive Test versus Standard Drive Test for Novices

Another difference in practices across States is the drive test. While some States administer extended/tailored road tests to drivers to ensure they can compensate for a physical disability (e.g., Arizona, Florida, Kansas, Washington), or home area tests to drivers who may need to be restricted to driving in very familiar areas (e.g., California and Wisconsin), other States administer the same test as that given to original applicants. One respondent commented that the Americans with Disabilities Act required the State to administer the same test to all applicants, thus eliminating the possibility of administering extended or area tests in his jurisdiction.

Availability of Customized/Restricted Licenses

Licensing agencies can allow drivers with medical conditions and functional impairments to continue to drive safely longer by (1) restricting drivers to driving during daytime only or only on roads with lower speed limits; (2) restricting drivers to driving only with prosthetic devices or vehicles with special adaptive equipment; and/or (3) restricting drivers to driving in familiar areas near their homes, either by restricting them to driving to specific destinations (e.g., church, doctor, shopping), or within a certain radius of home. Some States have extensive lists of restrictions that may be placed on licenses, including time-of-day and area limitations. Others have very limited types of restrictions that they may apply. Hawaii, New Jersey, and Rhode Island do not issue time-of-day or restricted area licenses. Rhode Island does not issue restricted licenses, beyond the requirement to wear corrective lenses or use special equipment; these are considered license classifications as opposed to license restrictions. There are no provisions for time-of-day or geographic restrictions, as Rhode Island considers drivers either medically qualified to drive or not medically qualified to drive.

Periodic Reporting

Currently, all but four States (Alaska, Colorado, Mississippi, New Hampshire) have the capability to monitor drivers with medical conditions through periodic medical reporting. In these four States, a driver who has a progressive medical condition and is considered by the physician as “OK to drive now” will not come to the attention of the licensing agency again until the next renewal cycle, unless involved in a crash or reported by a source outside of the DMV.

Fifteen jurisdictions said they have an automated medical record system, and 28 jurisdictions said they have automated workflow systems. Most jurisdictions that do not have automated workflow systems have a mechanism for tracking drivers with medical conditions and functional impairments.

Age-Based Testing

Age-based testing is permitted in five jurisdictions. A written and road test *may* be given to renewing drivers 75 and older in Washington, DC The District of Columbia regulations specify these tests *shall* be administered for this population; however, in practice the tests are only given when examiners observe signs of impairment. In New Hampshire and Illinois a road test is required at renewal for drivers 75 and older. In Oregon a vision test is required at 50 and older. In Pennsylvania, each month, 1,650 drivers over 45 are chosen randomly 6 months prior to the time of license renewal and must undergo vision and physical exams by a physician of their choice. Driver selection is weighted heavily toward the oldest drivers, and results in (almost) every driver over 85 being selected.

Some jurisdictions shorten the renewal cycle for older drivers, and others eliminate the opportunity to renew by mail as drivers age.

Reporting Sources Other Than Physicians

All 51 jurisdictions accept reports from law enforcement, 49 jurisdictions accept reports from the courts, 48 jurisdictions accept reports from family members, and 39 jurisdictions accept reports from friends and other citizens. Regarding reports from family, friends, and other citizens, some jurisdictions said they would accept reports from all three, while others said reports are only accepted from specific family members (e.g., immediate family; blood relatives of operators within 3 degrees of consanguinity, or the operator's spouse, who has reached the age of 18, etc.).

Agency Public Information and Educational (PI&E) Activities and Counseling of Functionally/Medically Impaired Drivers

Availability, depth/breadth, and method of delivery of PI&E vary greatly across jurisdictions. Programs that educate older drivers about the importance of fitness to drive and ways in which different impairing conditions increase crash risk may help to keep older drivers driving safely longer (through self-awareness of impairments, self-restriction where appropriate, and by seeking remediation of functional impairments). Similarly, the provision of counseling to drivers with functional impairments to help them adjust their driving habits appropriately and/or to help them deal with potential lifestyle changes that follow from limiting or ceasing driving, is viewed as an important component of a program that seeks to increase the safe mobility of older persons.

Thirteen jurisdictions reported they provide such PI&E materials to older drivers. Ten jurisdictions reported they provide counseling to drivers with functional impairments, and 7 more jurisdictions refer drivers to outside resources for counseling.

Recommendations/Referrals for Remediation

Twenty-seven jurisdictions either refer drivers for remediation of impairing conditions or recommend drivers for remedial treatments, while 24 jurisdictions said they neither refer nor recommend remediation.

IN-DEPTH STUDY

The objective of the in-depth study was to determine which activities currently applied by driver licensing agencies in the United States deserve priority for consideration as recommended strategies, and to provide suggestions that may facilitate the implementation of the recommended strategies. Two activities were undertaken to assist in this determination:

(1) A qualitative summary and comparison ("Relative Value Assessment") of medical review program activities in the United States selected as candidate recommended strategies.
(2) The identification of barriers to implementing specific, selected practices, and strategies to overcome those barriers.

The first of these activities involved responses from 45 of the 51 licensing jurisdictions, sampled through a mailed survey to key licensing officials and medical staff; the second was accomplished through a 1½-day meeting held in Washington, DC, that included representatives from NHTSA; AAMVA; TransAnalytics project staff; and medical review staff from a subset of States chosen with the assistance of NHTSA and AAMVA. Each effort is described in more detail below.

RELATIVE VALUE ASSESSMENT EXERCISE

Method

Representatives from all 51 jurisdictions sampled earlier in this project were contacted again through AAMVA with a request to participate in the Relative Value Assessment (RVA) exercise. As the first step in developing the RVA, medical review program components were identified as viable candidates for driver medical review recommended strategies. This was done through review of the earlier deliverable submitted to NHTSA for this project, titled *Summary of Medical Advisory Board Practices in the United States* by the TransAnalytics principal investigator and senior analyst. Sixty-four candidate recommended strategies were thus identified.

A framework for the RVA data collection and analysis was defined by Sage (1977). Basically, experts knowledgeable in the field assigned weights among related groups of components, moving in a structured fashion from more general to more specific levels of organization in a hierarchy that encompasses the entire system of interest—in this case, a State's medical review program. Instead of asking survey respondents to rate the relative value of the 64 components with respect to each other all at once, respondents were asked to assign weights to 21 sets of medical review program components, 4 components at a time. Respondents were instructed to assign relative values adding up to 100 to each set of components to indicate how important each component would be to the success of a model medical evaluation program. Further, they were asked to complete this exercise *without regard to current feasibility of implementation.* The task was not intended as an information-gathering activity to determine how each jurisdiction currently treats each of these elements—this was obtained through the

earlier survey activity; instead, it sought a synthesis of expert opinion about what would comprise an "ideal system."

A worksheet was developed in which the 64 candidate best-practice components were organized into a hierarchical branching table, shown in table 1. The components are labeled alphabetically from A to CF, from top to bottom, and left to right on the page. At the highest level of the hierarchy, the left column lists four very general aspects of a medical review program (labeled A-D). The middle column shown in table 1 shows 16 components of increasing specificity, organized in sets of 4 that branch off of the components shown in the first column (labeled E-T). The right column shows 64 extremely detailed components in sets of 4 that branch off of the components shown in the middle column (labeled U-CF).

The instructions provided to respondents for this exercise explained that while they may consider all four components in a set to be important in a medical review program, there may be one or two that are relatively *more* important, in their opinion, compared to the other two or three. Or there might be one that is really not important at all. Respondents were asked to "weight" the relative importance of components by assigning numbers from 0 to 100 to show how important each component in each set of 4 would be—*in a model program*—in comparison to the other 3 components.

To eliminate confusion about which components should be considered in any given comparison, each set of four to-be-weighted components was presented on a separate page, with its own instructions. For example, for the page displaying components A-D, respondents were given the following instructions:

> *What is the relative importance of each of the following four broad categories (A, B, C, and D) as a potential influence on the effectiveness of a model medical review program for your jurisdiction? Please answer by assigning a number between 0 and 100 to each of the 4 choices (shown in bold type) below, such that the 4 numbers add up to 100.*

Results

Forty-five jurisdictions completed and returned RVA exercises. An overview of the calculations performed on the subjective data follows, with the resulting relative values (weights) assigned to each candidate best practice.

The mean of the weights assigned by the 45 jurisdictions for each component is presented in table 2. This value shows the relative importance of the 4 components, in each of the groupings, at every level in the hierarchy. Inspection of table 2 reveals that the sum of the 4 mean values shown in column 1 totals 100. This allows for a direct comparison of how much more important one component is when compared with another component (in the same column).

Table 1. Relative Value Assessment Exercise Branching

Relative Value Assessment Branching Table					
%		%		%	
	[A] Policies governing medical review activities		**[E]** Nature/extent of DMV Medical Advisors' mission		**[U]** Develop medical criteria/guidelines for licensing
					[V] Review individual cases
					[W] Hear appeals
					[X] Develop report forms
				100	
			[F] Comprehensiveness of criteria for licensure		**[Y]** Standards for vision
					[Z] Standards for blackouts/seizures/losses of consciousness (includes mental disorders & dementia)
					[AA] Standards for medical conditions affecting multiple body systems (e.g., for heart, lung, endocrine, musculoskeletal, etc)
					[AB] Standards for alcohol/substance abuse
				100	
			[G] Due process for drivers referred for medical review		**[AC]** No anonymous reports
					[AD] Follow up of reporting source to validate claim
					[AE] Road test
					[AF] Appeal of departmental action
				100	
			[H] Physician reporting responsibilities and protections		**[AG]** Confidential
					[AH] Protection from tort action/immunity for reporting
					[AI] Mandated by law for specified medical conditions
					[AJ] Sanctions for failure to report
		100		100	
	[B] Process for identifying at-risk drivers		**[I]** Extent of DMV testing for license renewal		**[AK]** Vision
					[AL] Knowledge
					[AM] Road
					[AN] Functional screening
				100	
			[J] Use of internal triggers for medical reviews		**[AO]** Self reports
					[AP] Observations by counter staff
					[AQ] Driving history (points, crashes)
					[AR] Age
				100	
			[K] Use of external, non-medical triggers for medical reviews		**[AS]** Law enforcement/courts
					[AT] Family
					[AU] General public
					[AV] Social services (includes geriatric evaluation)
				100	
			[L] Use of external, medical triggers for medical reviews		**[AW]** Personal physician
					[AX] Hospital discharge planners
					[AY] OT/driving evaluators
					[AZ] Vision care specialists
		100		100	
	[C] Case review procedures		**[M]** Availability of options for preliminary disposition (determines path for evaluation)		**[BA]** Hearing officer interview with driver
					[BB] Assignment by medical staff advisor (e.g., nurse case worker, on-staff or physician consultant)
					[BC] Assignment by non-medical staff (administrative determination via procedure manual, checklist)
					[BD] Voluntary surrender
				100	
			[N] Extent of DMV evaluation procedures		**[BE]** Interview (in-person or video)
					[BF] Request for and review of medical history
					[BG] Functional screening
					[BH] DMV examination (may include vision, knowledge, and/or road)
				100	
			[O] Use of external evaluation procedures		**[BI]** Driving evaluation (driver rehabilitation or driver training specialist (OT/CDRS, driving school)
					[BJ] Examination by personal physician
					[BK] Examination by medical specialist (e.g., Neurologist)
					[BL] Clinical/laboratory testing
				100	
			[P] Composition of Medical Advisory Board		**[BM]** Full-time DMV staff physicians
					[BN] Part-time DMV staff physicians
					[BO] Paid consultants
					[BP] Voluntary consultants
		100		100	
	[D] Options supporting continuing safe mobility		**[Q]** Availability of restrictions for license "customization"		**[BQ]** Daylight/time of day
					[BR] Geographical (e.g., radius of home, within city limits, not in city limits)
					[BS] Specific routes or destinations
					[BT] Road class exclusion (e.g., no freeways, no roads with speeds of 45 mph or greater)
				100	
			[R] Type/extent of referrals for at-risk drivers		**[BU]** Counseling (for adjustment to change in license or functional status)
					[BV] Remediation (to correct or ameliorate functional deficits)
					[BW] Alternative transportation
					[BX] Retraining/"skills refresher"
				100	
			[S] Breadth of outreach activities by DMV		**[BY]** Physician education
					[BZ] Public awareness/injury prevention
					[CA] Law enforcement training in signs of impairment
					[CB] Other agencies providing services to seniors
				100	
			[T] Scope of DMV staff training		**[CC]** Counter staff (to recognize signs of functional impairment)
					[CD] License examiners (to conduct functional screening)
					[CE] License examiners (to conduct specialized road tests)
					[CF] Sensitivity training for issues relating to senior drivers & drivers with disabilities
100		100		100	

Table 2. Results of Relative Value Assessment Exercise

Mean Weights Across States (n=45)					
%		%		%	
29.8	**[A]** Policies governing medical review activities	25.6	**[E]** Nature/extent of DMV Medical Advisors' mission	40.6	**[U]** Develop medical criteria/guidelines for licensing
				28.5	**[V]** Review individual cases
				15.0	**[W]** Hear appeals
				16.3	**[X]** Develop report forms
				100	
		32.2	**[F]** Comprehensiveness of criteria for licensure	27.9	**[Y]** Standards for vision
				28.4	**[Z]** Standards for blackouts/seizures/losses of consciousness (includes mental disorders & dementia)
				24.8	**[AA]** Standards for medical conditions affecting multiple body systems (e.g., for heart, lung, endocrine, musculoskeletal, etc)
				19.2	**[AB]** Standards for alcohol/substance abuse
				100	
		16.6	**[G]** Due process for drivers referred for medical review	23.5	**[AC]** No anonymous reports
				23.3	**[AD]** Follow up of reporting source to validate claim
				31.8	**[AE]** Road test
				21.5	**[AF]** Appeal of departmental action
				100	
		25.6	**[H]** Physician reporting responsibilities and protections	21.2	**[AG]** Confidential
				35.4	**[AH]** Protection from tort action/immunity for reporting
				28.6	**[AI]** Mandated by law for specified medical conditions
				15.1	**[AJ]** Sanctions for failure to report
		100		100	
29.3	**[B]** Process for identifying at-risk drivers	25.4	**[I]** Extent of DMV testing for license renewal	29.6	**[AK]** Vision
				18.8	**[AL]** Knowledge
				28.6	**[AM]** Road
				23.1	**[AN]** Functional screening
				100	
		18.6	**[J]** Use of internal triggers for medical reviews	28.0	**[AO]** Self reports
				28.8	**[AP]** Observations by counter staff
				24.2	**[AQ]** Driving history (points, crashes)
				19.2	**[AR]** Age
				100	
		24.8	**[K]** Use of external, non-medical triggers for medical reviews	33.7	**[AS]** Law enforcement/courts
				28.4	**[AT]** Family
				14.4	**[AU]** General public
				23.5	**[AV]** Social services (includes geriatric evaluation)
				100	
		31.2	**[L]** Use of external, medical triggers for medical reviews	35.4	**[AW]** Personal physician
				15.2	**[AX]** Hospital discharge planners
				20.8	**[AY]** OT/driving evaluators
				28.6	**[AZ]** Vision care specialists
		100		100	
23.5	**[C]** Case review procedures	19.8	**[M]** Availability of options for preliminary disposition (determines path for evaluation)	22.8	**[BA]** Hearing officer interview with driver
				27.4	**[BB]** Assignment by medical staff advisor (e.g., nurse case worker, on-staff or physician consultant)
				29.8	**[BC]** Assignment by non-medical staff (administrative determination via procedure manual, checklist)
				20.2	**[BD]** Voluntary surrender
				100	
		28.7	**[N]** Extent of DMV evaluation procedures	16.3	**[BE]** Interview (in-person or video)
				31.2	**[BF]** Request for and review of medical history
				21.0	**[BG]** Functional screening
				31.6	**[BH]** DMV examination (may include vision, knowledge, and/or road)
				100	
		32.2	**[O]** Use of external evaluation procedures	22.2	**[BI]** Driving evaluation (driver rehabilitation or driver training specialist (OT/CDRS, driving school)
				32.8	**[BJ]** Examination by personal physician
				30.7	**[BK]** Examination by medical specialist (e.g., Neurologist)
				14.4	**[BL]** Clinical/laboratory testing
				100	
		19.3	**[P]** Composition of Medical Advisory Board	23.4	**[BM]** Full-time DMV staff physicians
				24.4	**[BN]** Part-time DMV staff physicians
				27.0	**[BO]** Paid consultants
				25.5	**[BP]** Voluntary consultants
		100		100	
17.4	**[D]** Options supporting continuing safe mobility	29.2	**[Q]** Availability of restrictions for license "customization"	34.3	**[BQ]** Daylight/time of day
				24.8	**[BR]** Geographical (e.g., radius of home, within city limits, not in city limits)
				16.5	**[BS]** Specific routes or destinations
				24.6	**[BT]** Road class exclusion (e.g., no freeways, no roads with speeds of 45 mph or greater)
				100	
		20.3	**[R]** Type/extent of referrals for at-risk drivers	21.5	**[BU]** Counseling (for adjustment to change in license or functional status)
				24.7	**[BV]** Remediation (to correct or ameliorate functional deficits)
				24.4	**[BW]** Alternative transportation
				29.6	**[BX]** Retraining/"skills refresher"
				100	
		21.7	**[S]** Breadth of outreach activities by DMV	29.5	**[BY]** Physician education
				22.2	**[BZ]** Public awareness/injury prevention
				26.0	**[CA]** Law enforcement training in signs of impairment
				22.4	**[CB]** Other agencies providing services to seniors
				100	
		28.7	**[T]** Scope of DMV staff training	24.9	**[CC]** Counter staff (to recognize signs of functional impairment)
				26.9	**[CD]** License examiners (to conduct functional screening)
				27.9	**[CE]** License examiners (to conduct specialized road tests)
				20.4	**[CF]** Sensitivity training for issues relating to senior drivers & drivers with disabilities
100		100		100	

