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250 BUREAU OF MOTOR VEHICLES

Chapter 3: PHYSICAL, EMOTIONAL AND MENTAL COMPETENCE TO OPERATE A MOTOR VEHICLE

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29 DEPARTMENT OF SECRETARY OF STATE

250 BUREAU OF MOTOR VEHICLES

Chapter 3: PHYSICAL, EMOTIONAL AND MENTAL COMPETENCE TO OPERATE A MOTOR VEHICLE

SUMMARY: These rules describe the standards to be used by the Secretary of State in determining physical, emotional and mental competence of persons to operate motor vehicles. The rules establish a reporting system that requires persons to submit medical information to the Secretary of State. Persons found incompetent to operate a motor vehicle in accordance with procedures outlined in these rules may have their driving privileges suspended, revoked or restricted.

SECTION 1: STANDARDS

- 1. **Secretary of State**. The Secretary of State shall determine the physical, emotional, and mental competence of a person to operate a motor vehicle with the advice of the Medical Advisory Board and on the basis of the Functional Ability Profiles.
- 2. **Functional Ability Profiles**. Standards to determine the competence of a person to operate a motor vehicle are those contained in the "Functional Ability Profiles" adopted by the Secretary of State with the assistance of the Medical Advisory Board.

SECTION 2: REPORTING SYSTEM

- 1. **Medical conditions requiring report**. Conditions which may result in functional limitations and increase risk of unsafe operation of a motor vehicle should be reported. Conditions for which a person is required to submit a report to the Secretary of State include, but are not limited to, alterations/loss of consciousness, cardiovascular, chronic pulmonary, hypoglycemia, musculoskeletal, neurological (including dementia, epilepsy/seizures, narcolepsy, sleep apnea), substance use, mental/emotional, and visual disorders.
- 2. **Sources of information**. Sources of information concerning medical conditions include, but are not limited to:
 - A. Permits, licenses, renewal applications, and accident reports;
 - B. Written reports from family, physicians, law enforcement personnel and other government agencies; and
 - C. Signed statements from citizens.
- 3. **Nature of medical report**. Upon receipt of information concerning the existence of a medical condition for which a report is required or which may affect a person's ability to operate a motor vehicle, the Secretary of State shall request the person involved to submit a medical report from a physician or from other qualified treatment personnel who may be specified. Other treatment personnel may include but are not limited, to licensed or certified professionals as follows: Physicians, nurse practitioners (NP), physician's assistants (PA), optometrists, psychologists, chiropractors (only for musculoskeletal issues), licensed clinical social workers (LCSW) trained in substance abuse or mental health, physical or occupational therapists (PT or OT), and any other medical personnel as deemed appropriate by the Secretary of State or his/her designee.

- A. To be acceptable, the medical report must be made on forms supplied or approved by the Secretary of State and must contain the physician's or other treatment personnel's diagnosis of the patient's condition(s) and any prescribed medication(s).
- B. The Secretary of State may specify the clinician qualifications in certain situations, e.g. narcolepsy or obstructive sleep apnea.
- C. The Secretary of State may require an individual to certify in writing the date of the person's last seizure, or alteration of consciousness.

4. Action by the Secretary of State

- A. Upon receipt of a medical report indicating that a person is competent to operate a motor vehicle, the Secretary of State may approve the person's competence to operate a motor vehicle, with or without restrictions, taking into consideration the safety of the public and the welfare of the driver.
- B. Upon receipt of a medical report indicating that a person is not competent to operate a motor vehicle, or upon the failure or refusal of a person to submit the requested information, the Secretary of State shall follow one or more of the following procedures:
 - (1) If, from records or other sufficient evidence, the Secretary of State has cause to believe that a person is not physically, emotionally, or mentally competent to operate a motor vehicle, the Secretary of State may:
 - (a) Obtain the advice of any member of the Medical Advisory Board or the Board collectively. The Board, or any member may formulate advice from the existing records and reports, or may request that an examination and report be made by the Board or any other qualified person so designated. The licensed driver or applicant may present a written report from a physician or other qualified treatment personnel of the person's choice, to the Board or the member reviewing the matter and such report must be given due consideration. Members of the Board and other persons making examinations and reports are not liable for their opinions and recommendations pursuant to this subsection.
 - (b) Require a person to submit to a driving evaluation. Upon the conclusion of such an evaluation, the Secretary of State shall take action as may be appropriate. The Secretary of State may suspend the license of such person, allow person to retain a license, or issue a license subject to any conditions or restrictions deemed advisable, having in mind the safety of the public and the person.
 - (c) After hearing, suspend any operator's license, operating privileges, or privilege to apply for and obtain a license in the State of Maine.
 - (d) Without preliminary hearing, suspend any operator's license, operating privilege, or privilege to apply for and obtain a license in the State of Maine if the Secretary of State determines that the person's continued operation of a motor vehicle presents a potential danger to the person or other persons or property. The Secretary of State shall notify the person that a hearing will be provided without undue delay.