The relative value of the 16 components in column 2 was indicated through an additional calculation. Specifically, using decimal equivalents instead of percentages, each of the 4 mean values in column 1 was multiplied by each of the 4 mean values in the group that branches from it in column 2. For example, the mean value for component A (.298) was multiplied by the mean value for component E (.256). The product was then multiplied by 100 to obtain the relative value of component E (7.63%). Because the sum of the 16 values in column 2 derived through this multiplication process equals 100, a direct comparison can be made regarding how much more important one component is than another, within the same column.

Finally, this procedure was extended to gauge the relative value of each of the 64 components in column 3: The mean weight calculated for the column 1 component was multiplied by the mean weights calculated for its branching components in column 2, and then by the mean weights of *its* branching components in column 3. For example, the relative weight of component U (3.10%) was obtained by multiplying the mean weight for component A (.298) by the mean weight for component E (.256), then multiplying that product by the mean weight for component U (.406) and then multiplying by 100. Again, the sum of the 64 multiplied values in column 3 equals 100, permitting a direct comparison of how much more important one component is when compared to any other component in the same column.

The resulting component scores (calculated weights) are presented in table 3. These scores have been sorted to present the components that ranked highest in importance within each grouping of 4 components. Table 4 presents the 16 components listed in column 2 only, in rank order from highest to lowest weight. Table 5 presents all 64 model program components included in this exercise, organized in descending order of importance in the RVA.

MEETING WITH EXPERTS

Method

A blend of licensing officials and medical personnel from 11 jurisdictions met in Washington, DC to address barriers to implementing the components emerging from the RVA as being most important. Jurisdictions were chosen with input from AAMVA, NHTSA, and TransAnalytics staff to provide diversity in terms of size, geographic area, AAMVA Region, number of drivers, scope of current medical review activities, and perceived interest in exploring innovative practices to meet future safety needs and customer service goals.

The 11 jurisdictions chosen included: District of Columbia, Florida, Iowa, Maryland, North Carolina, Ohio, Oregon, Utah, Virginia, Washington, and Wisconsin. Key attributes of the jurisdictions chosen to attend the meeting are contrasted in table 6. Fifteen representatives (10 administrative and 5 medical) from the 11 jurisdictions participated, along with 3 NHTSA staff, 1 AAMVA staff member, and 2 TransAnalytics staff. The meeting was audio-recorded and later transcribed by Caset Associates. The agenda was organized into three areas: introductions by meeting attendees; a description of the project history and findings to date; and a round-table discussion of best-practice recommendations and barriers to their implementation. The list of meeting attendees is presented in Appendix C.

Table 3. Results of Relative Value Assessment Exercise (Calculated Weights).

Weight	Category	Weight	Subcategory	Weight	Item
30	**[A]** Policies governing medical review activities	**9.58**	**[F]** Comprehensiveness of criteria for licensure	**2.72**	**[Z]** Standards for blackouts/seizures/losses of consciousness (includes mental disorders & dementia)
				2.67	**[Y]** Standards for vision
				2.37	**[AA]** Standards for medical conditions affecting multiple body systems (e.g., for
				1.84	**[AB]** Standards for alcohol/substance abuse
		7.63	**[E]** Nature/extent of DMV Medical Advisors' mission	**3.10**	**[U]** Develop medical criteria/guidelines for licensing
				2.17	**[V]** Review individual cases
				1.24	**[X]** Develop report forms
				1.14	**[W]** Hear appeals
		7.62	**[H]** Physician reporting responsibilities and protections	**2.70**	**[AH]** Protection from tort action/immunity for reporting
				2.18	**[AI]** Mandated by law for specified medical conditions
				1.61	**[AG]** Confidential
				1.15	**[AJ]** Sanctions for failure to report
		4.95	**[G]** Due process for drivers referred for medical review	**1.58**	**[AE]** Road test
				1.16	**[AC]** No anonymous reports
				1.15	**[AD]** Follow up of reporting source to validate claim
				1.06	**[AF]** Appeal of departmental action
29	**[B]** Process for identifying at-risk drivers	**9.15**	**[L]** Use of external, medical triggers for medical reviews	**3.24**	**[AW]** Personal physician
				2.61	**[AZ]** Vision care specialists
				1.91	**[AY]** OT/driving evaluators
				1.39	**[AX]** Hospital discharge planners
		7.44	**[I]** Extent of DMV testing for license renewal	**2.20**	**[AK]** Vision
				2.13	**[AM]** Road
				1.72	**[AN]** Functional screening
				1.40	**[AL]** Knowledge
		7.26	**[K]** Use of external, non-medical triggers for medical reviews	**2.45**	**[AS]** Law enforcement/courts
				2.06	**[AT]** Family
				1.71	**[AV]** Social services (includes geriatric evaluation)
				1.05	**[AU]** General public
		5.46	**[J]** Use of internal triggers for medical reviews	**1.58**	**[AP]** Observations by counter staff
				1.53	**[AO]** Self reports
				1.32	**[AQ]** Driving history (points, crashes)
				1.05	**[AR]** Age
24	**[C]** Case review procedures	**7.55**	**[O]** Use of external evaluation procedures	**2.48**	**[BJ]** Examination by personal physician
				2.32	**[BK]** Examination by medical specialist (e.g., Neurologist)
				1.68	**[BI]** Driving evaluation (driver rehabilitation or driver training specialist (OT/CDRS, driving school)
				1.09	**[BL]** Clinical/laboratory testing
		6.75	**[N]** Extent of DMV evaluation procedures	**2.14**	**[BH]** DMV examination (may include vision, knowledge, and/or road)
				2.10	**[BF]** Request for and review of medical history
				1.42	**[BG]** Functional screening
				1.10	**[BE]** Interview (in-person or video)
		4.66	**[M]** Availability of options for preliminary disposition (determines path for evaluation)	**1.39**	**[BC]** Assignment by non-medical staff (administrative determination via procedure manual, checklist)
				1.28	**[BB]** Assignment by medical staff advisor (e.g., nurse case worker, on-staff or physician consultant)
				1.06	**[BA]** Hearing officer interview with driver
				0.94	**[BD]** Voluntary surrender
		4.54	**[P]** Composition of Medical Advisory Board	**1.23**	**[BO]** Paid consultants
				1.16	**[BP]** Voluntary consultants
				1.11	**[BN]** Part-time DMV staff physicians
				1.06	**[BM]** Full-time DMV staff physicians
17	**[D]** Options supporting continuing safe mobility	**5.09**	**[Q]** Availability of restrictions for license "customization"	**1.74**	**[BQ]** Daylight/time of day
				1.26	**[BR]** Geographical (e.g., radius of home, within city limits, not in city limits)
				1.25	**[BT]** Road class exclusion (e.g., no freeways, no roads with speeds of 45 mph or greater)
				0.84	**[BS]** Specific routes or destinations
		5.01	**[T]** Scope of DMV staff training	**1.40**	**[CE]** License examiners (to conduct specialized road tests)
				1.34	**[CD]** License examiners (to conduct functional screening)
				1.24	**[CC]** Counter staff (to recognize signs of functional impairment)
				1.02	**[CF]** Sensitivity training for issues relating to senior drivers & drivers with disabilities
		3.79	**[S]** Breadth of outreach activities by DMV	**1.12**	**[BY]** Physician education
				0.99	**[CA]** Law enforcement training in signs of impairment
				0.85	**[CB]** Other agencies providing services to seniors
				0.84	**[BZ]** Public awareness/injury prevention
		3.54	**[R]** Type/extent of referrals for at-risk drivers	**1.05**	**[BX]** Retraining/"skills refresher"
				0.87	**[BV]** Remediation (to correct or ameliorate functional deficits)
				0.87	**[BW]** Alternative transportation
				0.76	**[BU]** Counseling (for adjustment to change in license or functional status)
100		**100**		**100**	

Table 4. Rank Ordering of the 16 Components from Column 2 of the Relative Value Assessment Exercise.

	Medical Review Component	Weight	Rank
F	Comprehensiveness of Criteria for Licensure	9.58	1
L	Use of External, Medical Triggers for Medical Review	9.15	2
E	Nature/Extent of DMV Medical Advisors' Mission	7.63	3
H	Physician Reporting Responsibilities and Protections	7.62	4
O	Use of External Evaluation Procedures	7.55	5
I	Extent of DMV Testing for License Renewal	7.44	6
K	Use of External, Non-Medical Triggers for Review	7.26	7
N	Extent of DMV Evaluation Procedures	6.75	8
J	Use of Internal Triggers for Medical Reviews	5.46	9
Q	Availability of Restrictions for License Customization	5.09	10
T	Scope of DMV Staff Training	5.01	11
G	Due Process for Drivers Referred for Medical Review	4.95	12
M	Availability of Options for Preliminary Disposition (Determines Path for Evaluation)	4.66	13
P	Composition of MAB	4.54	14
S	Breadth of Outreach Activities by DMV	3.79	15
R	Type/Extent of Referrals for At-Risk Drivers	3.54	16

Results

The results of the Relative Value Assessment (RVA) exercise formed the starting point for the discussions. These discussions were summarized in detail in a separate task report submitted to NHTSA. A more limited summary follows, focusing on the top half of the components listed in table 5, plus highlights from the bottom half of the table when a particular component, though lower-ranked, still received considerable discussion.

Table 5. Rank Ordering of the 64 Components from Column 3 of the Relative Value Assessment Exercise.

	Medical Review Component	Calculated Weight	Rank
AW	Personal physician as external medical trigger	3.24	1
U	Mission of medical advisors: Develop medical criteria/guidelines for licensing	3.10	2
Z	Criteria for licensure: Standards for blackouts/seizures/losses of consciousness (includes mental disorders & dementia)	2.72	3
AH	Physician reporting: Protection from tort action/immunity for reporting	2.70	4
Y	Criteria for licensure: Standards for vision	2.67	5
AZ	Vision care specialists as external medical triggers	2.61	6
BJ	Examination by personal physician as external evaluation procedure	2.48	7
AS	Law enforcement/courts as external non-medical trigger	2.45	8
AA	Criteria for licensure: Standards for medical conditions affecting multiple body systems (e.g., for heart, lung, endocrine, musculoskeletal, etc)	2.37	9
BK	Examination by medical specialist (e.g., Neurologist) as external evaluation procedure	2.32	10
AK	Vision test for license renewal	2.20	11
AI	Physician reporting mandated by law for specified medical conditions	2.18	12
V	Mission of medical advisors: Review individual cases	2.17	13
BH	DMV Eval Procedures: DMV examination (may include vision, knowledge, and/or road)	2.14	14
AM	Road test for license renewal	2.13	15
BF	DMV Eval Procedures:Request for and review of medical history	2.10	16
AT	Family as external non medical trigger	2.06	17
AY	OT/driving evaluators as external medical trigger	1.91	18
AB	Criteria for licensure: Standards for alcohol/substance abuse	1.84	19
BQ	License Restrictions: Daylight/time of day	1.74	20
AN	Functional screening for license renewal	1.72	21
AV	Social services (includes geriatric evaluation)as external non medical trigger	1.71	22
BI	Driving evaluation (driver rehabilitation or driver training specialist (OT/CDRS, driving school)	1.68	23
AG	Physician reporting: Confidential	1.61	24
AE	Road test as due process	1.58	25
AP	Observations by counter staff as internal trigger	1.58	26
AO	Self reports as internal trigger	1.53	27
BG	DMV Eval Procedures: Functional screening	1.42	28
CE	Scope of DMV Training: License examiners (to conduct specialized road tests)	1.40	29
AL	Knowledge test for license renewal	1.40	30
AX	Hospital discharge planners as external medical trigger	1.39	31
BC	Preliminary disposition: Assignment by non-medical staff (administrative determination via procedure manual, checklist)	1.39	32
CD	Scope of DMV Training: License examiners (to conduct functional screening)	1.34	33
AQ	Driving history (points, crashes) as internal trigger	1.32	34
BB	Preliminary disposition: Assignment by medical staff advisor (e.g., nurse case worker, on-staff or physician consultant)	1.28	35
BR	License Restrictions: Geographical (e.g., radius of home, within city limits, not in city limits)	1.26	36
BT	License Restrictions: Road class exclusion (e.g., no freeways, no roads with speeds of 45 mph or greater)	1.25	37
CC	Scope of DMV Training: Counter staff (to recognize signs of functional impairment)	1.24	38
X	Mission of medical advisors: Develop report forms	1.24	39
BO	Composition of MAB: Paid consultants	1.23	40
AC	No anonymous reports as due process	1.16	41
BP	Composition of MAB: Voluntary consultants	1.16	42
AD	Follow up of reporting source to validate claim as due process	1.15	43
AJ	Physician reporting:Sanctions for failure to report	1.15	44
W	Mission of medical advisors: Hear appeals	1.14	45
BY	DMV outreach activities: Physician education	1.12	46
BN	Composition of MAB: Part-time DMV staff physicians	1.11	47
BE	DMV Eval Procedures: Interview (in-person or video)	1.10	48
BL	Clinical/laboratory testing as external evaluation procedure	1.09	49
AF	Appeal of departmental action as due process	1.06	50
BM	Composition of MAB:Full-time DMV staff physicians	1.06	51
BA	Preliminary disposition: Hearing officer interview with driver	1.06	52
AU	General public as external non medical trigger	1.05	53
AR	Age as internal trigger	1.05	54
BX	Referrals: Retraining/"skills refresher"	1.05	55
CF	Scope of DMV Training: Sensitivity training for issues relating to senior drivers & drivers with disabilities	1.02	56
CA	DMV outreach activities: Law enforcement training in signs of impairment	0.99	57
BD	Preliminary disposition: Voluntary surrender	0.94	58
BV	Referrals: Remediation (to correct or ameliorate functional deficits)	0.87	59
BW	Referrals: Alternative transportation	0.87	60
CB	DMV outreach activities: Other agencies providing services to seniors	0.85	61
BZ	DMV outreach activities: Public awareness/injury prevention	0.84	62
BS	License Restrictions: Specific routes or destinations	0.84	63
BU	Referrals: Counseling (for adjustment to change in license or functional status)	0.76	64

Table 6. Contrast Among Jurisdictions Selected to Attend Task 8 Meeting.