5. **Confidentiality of reports**. Reports received under this rule are confidential in accordance with the Maine Motor Vehicle Statutes.

SECTION 3: FUNCTIONAL ABILITY PROFILES

Functional ability to operate a vehicle safely may be affected by a wide range of physical, mental or emotional impairments. To simplify reporting and to make possible a comparison of relative risks and limitations, the Medical Advisory Board has developed Functional Ability Profiles for twelve categories, with multiple levels under each profile. Conditions that may affect the safety of a person to operate a motor vehicle but are not included in the specified categories, may be reported using the general definitions listed below. Clinician recommendations to limit or expand driving privileges, shorten or extend intervals for review, add or delete restrictions will be given due consideration. However, the Secretary of State will make the final determination.

Each profile follows the same format and describes levels or degrees of impairment:

- 1. **No diagnosed condition.** This section is used for a patient who has indicated to the Bureau of Motor Vehicles a problem for which no evidence is found, or for which no ongoing condition can be identified. For example, this category might apply to a person with a heart murmur as a young child who indicates heart trouble, or to a teenager who fainted in gym class once on a hot day who indicates blackouts.
- 2. **Condition, fully recovered/compensated.** This category includes history of a condition that has been resolved or does not warrant review. Guidance for the use of this section is provided in each profile.

3. **Active impairment**

- A. **Mild.** This section deals with conditions which warrant periodic medical review because of an ongoing condition that could deteriorate, and/or conditions that may impair ability to drive but which are controlled so that a person can still operate a motor vehicle safely.
- B. **Moderate.** This section deals with conditions that require more frequent medical review, or may necessitate use of personal medical devices, orthotics, adaptive equipment for the car, or restrictions to safely operate a motor vehicle. Some conditions may require a driving test to determine fitness to drive, or may preclude driving, but with potential for recovery allowing safe operation of a motor vehicle.
- C. Severe. This section deals with conditions that preclude safe operation of a motor vehicle. This may be due to the severity of the condition; because the condition is not controlled; or because of a new condition which requires further testing and follow-up to determine safety to operate.

In all cases, periodic review may result in a different profile level as the condition improves or deteriorates.

When the circumstances of an individual driver do not clearly fit within the guidelines presented in these rules, the Medical Advisory Board or any Member may be consulted for review, on a case by case basis.

Reporting of temporary conditions is not required. However, a person experiencing a condition or taking medications that may impair their ability to safely operate a motor vehicle should refrain from operating a motor vehicle until their condition improves or they are no longer taking the medication.

CARDIOVASCULAR DISORDERS

Cardiovascular disease may affect a driver's ability in a variety of ways, most particularly being the possibility of cardiac syncope or near syncope, due to either dysrhythmia or medications/devices used to treat the cardiac disorder. Guidelines are provided for two important categories of diagnoses that may require driving restriction or periodic review.

Supraventricular Arrhythmia and Cardiac Syncope

In general, the first two levels of this profile apply to individuals whose arrhythmia has been of a minor nature or so remote and well controlled that the patient is expected to drive without his/her condition presenting a risk to the public. In other cases, such as Supraventricular Tachycardia, Atrial Fibrillation, or bradydysrhythmias, the risk is related to the likelihood of recurrence, and the likelihood that recurrence may result in alteration or loss of consciousness.

Ventricular Tachycardia and Ventricular Fibrillation (VT and VF)

Implantable Cardioverter-Defibrillators (ICD) present special circumstances and problems. Generally, a patient who receives such a device for a presenting rhythm that resulted in loss of consciousness (e.g., for secondary preventionⁱ, following syncope or sudden death), or a person who experiences Loss of Consciousness(LOC) associated with discharge of the device for an abnormal rhythm, should not drive for 6 months. Driving may be resumed after 6 months without an event. Patients, who have a device implanted for primary prevention¹ due to non-syncopal rhythms may be allowed to resume driving within a week. It is important to note that each of these is a discrete decision by the treating clinician and must be considered individually.

Other Cardiac Conditions

Any other cardiac condition which could cause syncope or near syncope so that a person might not be safe to drive, may be profiled using the generic profile levels described in SECTION 3 of the FAP. Vasovagal syncope is excluded from this FAP. The clinician may make recommendations about driving or the interval for review. A person with generalized deconditioning which reduces functional capacity should be evaluated using the "Miscellaneous Musculoskeletal and Neurological Conditions" FAP.

Footnotes:

ⁱPrimary prevention refers to placement of an ICD in a person that has not experienced a sudden cardiac arrest, but is at high risk for such an event. Placement in a person that has already experienced a cardiac event such as syncope or cardiac arrest is referred to as secondary prevention.