State	Does State Have an MAB?	Is Physician Reporting Mandatory?	Are Physicians who Report Given Immunity?	What Kinds of Medical Standards Exist for Licensing?
District of Columbia	NO	NO	NO	Vision, Seizures, Diabetes
Florida	YES	NO	YES	Vision, Seizures
Iowa	YES	NO	YES	Vision, Loss of Consciousness
Maryland	YES	NO	YES	Vision, Seizures, Multiple Medical Conditions
North Carolina	YES	NO	YES	Vision, Seizures, Multiple Medical Conditions (Functional Ability Profiles)
Ohio	NO	NO	NO	Vision, Loss of Consciousness
Oregon	NO	YES	YES	Vision
Utah	YES	NO	YES	Vision, Seizures, Multiple Medical Conditions (Functional Ability Profiles)
Virginia	YES	NO	YES	Vision, Seizures
Washington	NO	NO	NO	Vision, Loss of Consciousness
Wisconsin	YES	NO	YES	Vision, Loss of Consciousness, Multiple Medical Conditions

Meeting discussions began at the most general level of the RVA—components A-D. High weights assigned to components at this level had the effect of producing high weights for the subcomponents at the third level of this weighting exercise. Conversely, low weights assigned to components at this level produced low weights for the subcomponents at the third level. Within the four broad categories that describe medical review activities, the 45 respondents weighted *policies governing medical review activities* (component A) and *processes for identifying at-risk drivers* (component B) as nearly equally important (at 30 and 29, respectively), and as the two most important areas in a model medical review program.

This result was considered intuitive by meeting attendees, because first and foremost in a medical program, methods for identifying potentially at-risk drivers and guidelines and procedures for determining medical and functional fitness to drive for this population must be in place. The RVA respondents rated *case review procedures* (component C) as third in relative value, with a weighting of 24, and *options supporting continuing safe mobility* (component D) as fourth in relative value, with a weighting of 17.

In addition to being rated as most important in a model medical program, *policies governing medical review activities* received considerable attention during the meeting. Several attendees said policies are so important to DMVs because they must ensure that drivers are being treated with consistency to avoid tort litigation. Policy is also important in determining how fitness to

drive is defined (medical criteria and standards); whether a jurisdiction has a Medical Advisory Board and what medical specialties must be represented by the physicians on the board; physician reporting responsibilities and protections; and procedures for license renewal testing and renewal cycles. It is clear from the Relative Value Assessment exercise and discussion that followed, that policy was rated as the most important of the four components because it sets the tone for the entire medical review process.

Meeting participants were asked to comment on the low rating given to *options supporting safe mobility*. This was highlighted for discussion in light of the fact that NHTSA, as well as several States, have acknowledged that not only identifying at-risk drivers but also keeping people driving safely longer are *both* important components of medical review programs. In a broad-based program where the welfare of the individual is a priority—in addition to public safety—all four general components in the first column would, hypothetically, be equally weighted at 25. *Options supporting continuing safe mobility* received a relative value of only 17.

A physician in attendance remarked that, for the four broad components to be considered equally important, the DMVs' missions must be "to keep people on the road as long as they can be safe" instead of just "public safety." Meeting attendees explained the various reasons that *options supporting safe mobility* may have been weighted lower in their jurisdictions. Reasons included the fact that this is a new concept for several jurisdictions, and they have just begun to explore how to implement activities such as public information and education; counseling and referral for remediation/retraining or to alternative transportation; and education of physicians, law enforcement, etc. Traditionally, the DMV mission has been highway safety—get the unsafe driver off of the road. Even though a DMV may want to help people and provide options, providing options for continued safe mobility does not presently hold the same importance as highway safety.

Another reason for the low rating is that in many places, some of the options are limited, such as alternative transportation in rural communities.

Other jurisdictions explained that the DMV does not explicitly get involved in these activities, but joins with other agencies and supplies drivers with information about the services provided by the partnering agencies. So it is <u>not</u> the case that DMVs place a low level of importance on options for supporting safe mobility but instead they "hand off" many of these activities to organizations better equipped to provide such support. A comment was made that in order for information about where to go for help to be of use to an individual, lists of services must be local/community-based and not State-based.

One point that was made and agreed upon by most in attendance was that if the approach to medical review were balanced across all four components (expressed as " the right way"), it would be cost effective in the long run, even though it may be more costly in the beginning. It was also mentioned by one meeting attendee that it should not be difficult to get all the DMVs to include options for supporting continuing safe mobility in their mission statements, as all DMVs <u>want</u> to keep people driving as long as they can do so safely.

The remaining summary of meeting discussions in this section is organized loosely in terms of the ranking of the top half (highest weighted 32 components) of the RVA, including meeting participants' comments regarding recommended strategies and barriers to their implementation. Where substantial time was devoted in the meeting to discussion of components ranked in the bottom half of the RVA, comments are provided where discussion of these points is logical within the context of a model medical review program.

Ranks 1, 6, 18, and 31: Use of External, Medical Triggers for Medical Reviews -
Personal Physician (Component AW)
Vision Care Specialist (Component AZ)
Occupational Therapists/Driving Evaluators (Component AY)
Hospital Discharge Planners (Component AX)

Physicians are valued sources of information to DMVs. Referrals by personal physicians received a weighting of 3.24, placing it highest in importance of all 64 components weighted in the RVA. As indicated earlier, all 51 jurisdictions accept reports of potentially at-risk drivers from physicians. In the initial survey, at least one jurisdiction reported that physicians and law enforcement are considered "expert" sources, meaning that a licensing action can be made without the DMV requesting additional information (medical history and physician recommendation) from the treating physician. Immediate suspensions are issued in many jurisdictions based on the information provided in an initial report submitted by a physician (e.g., loss of consciousness or other condition that poses an immediate threat to the public). Discussions revolved mainly around the physicians' responsibility to counsel drivers about their ability to drive safely, and to report their patients only when there was a need to get the DMV involved (i.e., when the patient does not comply with the physician's recommendations).

Although educating physicians about how medical conditions affect driving performance was rated relatively low (46/64), meeting attendees agreed this was very important and necessary in a model program; it likely fell low in priority in this exercise because it was contained in an area that often gets low priority because of funding and staffing shortages (options for supporting continuing safe mobility). Attendees said physicians need to be educated regarding the State's reporting requirements and the State's licensing guidelines for medical conditions and functional impairments. A comment was made by an MAB physician in attendance that many physicians are hesitant to send reports to the DMV because they don't know what is going to happen to the patients they report. DMVs have found that when physicians understand the DMV process for reported patients, physicians are more likely to report the patients who should be reported. Where used, training in how to profile drivers using Functional Ability Profiles should be provided to physicians. Training in how to complete the driver medical history requests from DMV medical review departments would also be useful to physicians.

Physicians at the meeting agreed the AMA/NHTSA *Physician's Guide to Assessing and Counseling Older Drivers* (Wang, Kosinski, Schwartzberg, and Shanklin, 2003) should be required reading for physicians, and that Continuing Medical Education (CME) credits should be offered. Physician education is deemed important regardless of whether reporting is mandatory or voluntary in a jurisdiction. It was recommended by one MAB physician consultant that physicians be required to complete a CME in driver medical education every three years. The

hope is that, as physicians become more educated, so will their patients, through various other publications and media. Education must start with the physicians, and it is a never-ending job.

On a related topic, education of the public received a low weight in the RVA (0.84, placing it 62nd out of 64), but received attention during the meeting with experts. Low ratings for this component are related to the fact that this is a new concept for several jurisdictions, which have just begun to explore how to implement activities such as public information and education. One attendee said, "We have convinced people that it is socially wrong to drink and drive. We have convinced them that they must wear safety belts. Nobody presents the idea to the public through commercials or other media that they might not be safe to drive because of a medical condition or functional impairment." Another reason for low ratings and a barrier is that funding has been appropriated for DUI and safety belt programs, but not for fitness-to-drive. Although the section is not traditionally used for this purpose, a NHTSA representative said a jurisdiction could apply for funding under 23 U.S.C. § 402 (NHTSA grant funding for highway safety programs through the Governor's Office of Highway Safety) with a particular project in mind for enhancing public safety. It was brought up that the AAMVA Grand Driver program is one of the tools that can be used in any State to implement public education. Two other projects are underway through NHTSA, one called "New Generations" with Iowa DOT and another called "Community Conversations" that will produce materials for educating the public about fitness to drive. Oregon DMV has recently received a grant to work with an ad agency to produce public service announcements. The kit includes radio spots, TV spots, and newspaper ads with the spin, "If you can talk to your kids about sex, you can talk to your parents about driving."

One MAB physician in attendance highlighted the importance of educating the legislature. Even if there is a public awareness, at some point it comes down to the law, and it can be difficult to get good laws passed unless there is some sort of an education of the body that makes those laws. (Note: in the initial survey, legislation was mentioned by 17 jurisdictions as a barrier to providing more extensive screening, counseling, and referral activities in DMVs).

Referrals by vision care specialists received a weighting of 2.61, placing it second in importance within the set of four components describing external, medical triggers, and 6th out of 64 when considering all components in the third column of the RVA. Several meeting attendees said vision care specialists report drivers in their jurisdictions. Like physicians, their reports provide credible information to DMVs. One attendee remarked that frequently a driver has been required to see an optometrist (because the driver failed the DMV vision screen), and the report came back from the ophthalmologist that the driver has diabetic retinopathy or some other eye disease. That information prompts the requirement for drivers to undergo a medical examination (and have a medical form completed) by their regular physicians.

Referrals by occupational therapists (OTs) and other professionals who conduct driving evaluations, such as certified driver rehabilitation specialists (CDRSs), received a weighing of 1.91, placing it third out of the four components in the set of medical referral triggers, and 18th out of 64 when considering all components listed in the third column of the RVA. Referrals from OTs/CDRSs are among the sources that DMVs consider as valid, removing the requirement for investigations into the credibility of the report. It is probably more common, currently, for a DMV to refer a driver to an OT or CDRS for an evaluation of fitness to drive, than for a report

by an OT or CDRS to trigger medical review. However, in a model system where physicians are educated with respect to fitness to drive issues, have good rapport with their patients, and can recommend testing and possible remediation by driving evaluators, drivers may be able to drive safely longer without the need to involve the DMV for medical review. One MAB physician attendee said a team approach that utilizes the treating physician, OTs/CDRSs and the DMV, removes the need for mandatory reporting and allows the physicians and the DMV to be viewed as resources to help people keep driving safely longer, as opposed to agencies trying to take licenses away.

Hospital discharge planners received a weighting of 1.39, placing them least in importance as external medical triggers for medical review in the set of four components evaluated in the RVA, and 31st out of the 64 total components evaluated in the third column of the RVA. In initial survey conducted in this project, 48 jurisdictions said they accept reports of at-risk drivers from hospitals (they were not asked specifically about discharge planners). There was no discussion at the meeting about the utility of hospital discharge planners as external medical triggers for medical review of fitness to drive.

Ranks 2 and 13: Mission of Medical Advisors –
Develop Medical Criteria/Guidelines for Licensing (Component U)
Review Individual Cases (Component V)

Meeting attendees, both those with and without MABs, agreed it was important to have a Medical Advisory Board to help DMV administrative staff make fitness-to-drive decisions. Members agreed a recommendation for each jurisdiction to have an MAB was a best-practice recommendation. A good medical review program needs to have both physicians and administrative medical review personnel. Some cases are cut-and-dried and can easily be disposed of by applying medical standards/guidelines, but there are many complicated cases where a physician's knowledge and advice are valuable and necessary. This advice cannot be left up to the driver's treating physician because treating physicians don't always have expertise in how a medical condition affects driving performance, and treating physicians who have a personal relationship with their patients often want to protect individual driving privileges. MAB physicians are needed to review some of the more complicated medical reports returned by treating physicians. Non-medical people cannot be trained in all the complexities (e.g., myocardial infarction, what type of arrhythmia, what type of seizure, what medication, is it a sedating medication?)

There was some confusion in the terminology relating to Medical Advisory Boards and Medical Review Boards and their missions. Since some States use their MABs only to hear appeals, or have a Medical Review Board to hear appeals in addition to having a Medical Advisory Board to review individual cases, it was agreed in this meeting that when we speak of a "Medical Advisory Board" we are referring to a group of physicians who review individuals' cases and advise the DMV administrative licensing personnel regarding a person's fitness to drive. Thus, the term "Medical Advisory Board" in this report will not mean a group of physicians whose sole function is to hear appeals of drivers who disagree with a licensing agency's decision.

Regardless of whether a jurisdiction has an MAB, the use of Functional Ability Profiles (FAPs) was looked upon favorably by administrative medical unit supervisors in attendance to provide consistency in how physicians report the level of severity of a medical condition as well as in how DMVs make licensing determinations. In jurisdictions where there is no MAB or where the MAB is not used for case review, the use of FAPs was looked upon favorably by administrative staff and by several physicians in attendance to help medical review administrative staff make licensing determinations. Physicians in the meeting cautioned against using FAPs in place of case review by physicians for complex situations, and noted that FAPs, if used, need to be updated regularly with changes in state-of-the-knowledge. Also with regard to FAPs, one physician said it is difficult to subcategorize severity of medical conditions into more than two or three categories of risk (i.e., low-, medium-, and high-risk). It is difficult to draw the fine lines required to go beyond low, moderate and high, and have cutoffs in between for a five- or a six-level system of categorization.

It was decided the mission of the MAB should not be limited to hearing appeals of licensing determinations, as this would diminish the usefulness of physicians to the non-medical administrative staff when making the first licensing determination. It was agreed MAB physicians should review individual cases, and in the performance of this function it was agreed an individual MAB physician (rather than a quorum of the board, or a panel of MAB physicians) could review a case and make a determination. The MAB physicians based their recommendations on multiple opinions—on the opinion of the DMV examiner who conducted a road test; on the highway patrol person who stopped the driver for an infraction; on the driving record that shows crashes, violations, and convictions; and on medical records submitted by treating physician(s).

Compensation of MAB physicians received attention during the meeting, even though the components relating to composition and compensation of board members received ratings placing them in the bottom half of the RVA. Meeting attendees agreed DMV physician staff positions for physicians serving on the MAB would be preferable, but not likely, due to costs. Where paid-staff positions are not possible, paid consultants would be ideal. In a jurisdiction that employs both full-time physicians and contract physicians, it was explained that consultants (contractors) are very useful when there is a large influx of cases and another full-time DMV staff position is not needed. Based on the demands of the medical decisions and the need to stay abreast of what the state-of-the-art is regarding medicine and functional ability to drive, MABs should be comprised of paid consultants, as opposed to volunteers.

It was suggested by physicians in attendance and met with agreement that the appropriate level of compensation should be equivalent to what physicians could make in their private practices or through a hospital.

Regarding perceived conflicts of interest and physician liability, as long as the licensing decision is the responsibility of the DMV, it will not appear as though the paid-physician advisors are siding with the DMV rather than with the patient. In addition, making the ultimate licensing decision the responsibility of the DMV removes the physicians from liability (malpractice suits) for their recommendations. Board physicians should not be held liable for their recommendations.

As far as what medical specialties should be represented on the board, it was recommended not to let the statutes determine how the board operates. For example, in jurisdictions where statutes require members to be physicians, an occupational therapist or registered nurse could not be part of the board.

Ranks 3, 5, 9, and 19: Comprehensiveness of Criteria for Licensure –
Standards for Blackouts/Seizures/Losses of Consciousness (Component Z)
Standards for Vision (Component Y)
Standards for Medical Conditions Affecting Multiple Body Systems (Component AA)
Standards for Alcohol/Substance Abuse (Component AB)

In the Relative Value Assessment exercise, the medical review component labeled comprehensiveness of criteria for licensure was rated as the most important of the 4 general components under policies governing medical review activities and the most important of the 16 components listed in the second column of the exercise. In fact, having standards for blackouts/seizures/losses of consciousness (weight=2.72); standards for vision (weight=2.67); standards for medical conditions affecting multiple body systems (weight=2.37); and standards for alcohol/substance abuse (weight=1.84) were ranked 3rd, 5th, 9th, and 19th in importance, respectively, out of 64.

Standards for alcohol may have received lower ratings than standards for other medical conditions because, in at least one jurisdiction represented at the meeting, alcohol cases only come to the attention to the medical department after three DUI convictions. In several other jurisdictions represented at the meeting, alcohol cases go directly to the court system as opposed to the medical unit. In the majority of the jurisdictions represented at the meeting, alcohol school, substance-abuse counseling, and alcohol interlock requirements are automatic administrative requirements or court-ordered requirements; very few alcohol/substance abuse cases, if any, are considered by the MAB, with the exception of one jurisdiction.

Meeting attendees were asked to focus the discussion on the following points:

- For what medical conditions should there be standards for licensing?
- How detailed should medical standards for licensing be?
- Should National (Federal) standards be established, as opposed to having 51 different sets of State standards?

The discussion of these points is summarized below. Areas of significant agreement among group members are noted.

It was a consensus that it would be useful to have a regular way for MAB members in all jurisdictions to meet and exchange information. This group of MAB members should consist of medical professionals from each State, for the purpose of drafting a set of National guidelines for licensing drivers with medical conditions/functional impairments. The group should meet annually—potentially at meetings hosted by AAMVA—and update guidelines to keep them current with the state-of-the-art knowledge. The starting point for the National guidelines should

be the AMA/NHTSA *Physician's Guide to Assessing and Counseling Older Drivers* (Wang et al., 2003).

A comment was made that unless the Federal Government promulgates National guidelines, States will not pay attention because there is never enough money or resources appropriated unless something is mandated.

With respect to medical standards for alcohol/substance abuse cases, it was recommended by two physicians in attendance that "first-time offender" cases should be referred to the medical review department, based on the following statistics brought up during conversation:

- These individuals have already driven drunk anywhere from 200 to 1,000 times before their first legal pick-up.
- 80 to 85 percent of "first-time" DUI offenders have an alcohol dependency problem.
- 1 out of 3 "first-time" offenders will recidivate.

Administrative personnel said alcohol cases <u>are</u> followed up in their States (by the courts, Alcohol Commission, etc.), just not by the MAB/medical review department. One administrative medical review unit attendee remarked that having alcohol cases handled in the medical review department could result in almost no occupational licenses being issued in the State. This is because a medical review unit would use different criteria for licensing than the courts or the alcohol commission might. For example, a first-time offender would automatically qualify for an occupational license according to criteria used for licensing by the courts (by virtue of having no prior DUI arrests). The same individual may be denied a license according to criteria for medical fitness used by a medical unit (by virtue of being diagnosed as having a substance abuse problem).

Regarding vision standards, two physicians in attendance pointed out many States require far visual acuity of 20/40 for licensure. However, recent studies indicate there may be no basis for that requirement. In two jurisdictions represented at the meeting, the requirement for a (non-CDL) driver to obtain a favorable vision statement before driving privileges could be continued was recently changed from 20/40 acuity to 20/70 acuity. In these two jurisdictions, the vision standard for licensing is not written in statute, but exists in guidelines/code.

It was recommended that medical guidelines for licensing should remain as guidelines (or Code of State Regulations) and not become statutes, to allow for States to maintain their individual approaches to licensing drivers, but with a common thread. Medical guidelines for licensing, if kept as guidelines, can be updated within a week or two with new state-of-the-knowledge information, allowing the DMV to give drivers its best judgment, whereas statutes require changes in legislation that can take years.

Ranks 4, 12, and 24: Physician Reporting Responsibilities and Protections
Protection from Tort Action (Component AH)
Physician Reporting Mandated by Law for Specified Medical Conditions (Component AI)
Reports by Physicians Held Confidential (Component AG)

Physician reporting responsibilities and protections ranked 4th out of the 16 components in the second column of the RVA, with a weighting of 7.62. Looking at the four components within this area, protection from tort action/immunity for reporting received the highest weighting (2.70), which places it 4th in order of importance when considering all 64 components. The component with the second highest weighting of the four in this area is reporting that is mandated by law for specified medical conditions (weight=2.17), which places it 12th out of 64 in order of importance. Confidentiality of reports followed with a weight of 1.61, placing it 24th out of 64 in order of importance. Sanctions for failure to report received the lowest weight of the four components in this area (weight=1.15), and placed 44th in order of importance when considering all 64 components in column 3.

Mandatory physician reporting is controversial. Although mandatory reporting is not favored by physicians, most of the administrative medical staff at the meeting thought this would be extremely helpful to DMVs for identifying drivers with medical conditions and functional impairments. Mandatory reporting would be particularly helpful because many people lie about medical conditions on the license renewal form, and because family members are often reluctant to report their loved ones.

Physicians in the meeting stated that treating physicians should counsel their patients about driving, and only report those who do not comply with driving recommendations or medical treatments. Physicians are concerned that mandatory reporting laws will result in drivers not getting needed medical treatment for fear of losing their licenses, and will result in compromised health (and more unsafe drivers on the road).

A physician in the meeting said mandatory reporting results in the public perception that the DMV is there to take away licenses instead of trying to help people maintain their safe driving ability. Instead, the treating physician should perform some functional tests in the office, and then refer the driver for remediation of functional abilities or retraining, and get the MAB involved for a review of the situation if there is no improvement.

Another argument against mandatory reporting is that people living in small communities and in rural areas will get reported in high numbers if reporting is mandatory, because they are the ones who have repeat appointments with the same doctors and have good relationships with their physicians. Drivers in metropolitan areas who have no doctor loyalty will not get reported. So, many who should be reported will not get reported, and those with a good patient-physician relationship who may respond well to physician counseling will have that relationship tainted if reporting were mandatory.

All physicians in this meeting (and several of the administrative attendees) responded that physician reporting should be voluntary. To make voluntary reporting effective, physicians in the

meeting stated there should be a policy and funding set aside for the DMV to talk to the medical boards and committees in the State to educate the physicians about reporting requirements, the relationship between medical conditions/functional ability and safe driving ability, and how to counsel patients to adjust driving habits or seek alternative transportation. Patient and physician education limit the number of reports going into the DMV to those where DMV intervention is needed to effect a change in driving behavior (i.e., patients whom the physician knows will dismiss their advice). In the RVA, physician education by the DMV was ranked 46/62, as discussed earlier.

Physicians in the meeting said the AMA/NHTSA *Guide* provides Current Procedural Terminology (CPT) codes physicians can use to bill for counseling—physicians may spend an extra 15 minutes counseling a driver about driving if they will be compensated for their time. Physicians will be more likely to spend time learning about medical conditions and driving if they know they will receive CME credits for their education.

If mandatory reporting would burden a medical unit, it was suggested that reporting could be limited to conditions so severe and uncontrollable that driving safely is impossible (Oregon's new law). This eliminates temporary impairments or reporting by diagnosis, as it is not the medical condition that causes the report to be required, but how that condition affects driving safety. In other words, the diagnosis of a particular disease would not *in itself* be cause to report; but if that disease has progressed to the point where safe driving is compromised by severe and uncontrollable cognitive, physical or visual impairments, this *would* constitute cause to report.

There was high agreement by all meeting attendees that physicians who report (either by law or voluntarily) should be protected from tort action (provided with immunity from legal action) by their patients. Even when guaranteed immunity, physicians in the meeting said their colleagues often do not report because they do not want to deal with all the extra paperwork that the DMV will require them to complete, coupled with the fact that they do not want to be bothered by the patient's relatives who invariably call the office asking how the physician could have done such a thing.

Confidentiality of reporting is controversial. Some attendees thought drivers should have a right to "know their accuser." Others thought confidentiality would increase the volume of voluntary reports by physicians as well as concerned family members.

Ranks 7, 10, and 23: Use of External Evaluation Procedures –
Examination by Personal Physician (Component BJ)
Examination by Medical Specialist (Component BK)
Driving Evaluation by Driver Evaluation/Training Specialist (Component BI)

Most jurisdictions begin their case reviews by requiring drivers to obtain a medical report from their treating physician to determine if the person is medically and mentally competent to drive. Some jurisdictions request further medical information from specialists, such as neurologists, and also request that certain laboratory tests be conducted, with the results submitted for review by MAB physicians. Finally, some jurisdictions request information from driver rehabilitation specialists about a person's ability to drive safely before they will allow a

person to be road-tested by a driver license examiner or will make a licensing determination. Results of the Relative Value Assessment and comments provided by meeting attendees are provided below for each of the four external evaluation procedures components and their subcomponents.

Examination by a personal physician received a weighting of 2.48, placing it first in importance among the four external evaluation components evaluated, and 7th in importance out of 64 when considering all components listed in the third column of the RVA. Comments provided by meeting participants regarding the usefulness of medical history data received by drivers' personal physicians in making licensing determinations follow.

Meeting attendees agreed the medical history is critical—it provides valuable information to help the DMV make a licensing determination.

In some jurisdictions represented at the meeting, the doctor is asked to provide a response to indicate whether the person is medically and mentally competent to drive. If the doctor checks "no" the person does not drive. But sometimes physicians check "don't know," and request a drive test by the DMV or by a CDRS/OT. DMV administrative medical review people at the meeting said either the physician really does not know, or does not want to be the "bad guy" and "take the license away." One attendee said they are going to take the "Don't know, please road test" option off the medical history form, because it does not help with a determination of medical fitness to drive. One MAB physician in attendance said it is useful to have that check box on the form for the treating physician who really does not know if the person is medically fit to drive.

Meeting attendees agreed it is often valuable for MAB physicians to talk with treating physicians regarding a patient's fitness to drive, especially when the treating physician is uncomfortable marking whether a person is fit to drive on the medical history form. The treating physician and the MAB physician each have information the other might not have (e.g., traffic records showing crashes, police reports, etc.).

Physicians also liked the policy described by one attendee, where if any restrictions other than corrective lenses were recommended by a treating physician, the driver would automatically be road-tested by the DMV. This way, the doctor would not seem to be the one that "took the license away" by stating the person was not medically fit to drive.

Sometimes it is difficult to get good medical information from treating physicians because drivers often switch doctors—there is no doctor loyalty in metropolitan areas, some people do not even have a doctor, and some people with mental incapacities are able to hide their cognitive deficit well. If a treating physician does not see such individuals over several appointments with family input, the history just is not there. Particularly in these cases, an in-person or video interview with the driver, conducted by MAB physicians, can shed light on the magnitude of the problem. (In the RVA, in-person or video interviews were ranked 48/64. Comments about MAB physician interviews with customers are addressed later in this report).

Examination by a medical specialist was weighted 2.32, placing it second in importance of the four components comprising external evaluation procedures, and 10th out of 64 with respect to all components evaluated in the third column of the RVA. Meeting attendees in jurisdictions with MABs said their MAB physicians can request that a driver see a neurologist if more information is needed before a licensing determination can be recommended. The DMV can recommend such an evaluation, but it cannot "require" an evaluation (because it results in out-of-pocket expenses by the driver). However, if the drivers do not comply with the MAB request for an examination by a specialist, their driving privileges will be suspended until the requested information is received, rendering the "request" a "requirement." One MAB physician said an examination by a medical specialist is medically appropriate, without even considering licensing. If a person has a medical condition such as a loss of consciousness, a medical specialist should conduct an evaluation to determine the cause and treatment, and recommend possible lifestyle changes. This should not be a difficult topic to get across to legislators who might balk at the DMV requiring independent evaluations that may require out-of-pocket expenses by drivers.

An evaluation by a driving rehabilitation specialist (e.g., OT or CDRS) or a driving school was weighted 1.68, placing it third in importance of the four components comprising external evaluation procedures, and 23rd of 64 with respect to all components evaluated in the third column of the RVA. Comments provided by meeting attendees regarding evaluations by a driver rehabilitation specialist in making licensing determinations follow.

Meeting attendees agreed this is an important component in making driver-licensing determinations. A multidisciplinary team is needed to make the right decision—an OT is a very integral part of that team. Treating physicians need to know there are specialists (OTs/CDRSs) who have the expertise to evaluate whether patients with medical conditions and functional impairments can drive safely. One MAB physician did not know, until taking DMV/MAB job, that there were such things as driver rehabilitation specialists.

One meeting attendee commented that if the treating physician marks "don't know" to the question of whether the person is medically and cognitively fit to drive, the registered nurse on staff with the DMV medical unit sends drivers a notice that they must have an evaluation by a driver rehabilitation specialist, because if the drivers are not safe, the DMV does not want them in the car with an examiner. If drivers are able to go through the battery of tests and pass the specialist's drive test, then they may attempt the DMV road test, and must pass the DMV test to maintain driving privileges.

One meeting attendee voiced concern about the out-of-pocket cost to drivers; however, in the jurisdictions where this practice is in place, that is of no concern to the DMVs. If drivers do not undergo the driver rehabilitation evaluation, they may not road test with the DMV and the driving privileges will be withdrawn.

Ranks 8, 17, and 22: Use of External, Non-Medical Triggers for Medical Reviews –
Law Enforcement/Courts (Component AS)
Family (Component AT)
Social Services (Component AV)

Use of external, nonmedical triggers for medical reviews was weighted 7.26, placing it 7th in importance among the 16 components listed in the middle column of the RVA. The four components evaluated in this area included: (1) law enforcement/courts, (2) family, (3) social services, and (4) the general public.

Reports by law enforcement are a credible source of information—the officer was there, saw what happened, and asked the driver questions that possibly provided information about medical conditions. All meeting attendees were in agreement that referrals by law enforcement are important in the identification of at-risk drivers.

Jurisdictions reported varying figures estimating referrals that come from law enforcement, ranging from "very few" to "the majority." One jurisdiction reported it receives as many as 40 to 50 a week. These are not crashes; these are observations. Law enforcement officers make referrals after they see a driver almost hit another car (or perform some other unsafe maneuver), follow the driver, make a stop, and then find out that the driver has poor physical health, or admits to being disoriented, etc. One jurisdiction said 35 percent of its referrals come from law enforcement. Reports come in as a "request for re-exam" as opposed to a ticket. Thirty percent of the law enforcement referrals are for conditions including drivers who blacked out, are confused, or are dazed. When an officer requests an exam, the DMV temporarily suspends the license (and an investigator physically takes the license away) until the MAB can review the case. Several meeting attendees stated that in their jurisdictions, they do not immediately suspend a license when a police report is received.

Timeliness of law enforcement reporting is important. In some jurisdictions, the police officer's supervisor must sign off on the law enforcement request for reexamination, which slows down the process and can be problematic when an emergency suspension should have been placed on a driver after the observed event/behavior (e.g., for the dazed, confused, blacked-out conditions).

Law enforcement officers have requested feedback from DMVs regarding the outcomes of police reports to DMVs. One MAB physician said communication between the DMV and the police is important—if law enforcement refers drivers to the DMV, law enforcement deserves to know which drivers are reentering the driving public.

Comments regarding reporting by family members centered on confidentiality issues. Many meeting attendees thought a person should have the right to know who the "accuser" is, so the DMV should not accept anonymous reports or allow reports to remain confidential. In a jurisdiction that favors anonymous/confidential reporting, it was stated that on average, family members have struggled with these decisions for well over a year before they report the driver. When family members begin the struggle with the decision to contact the DMV, the driver is

already having some problems. There could be severe consequences to family members for reporting their loved ones if the reports cannot be kept confidential.

Several attendees said investigations could weed out the cases reported anonymously that are not valid. One attendee said that unless a DMV has the resources to put into investigating reports that are not signed, anonymous reports should not be accepted. Although some anonymous reports are legitimate (and would not have been submitted if not confidential for fear of retaliation by the driver), many are submitted by "bad family members" such as angry spouses/ex-spouses trying to get back at each other or greedy children trying to get possession of a parent's car or get them off of the road for other ulterior motives. Investigations to validate claims received a weight in the RVA that placed in the bottom half of the components in terms of importance (rank = 43); however, meeting attendees said follow-up of reporting sources was important. Funding for this activity is a barrier in some jurisdictions.

One attendee responded that her State has a very liberal open-records law, and consequently confidentiality is fraught with problems. In that jurisdiction, drivers can make their Driver Condition and Behavior Reports confidential but have to "jump through a couple of extra hoops" to do that. If an action begins with a confidential Driver Condition and Behavior Report, it can get thrown out if the case goes through a judicial review process, because the DMV, by law, cannot release the information.

Reports by social services agencies did not receive much discussion; however, social workers in a continuing-care retirement community concerned about drivers in that community, are considered an important referral source by at least one jurisdiction present at the meeting.

Ranks 11, 15, 21, and 30: Extent of DMV Testing for License Renewal –
Vision Test (Component (AK)
Road Test (Component AM)
Functional Screening (AN)
Knowledge Test (Component AL)

Regarding vision screening at renewal, one MAB physician consultant mentioned a study published in the *Journal of the American Medical Association* that found State-mandated tests of visual acuity were associated with a lower fatal crash risk for drivers 70 and older (Levy, Vernick, and Howard, 1995). This finding indicates vision screening at renewal (for drivers 70 and older) has public safety benefits. Another MAB physician said the MAB just recommended to its administrator that visual exams be eliminated at renewal for drivers between 20 and 40. Starting at 40 (when vision starts to change) is when the DMV should have vision screening as part of the renewal process. Drivers who are younger than 20 and have low-vision or eye diseases would already have been flagged by vision screening for initial licensure. Drivers who have developed an eye disease between initial licensure and renewal vision screening at age 40 will be identified at renewal when they are asked whether they have any of the listed medical conditions.

One attendee commented that currently in her jurisdiction, drivers renewing their licenses must have their vision tested every 5 years. Legislation to require drivers 70 and older to renew

every 2 years and have a vision test was put "on hold" until at least 2006 in this jurisdiction. Although meeting attendees agreed it has become increasingly acceptable to consider driver age in the determination of license renewal practices, DMVs still face legislative barriers to implementing such testing.

Regarding road testing for license renewal, one MAB physician consultant said the study published by Levy et al. (1995) found State-mandated road tests at renewal for drivers 70 and older did not reduce the fatal crash risk. Therefore, by itself, it is not a useful mechanism for identifying at-risk drivers.

Regarding knowledge testing at renewal, one MAB physician consultant said the Levy et al. (1995) study found State-mandated knowledge tests, when added to vision testing of drivers 70 and older, reduced the fatal crash risk. This finding indicates that knowledge testing at renewal (for drivers 70 and older) has public safety benefits. One meeting attendee said in her jurisdiction, a knowledge test might be included in the renewal process, along with a road test, if the renewal examiner sees signs of cognitive impairment.

Several meeting attendees said sometimes when drivers fail the knowledge test it is because of a language barrier. Employees need to be sensitive to that. Concerning older drivers and knowledge testing, one jurisdiction produces large-print paper knowledge tests, which are easier for older drivers to take than computer-based knowledge tests and smaller-print tests. Oral knowledge tests are also useful for older people with low levels of education who have not taken a test since they obtained their original licenses. Such tests should include a lot of traffic signs. One attendee noted that computer-based knowledge tests, even when given on touch screens, are upsetting to some senior citizens.

Regarding the implementation of functional screening at license renewal, it was mentioned by one physician in attendance that new public health initiatives are often met with resistance, but many initiatives have overcome the initial resistance (e.g., funding for prenatal and maternal health, smoking cessation). She said DMVs need to work on getting resources and the requisite changes in the law, to get functional screening in place. In order to get laws changed and funding in place, meeting attendees said legislators must be educated about the importance of functional screening for identifying at-risk drivers.

To address the barrier of funding for functional screening, NHTSA staff in attendance verified that funding under 23 U.S.C. § 402 could be requested for such activities (through the State's Governor's Office of Highway Safety). One meeting attendee said it is not feasible, because of time and training constraints, to conduct functional screening within the DMV. Her jurisdiction tried functional screening, but found that for renewals, it was just easier to ask the driver questions than to try to conduct tests. In this particular jurisdiction, if a license is not renewed within 30 minutes, the DMV is required to refund the driver the license renewal fee. When reexamination is necessary to determine whether people are functionally fit to drive, referring them somewhere for testing would be more feasible than trying to conduct tests within the DMV. It may be noted that the conduct of functional screening for reexamination was weighted as less valuable in the RVA (weight = 1.42, rank = 28), than functional screening at license renewal (weight = 1.72, rank = 21).

In one jurisdiction where studies of functional screening are in progress, the meeting participant said it was evident functional screening is not appropriate for all renewals—just those over 40 (vision) and over 55 (for cognitive, physical, and perceptual testing). In this jurisdiction, functional screening is looked upon as a preventive early intervention—the classic prevention model of early identification leading to remediation and helping to maintain a healthy quality of life. This participant s aid it feeds into the idea that the DMV's purpose is not to take away licenses—its purpose is to help customers drive safely (for their own health, as well as for public safety). In this same jurisdiction, the attendee said license examiners (as opposed to counter personnel) are the appropriate people in the DMV to conduct functional testing.

A NHTSA representative pointed out that until 100 percent of all physicians become aware of all the issues and make recommendations, it seems likely the only reliable fallback method of identifying drivers with medical/functional impairments is a regular assessment at the DMV. Because the validity of functional screening information declines over time, system safety is best served by initiating screening at an age early enough that most— if not all—drivers are "functionally intact." *Theoretically,* this translates to some time in the decade of the 40's, for visual functions, and in the 50's or 60's, for cognitive functions. However, analyses in the Maryland Pilot Study indicate it will not be *cost-effective* for a jurisdiction to screen at renewal until at least age 70, and possibly later. This is because it is only at these later ages that a significant number of drivers experience declines that place themselves and others at risk if they continue to drive unaware of their functional status. Further, since reliability of functional screening data for an individual decreases over time, two years is as long as a jurisdiction would want to go without retesting. (Staplin, Gish, and Wagner, 2003).

Ranks 14, 16, and 28: Extent of DMV Evaluation Procedures (for Re-Exam Drivers) - Typical DMV Examination with Vision, Knowledge, and/or Road Tests (Component BH)
Request for and Review of Medical History (Component BF)
Functional Screening (Component BG)

DMV evaluation procedures received a weighting of 6.75, placing them second in importance of the four case review procedures evaluated, and 6th out of 16 with respect to the components evaluated in the middle column of the RVA. When a person enters the medical review program, the DMV may:

- Request the driver's medical history.
- Conduct some or all of the examinations routinely administered by the DMV (vision test, knowledge test, and road test).
- Conduct a battery of functional screening evaluations.
- Require the driver to participate in an interview (either in person or via videoconference) with MAB physicians.

The results of the RVA and comments provided by meeting attendees for these subcomponents are described below.

Regarding DMV examinations, one attendee said her jurisdiction just added in September 2003 the requirement that whenever drivers are reexamined they must take the knowledge and driving tests. This has reduced reexaminations they administer by approximately 50 percent. People surrender their licenses because they do not want to take the knowledge test. An attendee from another jurisdiction commented that the knowledge test is included for reexamination customers who demonstrate serious cognitive impairment. These customers generally do not even attempt the knowledge test.

One attendee said whenever they require testing for medical reasons, a separate group of examiners (the more experienced ones) are assigned to conduct the road test. Another attendee said they use the same road test course for reexamination drivers as for initial licensees, but they are not looking for the same things when someone is missing an arm versus missing a leg. The examiner still asks questions but the driver is not scored the way a 16-year-old driver is, and drivers are not scored equally depending on the disability. The special drive tests are not scored at all, as far as a particular score passing or not. In the special drive test, the objective is to discover the driver’s limitations —whether the driver can deal with traffic in a 25-mph zone, a 30-mph zone, etc. That driver will be restricted from driving according to the limitations determined by the drive test. Several attendees said when drivers are issued geographically restricted licenses, they must return to the DMV for periodic evaluations during the license cycle to make sure their functional ability has not declined further. In one jurisdiction, an attendee said customers with mild dementia may be allowed to continue to drive, but they must take and pass multiple road tests given over the course of a two-or three-week period, because dementia patients have good days and bad days, and passing one single test is not indicative of their ability to drive safely. They must also be reexamined by taking drive tests at 3- or 6-month intervals as recommended by the MAB. Meeting attendees agreed it would be a good, best-practice recommendation to require patients with dementia to take and pass multiple road tests to keep their licenses.

Regarding DMV requests for and review of medical history, meeting attendees agreed medical history is critical in making licensing determinations. If people do not go to doctors and fail to get the forms completed, they do not drive. With regard to requiring medical reports on a periodic basis for progressive medical conditions, one jurisdiction said because of legislative and budget cuts, its medical review staff was reduced from 10 people to 2 people, so they had to stop the monitoring cycles already in place. In one jurisdiction represented at the meeting, a doctor's certification is required at the age of 70; the DMV will not renew the license without it.

One administrative attendee said they have received complaints from physicians about the complexity and length of time it takes to complete the DMV medical history forms. This jurisdiction has tried to find a middle ground and included Yes/No check boxes, but that seems simplistic compared to other States’ forms, which require thought and provide a lot of valuable information. One solution may be to have physicians profile patients using the Functional Ability Profiles. One jurisdiction said although its form seems lengthy, the physician only needs to fill

out one page per medical condition that affects the person (e.g., a physician need only complete the cardiovascular page unless the person has other medical conditions).

Physicians in attendance said the science of medicine cannot be reduced to check boxes, arguing that "If we are looking for a quality program, we do need a full administrative and medical piece. I don't think we can reduce medicine to a one-page form." One administrative attendee said in her jurisdiction, the medical review unit is staffed only with clerical staff, who have difficulty understanding how to interpret information provided by physicians. Clerical staff just want to know the ultimate answer—whether the person should be licensed or not. The point was also made that it is important to have physicians available to a DMV medical unit to review medical history forms. Administrative people in a medical unit cannot be trained on all aspects of all medical conditions.

Functional screening was considered twice in the RVA, once as a renewal procedure to identify at-risk drivers, and once as a DMV evaluation procedure during case review of individuals during reexamination. Functional screening received a higher value as a tool to identify potentially at-risk drivers (weight = 1.72, rank = 21/64) than as a case management procedure for drivers already identified as having a potential problem (weight = 1.42, rank = 28/64).

Although not falling within the top 32 components evaluated in the RVA, comments by attendees regarding the utility of conducting driver interviews instead of just paper reviews deserves mention. In the initial survey, it was found that only 5 jurisdictions currently hold interviews between drivers and MAB physicians. During the meeting, attendees voiced amazement that video conferencing could be implemented. Currently, in most jurisdictions, drivers going to a hearing to dispute a DMV decision (the only time in these jurisdictions there are in-person interviews) must drive to a central office location -- and these are the people who potentially should not be driving at all, so they must find a ride. As a result of current practice, many drivers just give up their licenses. Interviews may have been rated low in the RVA, because respondents could not get beyond considering the barriers to implementing them (even though the instructions for the exercise emphasized that weightings were not to consider feasibility). Meeting attendees liked the idea of in-person or video interviews to help make the initial licensing decision (as opposed to appealing the decision).

Rank 20: Availability of Restrictions for License Customization – Time-of-Day Restriction (Component BQ)

Restricting drivers who cannot meet the acuity standard to driving during daytime only, and restricting drivers who may not be able to pass a test administered in an unfamiliar area but demonstrate that they can drive safely to specific destinations in their home areas (e.g., church, doctor, shopping) or within a certain radius of home, are ways that licensing agencies can allow drivers with medical conditions and functional impairments to continue to drive safely longer.

Of the four components listed under options for supporting continuing safe mobility in the RVA, availability of restrictions for license customization received the highest RVA weighting (5.09), placing it 10th in importance of the 16 components listed in the middle column.

The restriction to drive only during the daytime was ranked the highest of the four restriction types evaluated in the RVA, possibly because it is the most common. Although restricting drivers to a certain geographical area or road class were ranked in the bottom half of the RVA, they deserve consideration, based on comments offered by meeting attendees. Comments regarding license restriction/customization follow.

One attendee said they have taken away the night restriction in his jurisdiction. In the past, drivers with acuity between 20/40 and 20/70 were restricted to daytime-only driving. They found no difference in the crash rate in a population of 32,000 and several subpopulations following the removal of the restriction. The people in the low-vision program in this jurisdiction (who are trained and monitored) have a lower crash rate than the general population.

One meeting attendee said "the ability to restrict licenses to geographic areas is an important service to the citizens of our respective States; however, this isn't implemented uniformly across all States. If we are going to deal with our aging population, we need to have that kind of capability. It will keep more people independent longer and be a reduction in cost to society." One attendee said all their dementia cases (mild dementia only—moderate dementia cases may not drive) have licenses restricted to geographic areas. These drivers also must be road tested in their specified geographic areas every 3 to 6 months.

Rank 25: Road Test as Due Process (Component AE)

The initial survey said all 51 jurisdictions have an appeal process for drivers who are aggrieved by a DMV's licensing determination. Meeting attendees shared their policies regarding hearings. In some jurisdictions, MAB physicians hear appeals, and in others, administrative law judges hear appeals. The initial survey did not specifically ask respondents whether a road test is always provided as due process, and neither did the meeting attendees discuss road testing as due process *per se*. However, one meeting attendee remarked that if the treating physician indicates the driver is not medically or cognitively competent to drive, the DMV will not allow the driver to get into a car with one of its examiners to take a road test. If a treating physician will not make a fitness-to-drive recommendation, this DMV will require the driver to be evaluated by an OT or CDRS, and will only road test the driver if the driving evaluator believes the driver in question is medically and cognitively competent to drive.

Ranks 26 and 27: Use of Internal Triggers for Medical Reviews
Observations by Counter Staff (Component AP)
Self Reports (Component AO)

Use of internal triggers ranked 9th out of 16 components evaluated in the middle column of the RVA. The four internal triggers evaluated in the RVA were: (1) observations by counter staff; (2) self-reports; (3) driving history (points and crashes); and (4) age. Comments provided by meeting attendees about observations by counter staff and self-reporting are provided below, in addition to the use of age as a trigger, despite the fact that age was ranked in the bottom half of the RVA (54 of 64). Age as an internal trigger produced valuable comments by meeting attendees. Comments regarding the low rating given to points and crashes generally centered

around these events as triggering driver improvement requirements, rather than medical review requirements.

The initial survey reported that in 48 of the 51 jurisdictions, observations by counter staff could trigger a medical review of the driver. Comments made by meeting attendees on this topic follow.

One meeting attendee reported that over half of the new cases that come into the medical review unit are referred by the license examiners, who are a front-line method of identifying possible problems. In this jurisdiction, the examiner's manual has a section on medicals, and MAB physicians conduct training for new hires in what to observe (behaviors, ways of walking, red-flag medications). Another meeting attendee said all their examiners and front-line staff are required by State rules to be trained in when to give the customer a medical report, and when to suspend a license based on a physician's report.

Interestingly, in the RVA, training of counter staff to recognize signs of impairment was ranked rather low (38 of 64). One MAB physician said the comments received from driver examiners such as "the person couldn't move the car because he/she couldn't feel where his/her foot was, whether it was the accelerator or the brake," or "he appeared confused or was short of breath" are very helpful during MAB case review.

Use of self-reports was weighted 1.53, placing it second in importance with respect to the four components evaluated in the set of internal triggers for medical review, and 27th out of 64 with respect to all components evaluated in the third column of the RVA. As stated earlier in this report, there are large differences across jurisdictions in the depth of this questioning. Comments provided by meeting attendees regarding the use of self-reporting as a trigger for medical review are provided below.

Several meeting attendees said in their jurisdictions, medical conditions questioning on the license application must be very general due to resistance by ADA. Others countered that if you are asking everyone the same questions, it is not discrimination. A comment was made that some State attorneys general may not want to deal with the political ADA battles that might arise out of requiring drivers to answer questions about specific medical conditions, and that is why the question about medical conditions is very general in those jurisdictions.

A NHTSA representative said according to a lawyer who reviews any ADA licensing questions, a licensing agency may impose a medical standard and/or ask about an individual's disability as long as the information is necessary to ensure public safety. However, the licensing agency must ensure that the medical standard and/or questions are based on real risks (and not on speculation, stereotypes or generalizations about individuals with disabilities or particular medical conditions.) When a medical consensus does not exist regarding whether an applicant/driver with a particular condition or functional limitation poses a real risk to public safety, the licensing agency must base its licensing decision on an individual assessment of whether an applicant/driver can drive safely, taking into consideration the use of adaptive equipment or license restrictions. An individual assessment, among other things, can consist of a

road test, review by the licensing agency of additional medical information, and medical or functional testing by the licensing agency (and/or medical personnel acting on its behalf).

Several physicians in the group said they take issue with responses to medical questions triggering the requirement to get a physician's report. This results in out-of-pocket expenses for the driver and a time requirement for physicians to do an exam or complete papers, when not really necessary. This would be the case for a temporary condition or one from the past that is not relevant to the driver's current medical status (e.g., people in a car crash in their youth who said they had a loss of consciousness). Other attendees said that they would want to see the physician's report to make their own decision about whether or not the medical condition affects current fitness to drive.

Several attendees said many applicants lie about medical conditions; they may tell the truth once but will never be honest again once they find out what the consequences of self-reporting are. One attendee used this rationale to say that mandatory reporting by physicians for patients of any age would let the DMV know to take action, instead of relying on faulty driver self-reports. Although people lie, the consensus of meeting attendees is that self-reporting is a valuable internal DMV trigger for driver evaluation because not all people lie on the application.

The use of driver age as a trigger for medical review received a weighting of 1.05, placing it last in importance of the 4 internal triggers evaluated, and 54th out of 64 with respect to all components evaluated in the third column of the RVA. As indicated in the report of the initial survey, age-based testing is allowed in 5 jurisdictions, and 17 jurisdictions require either in-person renewal or have truncated the renewal cycle based on age.

Meeting participants agreed that 5 or even 10 years ago, it was viewed as inappropriate in most jurisdictions to require in-person renewal (as opposed to renewal by mail), or to truncate a renewal cycle as people get older, but that has changed. Several jurisdictions said they had difficulty in the past getting legislation passed to allow truncated renewal cycles and/or age-based testing, but the political climate has changed with the recent older driver crashes that have made national news. It was a consensus of meeting participants that it is appropriate to require in-person renewal and to have shorter renewal periods based on age to give the DMV an opportunity to observe customers for functional impairments and to gather information about medical conditions that could affect driving safety. However, one MAB physician said specifying renewal intervals based on age may not be the way to go, since everyone ages differently. The renewal cycle should be individualized based on the person's baseline functional status and the nature of his or her medical condition.

With respect to age-based testing, one physician referred to a study that said vision screening and knowledge testing at renewal (every 2 years) were associated with lower fatal crash risk for drivers 70 and older, and that road testing was not associated with lower fatal crash risk for drivers 70 and older (Levy et al., 1995).

Rank 29: Scope of DMV Staff Training – License Examiners to Conduct Specialized Road Tests (Component CE)

This component did not generate any controversial discussion. One attendee said whenever the DMV requires testing for medical reasons, a separate group of examiners (the more experienced ones) is assigned to conduct the road test. Another attendee said the DMV has specially trained examiners who are used for conducting home area road tests for mild dementia customers.

Rank 32: Case Assignment by Non-Medical Administrative Staff (Component BC)

Meeting attendees said either their license examiners (who see the customers) or the administrative staff in the medical review department (who see the initial letter of concern) could make the determination whether a customer needs to have a medical report issued or can demonstrate safe driving ability by being road tested. The components that made up this area did not generate much discussion at the meeting, with the exception of the comment that it really is an injustice to cancel a license and then require a customer to pay for an ID card. In the cases of cancellation or voluntary surrender, attendees said the ID card should be free. In addition, if a license is cancelled or surrendered before the expiration date, a refund should be given.

RECOMMENDATIONS

The following recommendations for components of a model medical review program were developed through consideration of the results of the relative value assessment exercise and expert panel meeting conducted in this project. These recommendations are intentionally broad in scope, referencing program or policy initiatives that may fall beyond the jurisdiction of a DMV or DOT; demand resources that are not presently available; and in some instances, in some jurisdictions, even require statutory change. This approach is offered as a first step toward what must be a long-term solution for preserving personal mobility while protecting public safety in a significantly aging population. Further, it recognizes that ensuring medical fitness to drive will depend upon an active and effective partnership between licensing agencies, physicians and other health professionals.

It must be emphasized that the Model Program components presented below serve as *recommendations*; they *do not* define or imply a requirement or standard of practice for any licensing agency.

1. It is recommended that each licensing agency create a Medical Advisory Board (or equivalent organizational unit under another name) with roles and responsibilities as described below.

   1.a. At a minimum, the roles of the MAB should include:

      1.a.1. Review of individual cases (e.g., review of medical reports, in-person interview, video interview) to make medical/functional fitness-to-drive determinations and licensing recommendations to the DMV; and

      1.a.2. Development of medical criteria/guidelines for licensing.

   1.b. Case review and initial licensing recommendations should be provided by individual board members, as opposed to requiring consensus by the entire board or a panel of board members.

   1.c. The use of in-person and video interviews between MAB physicians and drivers under review should be explored to assist in making an initial fitness-to-drive determination.

   1.d. Where feasible, MAB physicians should be employed by the DMV, in full-time or part-time staff positions.

   1.e. Where DMV staff-position employment is not feasible due to cost constraints, MAB physicians should serve as paid consultants to the DMV, and should be compensated at a rate commensurate with rates obtained through private practice or hospital employment.

1.f. To prevent the exclusion of specialists other than physicians (e.g., an occupational therapist or registered nurse) from serving on the board, statutes should not be written that define or limit the medical specialties or types of professionals who comprise the MAB.

2. It is recommended that uniform National medical/functional guidelines for driver licensing be developed for adoption by the 51 licensing agencies in the United States.

2.a. As the first step toward establishment of a national association of Medical Advisory Boards, AAMVA and NHTSA should work cooperatively to create Medical Review Task Groups to develop uniform guidelines for medical/functional fitness to drive for operators of passenger vehicles, for adoption by States.

2.b. The Medical Review Task Groups should consist of physicians and other medical professionals, and driver licensing administrators from a variety of licensing agencies across AAMVA's regions, for the purpose of drafting a set of National guidelines for licensing drivers with medical conditions/functional impairments.

2.c. The Medical Review Task Groups should meet annually and update guidelines to keep them current with the latest knowledge.

2.d. Guidelines should be drafted for all conditions that affect safe driving ability. These include vision, losses of consciousness/seizure disorders, medical conditions affecting multiple body systems (e.g., pulmonary, cardiovascular, neurological, musculoskeletal, learning/memory, psychiatric, etc.), and for substance abuse disorders.

2.e. The Federal Department of Transportation should promulgate the National guidelines.

2.f. The AMA /NHTSA *Physician's Guide for Assessing and Counseling Older Drivers* should be used as the starting point for developing National guidelines.

3. The rules for medical review of drivers should not be placed in State statute, but should be in the Code of State Regulations, so that changes can be made quickly as new medical data become available.

4. For assessment of chemical dependency and fitness to drive, it is recommended that all cases (including drivers convicted of DUI/DWI for the first time) be routed through the Medical Advisory Board, as opposed to allowing disposition of the case through administrative action only.

5. It is recommended that medical/functional guidelines be employed by a licensing agency, to treat drivers with consistency.

5.a. Medical/functional guidelines used by non-medical administrative personnel to make licensing determinations should not replace case review by MAB physicians for more complicated cases.

5.b. The use of Functional Ability Profiles is recommended when non-medical administrative personnel are making licensing decisions based on information received in treating physicians' medical reports.

6. To protect public safety while balancing individual quality of life and protecting the patient/physician relationship, it is recommended that mandatory physician reporting laws be implemented, as follows:

6.a. Physicians should be required by law to report drivers with cognitive and functional impairments that are:

- Severe to a degree that preclude the safe operation of a motor vehicle and uncontrollable (e.g., through medication, therapy or surgery; or by driving device or technique); OR
- Severe to a degree that preclude the safe operation of a motor vehicle and controllable, but the patient does not comply with the physician's recommendations for treatment or for restricting driving.

6.b. Physicians who report drivers in good faith to the DMV should be immune from civil or criminal liability.

6.c. Although physicians should advise their patients when they report them to the DMV, the DMV should keep physician reports confidential.

7. The DMV should accept reports of potentially at-risk drivers from physicians and other medical providers, law enforcement, social services providers, friends, families, and other concerned citizens.

7.a. Physicians, other medical specialists, and law enforcement should be considered as expert sources, and as such, reports of at-risk drivers that originate from these sources need not be followed up by investigators to confirm the validity of the report before a licensing action is made or before a driver is required to undergo reexamination (medical history, vision, knowledge, and road test).

7.a.1. When a report from an expert source indicates that a driver had a loss of consciousness, a temporary emergency suspension should be issued, where an investigator is sent to the driver's home to pick up the license until the MAB can review the case. The drivers should then be required to have their physicians complete and return medical history forms to the MAB within 30 days, based on an examination that is no older than 3 months. Failure to have the forms completed and submitted should result in the emergency suspension becoming indefinite (or until forms are

received, the case undergoes MAB review, and a favorable fitness-to-drive disposition can be made).

7.a.2. When a report from a physician indicates that a driver has a cognitive or functional impairment so severe and uncontrollable the driver is unable to drive safely, or a driver does not comply with treatments and as such is unable to drive safely, a temporary emergency suspension should be issued, where an investigator is sent to the driver's home to pick up the license until the MAB can review the case. The driver should then be required to have the physician complete and return medical history forms to the MAB within 30 days, based on an examination that is no older than 3 months. Failure to have the forms completed and submitted should result in the emergency suspension becoming indefinite (or until forms are received, the case undergoes MAB review, and a favorable fitness-to-drive disposition can be made).

7.a.3. When a report from an expert source does not involve loss of consciousness, or does not involve impairments as indicated in 7.a.2, drivers should be required to have their physicians complete and return medical history forms to the MAB within 30 days, based on an examination that is no older than 3 months. Failure to have the forms completed and submitted should result in an indefinite license suspension (or a suspension until the forms are received, the case undergoes MAB review, and a favorable fitness-to-drive disposition can be made).

7.b. Drivers identified as potentially at-risk through reports submitted to a licensing agency by non-expert sources should be required to have their physicians complete and return medical history forms to the MAB within 30 days, based on an examination that is no older than 3 months. Failure to have the forms completed and submitted should result in an indefinite license suspension (or a suspension until the forms are received, the case undergoes MAB review, and a favorable fitness-to-drive disposition can be made).

7.b.1. Anonymous reports received by the DMV from non-expert sources should be followed up by DMV investigators to ensure validity of the report, before a driver is required to undergo reexamination.

7.b.2. Where resources preclude follow-up of anonymously submitted reports, DMVs should not accept reports that do not include the reporter's name, address, and signature attesting to the truth of the report.

7.c. The DMV should allow reports from non-expert sources to remain confidential. The DMV should be exempt from open-records laws in States, where a truly at-risk driver would otherwise be allowed to retain driving privileges should a case be dismissed from court as a result of a confidentiality clause.

8. It is recommended that the DMV, in consultation with State and/or National medical associations provide training to educate physicians about the relationship between medical/functional conditions and driving safety, the State's reporting requirements, and how to counsel patients to adjust driving habits or seek alternative transportation.

   8.a. The AMA/NHTSA *Physician's Guide for Assessing and Counseling Older Drivers* should be used to train physicians.

   8.b. Physicians should receive CME credits for participation in the training.

   8.c. Physicians should be required to complete a periodic CME in driver medical education.

   8.d. Treating physicians should be educated about the role driving specialists play in assessing fitness to drive and providing rehabilitation and retraining. Mechanisms should be put into place for DMVs and treating physicians to refer drivers to these specialists.

9. It is recommended that the DMV provide training to law enforcement officers in identifying drivers potentially at-risk due to medical conditions and functional impairments, and procedures for referring drivers to the DMV for reevaluation.

10. It is recommended that drivers be required to appear in person (eliminate renewal by mail) for license renewal when they reach a designated age threshold. An age in the range of 70 to 75 is most commonly cited in this regard.

   10.a. Drivers renewing their licenses who meet or exceed a designated age threshold (as per above) should be required to undergo vision screening, knowledge testing, and functional abilities screening. For jurisdictions where functional ability screening is not feasible within the DMV, a partnering relationship should be established with an approved/credentialed outside party to perform functional screening.

   10.b. The renewal cycle should be shortened to 2 years when drivers reach a designated age threshold (as per above), which is the limit at which functional screening measures appear to lose their value as predictors of crash risk.

11. It is recommended that vision screening be implemented for all renewing drivers 40 and older.

12. It is recommended that license examiners be trained in how to observe signs of impairment, and in what procedures to follow when they suspect a driving impairment.

   12.a. When license examiners observe behaviors that lead them to suspect that a customer is cognitively or functionally impaired, or may have medical conditions that prohibit safe operation of a motor vehicle, provisions should be available for

the examiner to conduct knowledge testing, vision and other functional abilities testing, and if appropriate, road testing. The MAB should develop procedures for license examiners to know when to refer drivers to their treating physicians.

12.b. When functional abilities testing by the licensing agency is not feasible, license examiners should refer drivers to their treating physicians, or to an occupational therapist, or other qualified driving assessment specialist for an examination which may result in a case review by the MAB.

13. It is recommended that original applicants and all renewal applicants be required to self-report medical conditions on the licensing application form.

13.a. The licensing application form should contain a list of medical conditions that may affect safe driving performance (*ref*. Maryland, Utah, Wisconsin).

13.b. After being licensed, drivers should be required by law to notify the DMV within 30 days if they have had a seizure or loss of consciousness.

14. It is recommended that customized/restricted licenses be issued as required to allow drivers with medical conditions/functional impairments to maintain driving privileges under safe conditions (e.g., daytime, speed-restricted, area-restricted).

15. It is recommended that drivers who are issued geographically restricted licenses be required to undergo periodic road testing during the license cycle, to ensure that functional ability has not declined to the point that the operating privilege should be withdrawn.

16. It is recommended that drivers with mild dementia who are deemed fit to retain driving privileges be required to undergo reexamination drive tests at 3- to 6-month intervals, and also be required to take and pass <u>multiple</u> (2 or 3) road tests administered at least a week apart for <u>each</u> reexamination to maintain their driving privileges. This protocol will minimize the "good-day/bad-day effect" that is common among drivers with dementia.

17. It is recommended that the mission of DMVs be expanded beyond the traditional role of protecting public safety, to supporting the continuing safe mobility of drivers with medical and functional impairments.

17.a. Lists of services provided by DMVs for counseling, education, remediation, and retraining should be community-based (locally based and not State-based).

17.b. The DMV should take an active role in educating the public about medical and functional fitness to drive, its State's reporting requirements, tips to help drivers drive safely longer, and resources for assessment, remediation, and treatment. NHTSA, AAMVA, and other DMVs should be contacted for assistance in the public information and education effort.

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APPENDIX A: SURVEY AND TELEPHONE INTERVIEW RESPONDENTS

State	Survey Respondent/Interviewee
Alabama	Terry Chapman CDL Coordinator Alabama Department of Public Safety Driver License Division Montgomery, AL
Alaska	Kerry Hennings Driver License & Partnership Development Manager Division of Motor Vehicles Anchorage, AK
Arizona	Kathleen Morley Assistant Division Director Motor Vehicle Division Lupe Valdivia, Medical Review Unit Motor Carrier & Tax Services Arizona Department of Transportation Phoenix, AZ
Arkansas	Susan Sims Manager, Driver Control Arkansas Driver Services Dept. of Finance & Administration Little Rock, AR
California	Sue Bradley Manager III California Department of Motor Vehicles Dept. of Motor Vehicles Post-Licensing Policy Section Sacramento, CA
Colorado	Debora Jerome GP IV Colorado Driver License Administration Motor Vehicle Business Group Department of Revenue Lakewood, CO
Connecticut	Marilyn Lukie Division Chief II DMV Medical Review Division Wethersfield, CT
Delaware	Arthur G. Ericson Chief, Driver Services Delaware Division of Motor Vehicles Dover, DE
District of Columbia	Jacqueline Stanley Acting Administrator Carolyn Garrett, Medical Review Supervisor Customer Services Administration Department of Motor Vehicles Washington, DC
Florida	Nancy Bass Medical Review Section Supervisor Selma Sauls, Planner II Department of Highway Safety and Motor Vehicles Medical Review Section Tallahassee, FL

State	Survey Respondent/Interviewee
Georgia	Beth Nisbet, Section Manager Brenda Williford, Program Associate Georgia Department of Motor Vehicle Safety Operations, Driver Services Georgia Department of Motor Vehicle Safety Conyers, GA
Hawaii	Peggy Umetsu Highway Safety Specialist Hawaii Department of Transportation Honolulu, HI
Idaho	Vicky Fisher Motor Vehicle Unit Supervisor Idaho Transportation Department, Driver Services Boise, ID
Illinois	JoAnn Wilson Chief Legislative Liaison Secretary of State Illinois Driver Services Department Springfield, IL
Indiana	Sedalia Rivers Director, Driver License Division Indiana Bureau of Motor Vehicles Indianapolis, IN
Iowa	Jane Holtorf Compliance Officer Iowa Department of Transportation Office of Driver Services Des Moines, IA
Kansas	Martha L. Bean Public Service Administrator Driver Review Section Dept. of Revenue, Division of Vehicles Topeka, KS
Kentucky	Lisa Bowling Coordinator, Medical Review Board 502-564-6800 ext. 2552 Gary Brunker Director, Driver Licensing Kentucky Department of Vehicle Regulation Frankfort, KY
Louisiana	Eula Brooks Motor Vehicle Office Manager Louisiana Office of Motor Vehicles Baton Rouge, LA
Maine	Linda French, Medical Review Coordinator Dawna Dostie, Medical Review Section Maine Bureau of Motor Vehicles Augusta, ME

State	Survey Respondent/Interviewee
Maryland	Robert L. Raleigh, M.D. Director, Medical Advisory Board Carl Soderstrom, MAB Physician Nancy Snowden, Nurse Case Manager Maryland Motor Vehicle Administration Glen Burnie, MD
Massachusetts	Steven A. Evans Director, Medical Affairs/Driver Control Massachusetts Registry of Motor Vehicles Boston, MA
Michigan	Ron Wilson Director, Driver Assessment Division Michigan Department of State Lansing, MI
Minnesota	William Hewitt, Evaluation Supervisor Don Hoechst, Driver Compliance Program Supervisor Minnesota Department of Public Safety Driver and Vehicle Services Division St. Paul, MN
Mississippi	Lane Jenkins, Director, Driver Services Bureau Henry Hood, Director, Driver Improvement/Statistics Mississippi Department of Public Safety Jackson, MS
Missouri	Gina Wisch Computer Info Tech II Department of Revenue Customer Assistance Bureau - License Issuance Missouri Motor Vehicle & Driver Licensing Division Jefferson City, MO
Montana	Anita Drews-Oppedahl Chief, Field Operations Montana Motor Vehicle Division Helena, MT
Nebraska	Sara O'Rourke Driver License Administrator Nebraska Department of Motor Vehicles Lincoln, NE
Nevada	Debbie Wilson Management Analyst, II Nevada Department of Motor Vehicles Carson City, NV
New Hampshire	Darryl Peasley Supervisor of Driver Licensing Division of Motor Vehicles New Hampshire Department of Safety Concord, NH
New Jersey	Kathy Higham Manager, Driver Review Paul Southers, Driver Review New Jersey Department of Transportation Motor Vehicle Services Driver Control & Regulatory Affairs Trenton, NJ

State	Survey Respondent/Interviewee
New Mexico	Curt Sanchez Chief, Driver & Vehicle Services Bureau Marilyn Owens, Medical Unit Motor Vehicle Division State of New Mexico Taxation & Revenue Department Santa Fe, NM
New York	Kevin P. O'Brien Director, Motor Carrier Services Diane Sprague, Medical Review Unit New York Department of Motor Vehicles Albany, NY
North Carolina	Susan Stewart Manager, Medical Review Branch Addie Avery Assistant Director for Adjudication North Carolina Division of Motor Vehicles Raleigh, NC
North Dakota	Syndi Worrell Chief Examiner North Dakota Department of Transportation Driver's License and Traffic Safety Division Bismarck, ND
Ohio	Cathy Ward, Supervisor Driver License Special Case/Medical Unit Ohio Department of Public Safety Bureau of Motor Vehicles Columbus, OH
Oklahoma	Michael Bailey Medical Supervisor Oklahoma Department of Public Safety Dept. Driver Improvement Division Oklahoma City, OK
Oregon	Bill Merrill Driver Control Manager Oregon Driver and Motor Vehicle Services Salem, OR
Pennsylvania	J.P. Duvall Manager, Driver Qualifications Section Bureau of Driver Licensing Pennsylvania Department of Transportation Harrisburg, PA
Rhode Island	Dennis Gerstmeyer Chief of Operator Control Rhode Island Division of Motor Vehicles Pawtucket, RI
South Carolina	James Barwick Manager, Driver Improvement South Carolina Department of Public Safety Division of Motor Vehicles Columbia, SC

State	Survey Respondent/Interviewee
South Dakota	Cindy Gerber Program Director Driver Licensing Department of Commerce W. Capitol Avenue Pierre, SD
Tennessee	Mary Norman, Master Officer Tennessee Department of Safety Research, Planning, and Development Nashville, TN
Texas	Linda Biline Manager, Driver Improvement Texas Department of Public Safety Driver License Division Austin, TX
Utah	Kurt Stromberg Utah Department of Public Safety, Driver License Division Program Coordinator/Medicals Salt Lake City, UT
Vermont	Michael Smith Chief, Customer Services Vermont Department of Motor Vehicles Montpelier, VT
Virginia	Millicent Ford Deputy Director, Driver Monitoring Division Driver Services Administration Virginia Department of Motor Vehicles Richmond, VA
Washington	Judy L. Groezinger, License Services Manager Dawn Hannum, Joe Clarno, Tom Hitzroth, Susan Christensen Washington Department of Licensing Driver Responsibility Olympia, WA
West Virginia	Raymond Douglas Thompson Manager, Driver Licensing West Virginia Division of Motor Vehicles Charleston, WV
Wisconsin	Jennifer Enright-Ford, Nursing Consultant II Jill Reeve, Medical Review Supervisor Department of Transportation Driver Services Madison, WI
Wyoming	Deb Ornelas Manager, Driver Services Program Wyoming Department of Transportation Cheyenne, WY

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APPENDIX B: DATA COLLECTION INSTRUMENT FOR SURVEY OF STATE PRACTICES

DATE: January 8, 2003

TO: Driver Licensing Contacts and Medical Advisory Board Contacts

FROM: Michael R. Calvin
Senior Vice President, Programs Division

RE: Medical Advisory Board Project Survey

On behalf of the National Highway Traffic Safety Administration and its contractor, TransAnalytics, enclosed is the comprehensive survey mentioned in my memorandum dated October 30. The survey will be used to document the processes the jurisdictions follow in licensing drivers with medical conditions and functional impairments. As you respond to the questions on the following pages, you are encouraged to write in additional information to help describe the organization and operations of your State's Medical Advisory Board (or other unit that addresses drivers with medical conditions and/or with impairments of the functional abilities—visual, physical, and mental—needed to drive safely).

There are three sections to this survey. You should complete Section 1, and then complete **either** Section 2 or Section 3, depending on whether your State/District has a Medical Advisory Board. When checking the response "Other," please provide a description of what this may entail.

Section 1—to be completed by **all** Licensing Agencies, whether or not they have a Medical Advisory Board.
Section 2—to be completed by States/Districts that HAVE a Medical Advisory Board (MAB), Health Advisory Board (HAB), or Medical Advisory Panel.
Section 3—to be completed by States/Districts that DO NOT HAVE a Medical Advisory Board/Health Advisory Board/Medical Advisory Panel.

Additional documentation is also requested such as forms, training materials and sections of your jurisdiction's Vehicle Code. A checklist of requested materials is attached.

TransAnalytics will summarize all survey results. They will also prepare a final report for NHTSA that summarizes the practices of all 50 states and the District of Columbia, highlighting recommended strategies identified in this research. This information will be made available to the jurisdictions.

We realize that this survey is quite extensive. If you have questions about specific items, please contact Kathy Lococo of TransAnalytics at 215-855-5380. We appreciate your patience in taking the time to provide thoughtful, complete answers.

Please complete and return the survey by Wednesday, January 29. Thank you!

Completed surveys and attached documentation should be mailed to the following address:

Kathy H. Lococo
TransAnalytics, LLC
P.O. Box 328, 1722 Sumneytown Pike
Kulpsville, PA 19443

SECTION 1
(TO BE COMPLETED BY ALL JURISDICTIONS)

1. What government body/department administers driver licensing in your State/District (i.e., Department of Motor Vehicles, Department of Public Safety, Department of Public Health)?
____
____

2. Does your State have a Medical Advisory Board (MAB)
_____ YES If YES, what is it called? ____
_____ NO

<table>
<tr><td colspan="2">3. Does your licensing agency have an internal medical review unit (that is separate from the MAB that you may have) with designated, trained, professional staff?</td></tr>
<tr><td>____YES

If YES…
Describe the staff (non-medical and medical) including number and types of specialists—i.e., nurses, driver improvement counselors, driver analysts, etc.</td><td>____NO

If NO…
Check which applies to your medical review program:

____Non-medical administrative staff who have other responsibilities in addition to medical evaluation
____A formal liaison with the State Health Department
____A formal liaison with the State Medical Association
____Full-Time Staff Physician(s); How many? _____
____Part-Time Staff Physician(s); How many? _____
____Permanent Physician Consultant(s); How many? ___
____Medical Advisory Board
____Other

Describe:</td></tr>
</table>

4. Are first-time applicants for a passenger vehicle driver's license required to have a physical exam performed by a physician or other medical practitioner?

___YES ___NO ___ NO, EXCEPT UNDER THE FOLLOWING CIRCUMSTANCES

5. Are applicants required to complete a section that contains questions about medical conditions? (If YES, please attach copy of application).

___YES, on first-time applications only
___YES, on renewal applications only
___YES, on first-time <u>and</u> renewal applications
___NO

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

<table>
<tr><td colspan="2">6. Are physicians required by law to report drivers to the licensing agency who have medical conditions or functional impairments that could affect their ability to drive safely?</td></tr>
<tr><td>____ YES
If YES…</td><td>____ NO
If NO…</td></tr>
<tr><td>6a What are the conditions that physicians are required to report? (List below, and attach sections of the Vehicle Code or other materials that describe the requirement).</td><td rowspan="4">6e Does the licensing agency allow reports to be submitted by physicians on a voluntary basis?

____YES ____NO

6f If YES to 6e, how does the physician provide the licensing agency with this information? (i.e., a specific licensing agency form, a letter written by the physician). Please provide copies of forms, if used.</td></tr>
<tr><td>6b How does the physician provide the licensing agency with this information (i.e., a specific licensing agency form, a letter written by the physician)? Please provide copies of forms, if used.</td></tr>
<tr><td>6c If a physician fails to report a driver with a medical condition, and then the patient is involved in a crash, can the physician be held liable as a proximate cause of a crash resulting in death, injury, or property damage caused by the patient?
____YES ____NO</td></tr>
<tr><td>6d If a physician fails to report a driver with a medical condition, can the physician be convicted of a summary criminal offense?

____YES ____NO</td></tr>
</table>

7. For physicians who report drivers (either by law or on a volunteer basis), are reports confidential?

___YES without exception

___YES, except in the following conditions (i.e., driver may receive copy upon request; physician reports may be admitted as evidence in judicial review proceedings of drivers determined to be incompetent):__________________
____
____
____

___NO

8. Are physicians who report drivers in good faith (either by law or on a volunteer basis) immune from legal action by their patients?

____ YES ____ NO

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

9. From which of the following sources does the licensing agency accept referrals of potentially "unsafe" drivers (check all that apply):

___Police Officers
___Courts
___Family
___Friends
___Other Citizens
___Hospital
___Occupational Therapists
___Physical Therapists
___Others (list) ____

10. Does the licensing agency accept reports from individuals who do not provide their name (i.e., anonymous referrals)?

___YES ___NO

11. Are reports from any of the sources investigated before the licensing agency contacts a driver for possible evaluation?

___YES ___NO

If YES, which sources are investigated, and what is the investigation process?

12. What are the circumstances under which a driver may be required to undergo evaluation (check all that apply)?

___Crash with fatality
___Accumulation of points (list how many and time period) ______________________________________
___Accumulation of crashes (list how many and time period) ____
___Upon reaching a certain age (list the age) ____
___Upon referral by police
___Upon referral by courts
___Upon referral by physician
___Upon referral by occupational therapist
___Upon referral by family/friends/other citizens
___Upon self report of a medical condition
___Licensing agency counter personnel observes signs of functional impairment during renewal process
___Expiration of license (list number of days)____
___Upon application for handicapped parking privileges
___Other (describe)____

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

13. On what basis (or upon whose recommendation) are licensing decisions generally made? (i.e., licensing agency generally adheres to MAB's recommendation; Agency generally adheres to recommendations made by driver's physician, Agency adheres strictly to visual and medical standards; Agency generally bases decision on whether driver passes road test, etc.).

14. Is there an appeal process for drivers whose driving privilege is suspended or restricted for medical conditions or functional impairments?

___YES ___NO

15. Does your licensing agency provide specialized training for its personnel in how to observe applicants for conditions that could impair their ability to operate a motor vehicle safely?

____YES ____NO

If YES, please send any related materials (i.e., training manuals, descriptions of course content, etc).

16. Does your licensing agency provide specialized training for driver licensing personnel relating to older drivers?

____YES ____NO

If YES, please send any related materials (i.e., training manuals, descriptions of course content, etc).

17. Does your licensing agency make available to older drivers Public Information & Education (PI&E) materials explaining the importance of fitness to drive and the ways in which different impairing conditions increase crash risk?

____YES ____NO

If YES, please send materials.

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

18. Does the licensing agency provide counseling to drivers with functional impairments:
    - to help them adjust their driving habits appropriately, and/or
    - to deal with potential lifestyle changes that follow from limiting or ceasing to drive?

<table>
<tr><td>____YES</td><td>____NO</td></tr>
<tr><td>If YES…</td><td>If NO…</td></tr>
<tr><td>18a. Please list the job title of the person(s) who provides counseling, and describe the counseling activities.</td><td rowspan="2">18c. Does the licensing agency refer the driver to an outside resource for counseling about how to deal with lifestyle changes as a result of reducing or stopping driving?

____YES ___NO

If YES, who/what is the source?</td></tr>
<tr><td>18b. Does the counseling include providing information about alternative transportation options?

____YES ____NO</td></tr>
</table>

19. Does the licensing agency refer drivers for remediation of impairing conditions (i.e., vision problems, mental problems, physical problems)?

    ___YES ___NO

    If YES, please identify the kinds of professionals to whom drivers are referred.

20. Are drivers diagnosed with dementia allowed to drive in your jurisdiction?

    ___YES ___NO

    If YES…

    20a. At what level or stage would driving privileges be revoked?

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

21. What barriers exist, if any, to implementing more extensive screening, counseling, and/or referral activities, including connections to alternative transportation?

22. Does your licensing agency use an automated medical record system?

___ YES ___ NO

23. Does your licensing agency use automated work flow systems (e.g., scanning of driver license number, automatic letter generation, case manager and workload assignment)?

___ YES ___ NO

24. Does your medical review process rely on NHTSA 402 funding to support its operation? ___YES __NO

If YES, to what degree?

SECTION 1 (CONTINUED)
(TO BE COMPLETED BY ALL JURISDICTIONS)

25. **OPTIONAL**. It is important that we fully understand the sequence of events/procedures that follow referral of a driver to the licensing agency for medical/functional evaluation of fitness to drive. Of particular interest are: (1) the tests conducted (i.e., vision, knowledge, traffic sign, closed course drive test, on-road drive test, tests of mental and physical abilities, medical evaluation by physician, etc); (2) personnel and agencies involved—inside of the licensing agency as well as outside of the agency); (3) how results are conveyed back to the licensing agency if someone outside the Agency conducts testing; (4) what kinds of results receive consideration in the licensing decision (test results, physician report, driving record, interview with driver, etc); and (5) how drivers referred for remedial treatments are followed up to ensure fitness to drive has been restored. Please include a flow chart of the process if you have one available.

    If you can provide this information at this time, it would be greatly appreciated. If not, it may be deferred to a follow-up telephone contact.

Please provide the following information:

State: ______________________________

Name of person completing survey: ______________________________

Title: ______________________________

Agency: ______________________________

Department: ______________________________

Phone: ______________________________

Fax: ______________________________

Email: ______________________________

CHECKLIST OF REQUESTED MATERIALS

- ✓ Sections of your State's Vehicle Code that describe the licensing of drivers of passenger vehicles.
- ✓ Forms that drivers complete for original and renewal licenses that request self-disclosure of medical conditions that could affect their safe driving ability.
- ✓ Forms used by your licensing agency to request medical history from a driver's physician.
- ✓ Forms that law enforcement, physicians, and private citizens would use to report a driver who exhibits signs of unsafe driving.
- ✓ Forms that counter personnel, driver license examiners, and MAB physicians use to assess functional ability.
- ✓ Any public information and education (PI&E) materials addressing "fitness to drive" issues.
- ✓ Training materials used in educating licensing personnel to observe functional ability.
- ✓ Training materials used in educating licensing personnel in dealing with older drivers.
- ✓ Standards and guidelines for licensing people with specific medical conditions.

Please continue to Section 2 if your State/District HAS a Medical Advisory Board.

Please continue to Section 3 if your State/District DOES NOT HAVE a Medical Advisory Board.

SECTION 2
(TO BE COMPLETED BY JURISDICTIONS THAT HAVE A MEDICAL ADVISORY BOARD)

1. In what year was the Medical Advisory Board created? ____

2. How many members are on the Board? ____

3. Is the Board divided into committees or subcommittees? ___YES ___NO

   If YES, what are the committees, and how many members are on each committee?

4. Please indicate the occupations (for both medical and non medical staff) and medical specialties represented by Board members, and how many members belong to each specialty (i.e., 2 nurses, 1 occupational therapist, 1 neurologist, 2 optometrists, etc.)

____Nurses	____Neurology	___Pharmacologists
____Occupational Therapists	____Orthopedics	___Drug/Alcohol Rehab
____Optometrists	____Psychiatrists	___General Surgery
____Ophthalmologists	____Psychologists	Other: _____________________________
____Cardiologists	____Endocrinologists	Other: _____________________________
____Family Practice Physicians	____Physical Therapists	Other: _____________________________
____Forensics	____Physiatrists	Other: _____________________________
____Internal Medicine	____Radiologists	Other: _____________________________

5. How are Board members nominated and appointed (i.e., nomination by State Medical Society; appointed by Director of Revenue, State Medical Association, Driver License Administrator, Director of Public Safety, State Department of Health, Commissioner, etc.)?

6. What is the length of term served by Board members? ____

   ____

7. What is the profession of the head of the Board? ____

8. What is the employment of the Board physicians?

   ___Full-time employees of the licensing agency
   ___Part-time employees of the licensing agency
   ___Paid consultants
   ___Volunteer consultants

9. If Board physicians are NOT employed by the licensing agency (i.e., if they are consultants), who are they employed by?

   ___Private practice
   ___Hospital/clinic
   ___Other Government agency (list, if known) ____
   ___Other (list, if known) ____

SECTION 2 (Continued)
(TO BE COMPLETED BY JURISDICTIONS THAT HAVE A MEDICAL ADVISORY BOARD)

10. Through what mechanisms, and with what frequency, do Board members interact for disposition of fitness to drive cases? (Check all that apply)

___In-person meetings as a group

Frequency: ___Weekly ___Bi-weekly ___Monthly ___ As directed by the administrator
___On a case-by-case basis ___Other: (describe) ___________________________________

___Teleconference

Frequency: ___Weekly ___Bi-weekly ___Monthly ___ As directed by the administrator
___On a case-by-case basis ___Other: (describe) ___________________________________

___Videoconference

Frequency: ___Weekly ___Bi-weekly ___Monthly ___ As directed by the administrator
___On a case-by-case basis ___Other: (describe) ___________________________________

___Email

Frequency: ___Weekly ___Bi-weekly ___Monthly ___ As directed by the administrator
___On a case-by-case basis ___Other: (describe) ___________________________________

___Regular mail

Frequency: ___Weekly ___Bi-weekly ___Monthly ___ As directed by the administrator
___On a case-by-case basis ___Other: (describe) ___________________________________

11. In what kinds of activities is the Board engaged? (check all that apply):

___ Board exists on paper only (i.e., is inactive, or not yet operational)
___ Board advises on medical criteria and vision standards for licensing
___ Board reviews and advises on individual cases (check all methods used below)
  ___Board physicians perform paper reviews (forms submitted by driver's physicians, police, family, driving record, etc)
  ___ Board physicians conduct in-person interviews with referred drivers
  ___ Board physicians conduct video interviews with referred drivers
  ___ Board physicians screen or assess abilities needed to drive safely (visual, mental, physical)
___ Board assists in developing standardized, medically acceptable report forms
___ Board develops educational materials on driver impairment for the general public
___ Board recommends training courses for driver license examiners in medical/functional aspects of fitness to drive
___ Board apprises licensing agency of new research on medical fitness to drive
___ Board conducts or oversees new research on medical fitness to drive.
___ Board advises on procedures and guidelines (explain):_______________________________________
____
___Other: ____

SECTION 2 (Continued)
(TO BE COMPLETED BY JURISDICTIONS THAT HAVE A MEDICAL ADVISORY BOARD)

12. List the medical conditions that are referred to the Board for further investigation. (Attach any formal listings used by your Agency)

13. Approximately how many drivers are referred to the Board each year? ___________________________

14. What percentage of these drivers are:

    over 65 ____________ over 75 __________________ over 85 _____________________

15. Approximately how many drivers are denied a license each year following reevaluation by the Board? ____________

16. What percentage of these drivers are:

    over 65 ____________ over 75 __________________ over 85 _____________________

17. What types of dispositions may the Board recommend or administer? For example:

    17a. License restrictions (include geographic, radius from home, time of day, special adaptive equipment, visual corrections, etc.)?

    17b. Suspensions?

    17c. Further testing (and by whom)?

    17d. Periodic reexaminations or medical statements (and for what conditions)?

    17e. Types of remediation recommended (specify all types of visual correction, medical intervention, physical therapy, driver training, and others)?

SECTION 2 (Continued)
(TO BE COMPLETED BY JURISDICTIONS THAT HAVE A MEDICAL ADVISORY BOARD)

18. Are licensing actions based on:

___ The recommendation of the entire Board
____The recommendation by multiple Board members, but not the entire Board.
____The recommendation of a single Board member/specialist
____Other (describe) ____

19. Are Board members immune from legal (tort) action?

___YES ___NO

20. Are records and deliberations of the board confidential?

___YES without exception

___YES, except in the following conditions (i.e., driver may receive copy upon request; physician reports may be admitted as evidence in judicial review proceedings of drivers determined to be incompetent):_________________
____

___NO

21. Are Board members' identities public, or do they remain anonymous?

___Identities are public __Identities are anonymous

22. Are annual reports generated that document the activities of the MAB?

___ YES ___ NO

23. Is there is any other information about your medical review program that you wish to provide?

SECTION 3

(TO BE COMPLETED BY JURISDICTIONS THAT DO NOT HAVE A MEDICAL ADVISORY BOARD)

1. What department(s), or organization(s)—inside or outside of the licensing agency—evaluates drivers with medical conditions or functional impairments (or applications for licensure/re-licensure)?

2. What specialties/job titles are represented among those who evaluate drivers with functional impairments or medical conditions? How many people fill each role?

3. How were evaluation guidelines (medical/functional criteria) for licensing established?

4. What types of dispositions may the licensing agency recommend or administer? For example:

   4a. License restrictions (include geographic, radius from home, time of day, special adaptive equipment, visual corrections, etc.)?

   4b. Suspensions?

   4c. Further testing (and by whom)?

SECTION 3 (Continued)
(TO BE COMPLETED BY JURISDICTIONS THAN DO NOT HAVE A MEDICAL ADVISORY BOARD)

4d. Periodic reexaminations or medical statements (and for what conditions)?

4e. Types of remediation recommended (specify all types of visual correction, medical intervention, physical therapy, driver training, and others)?

5. Are the individuals who make licensing determinations immune from legal (tort) action?

___YES ___NO

6. Are the individuals who make fitness to drive decisions anonymous?

___YES __NO

7. Is there is any other information about your medical review program that you wish to provide?

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APPENDIX C: LIST OF ATTENDEES AT MEETING WITH EXPERTS

District of Columbia

Carolyn Garrett
Supervisor
Medical Review Unit
District of Columbia Department of Motor Vehicles
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Washington, DC 20001

Florida

Laura Rogers
Program Manager, Bureau of Driver Improvement
FL Dept. of Highway Safety & Motor Vehicles, Medical Review Section
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Iowa

Kim Snook
Public Service Executive
Office of Driver Services
Iowa Motor Vehicle Division
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Park Fair Mall
Des Moines, IA 50306-9204

Maryland

Robert Raleigh, M.D.
Chief, Medical Advisory Board
Maryland Motor Vehicle Administration
6601 Ritchie Highway, N.E.
Glen Burnie, MD 21062

North Carolina

Laurel Broadhurst, M.D.
Private-Practice Physician and Medical Advisory Board Consultant

Vjaya Bapat, M.D.
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Medical Review Branch
North Carolina Division of Motor Vehicles
3112 Mail Service Center
Raleigh, NC 27699-3112

Susan Stewart
Manager
Medical Review Branch
North Carolina Division of Motor Vehicles
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Raleigh, NC 27697-0000

Ohio

Cathy Ward
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Driver License Special Case/Medical Unit
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Oregon

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Washington

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Wisconsin

Jill Reeve
Medical Review Supervisor
Wisconsin Department of Transportation
Driver Services
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NHTSA

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Jim Wright
U.S. Department of Transportation
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Washington, DC 20590

AAMVA

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American Association of Motor Vehicle Administrators
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TransAnalytics

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Kulpsville, PA 19443

Kathy Lococo
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U.S. Department of Transportation
National Highway Traffic Safety Administration

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