FUNCTIONAL ABILITY PROFILE

Cardiovascular Disorders¹: Ventricular Tachycardia/Ventricular Fibrillation

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|--|---|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Arrhythmia by history, not documented, asymptomatic | N/A |
| 3. | Active impairment | | |
| | a. Minimal | Non-syncopal, non-sustained ventricular tachycardia. | 4 years |
| | b. Moderate | Sustained VT without syncope under treatment; and/or VT or VF, treated with medication or ICD ³ , greater than 6 months without syncope or LOC. If driver has ICD - no pre or post shock syncope, alteration of consciousness, or interference with ability to control a motor vehicle, within past 6 months. | 2 years |
| | c. Severe | Same as Profile 3.b., but under treatment less than 6 months, or syncope pre or post ICD ³ discharge, or syncopal arrhythmia not responding to treatment; or New conditions under investigation to determine potential risk for unsafe driving. | No driving |

¹ For further discussion regarding CARDIOVASCULAR DISORDERS, please refer to NARRATIVE found at beginning of

² For further explanation of degree of impairment, please refer to SECTION 3.

³ ICD includes implantable cardioverter defibrillators

FUNCTIONAL ABILITY PROFILE Cardiovascular Disorders¹: Supraventricular Arrhythmias²/Cardiac Syncope/Bradyarrhythmias

| Profile Levels | Degree of Impairment ³ / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|---------------------------------------|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Arrhythmias by history, not documented, asymptomatic; or Documented arrhythmias (excluding VT/VF ⁴) with none in the last 18 months and no other identified heart disease. | N/A |
| 3. | Active impairment | Excluding VT or VF ⁴ | |
| | a. Minimal | Documented arrhythmias associated with syncope more than 18 months ago, asymptomatic; and/or A-fib or supraventricular tachycardia without syncope, only mildly symptomatic (e.g., dyspnea, mild lightheadedness). | 6 years |
| | b. Moderate | Documented arrhythmias associated with syncope within the past 6-18 months, mildly symptomatic (e.g., dyspnea, mild lightheadedness). | 2 years |
| | c. Severe | Documented arrhythmias associated with syncope within the past 6 months or symptoms that interfere with normal functioning; or History of syncope of unknown cause less than 6 months ago, with underlying heart disease(For exception see ⁵); or New conditions under investigation to determine potential risk for unsafe driving. | No driving |

¹For further discussion regarding CARDIOVASCULAR DISORDERS, please refer to NARRATIVE found at the beginning of this section.

²Excludes transient arrhythmias or conduction defects associated with acute myocardial infarction.

³ For further explanation of circumstances, please refer to SECTION 3.

⁴ For Ventricular Tachycardia or Ventricular Fibrillation, see appropriate FAP Table.

⁵ Definitive therapy for prevention of syncope may allow driving in <6months on an individual basis.

CHRONIC PULMONARY DISEASE

Chronic obstructive pulmonary disease (COPD) refers to those pulmonary diseases characterized by obstruction to the outflow of breath, as measured by expiratory flow rates, and includes emphysema, chronic bronchitis, and some forms of chronic asthma. Restrictive pulmonary diseases are distinct in limitation of expansion of the lung and include any type of pulmonary fibrosis, chronic infection with scarring, dust deposition, etc. Although the pathology is different, a final common pathway for both major types of pulmonary disease will be breathlessness or dyspnea, hypoxia, frequent exacerbations and infections, eventual pulmonary insufficiency, and finally respiratory failure.

Most COPD in U.S. is the result of chronic tobacco use and its sequelae. It is the fourth leading cause of death nationally, counts 16 million sufferers in the U.S., is the major cause of hospitalization in Medicare recipients in Maine, and is the source of many reports of disease in license applications to Maine Bureau of Motor Vehicles. Chronic restrictive disease is much less common.

Currently the Global Initiative for Chronic Obstructive Lung Disease (GOLD)^A guidelines as developed by World Health Organization and the National Institutes of Health define the diagnosis and severity of COPD using pulmonary function testing measuring FVC and FEV1. COPD is confirmed if the FEV1/FVC is < 0.70.

Severity of disease is divided into Classes A-D in the following way:

A MILD: FEV1 \geq 0.80 (of predicted normal for age and sex)

B MODERATE: FEV1 \geq 0.50 and <0.80

C SEVERE: FEV1 \geq 0.30 and < 0.50

D VERY SEVERE: FEV1< 0.30

These categories were developed to define treatment and prognosis but can also be used to predict severity of symptoms and hypoxia. There are other systems for defining severity. For example, the previously used American Thoracic Society chart^B uses two parameters (PFT and DLCO) and divides classes of disease slightly differently. However, none of these systems are based on oxygen saturation or PO2.

In contrast, most studies of driving ability and COPD have focused on the neuropsychological effects of hypoxia. Classic studies in the 1980's found difficulties in COPD patients on complex cognitive testing. Grant and colleagues (1982)^C studied 203 severely hypoxic patients (mean PO2 of 51) and matched controls, and found 42% with cognitive difficulties in the study group compared to 14% in the controls. These did not correlate well with standard pulmonary function tests (PFT's). A second study by Prigatano (1983)^D confirmed the same type of cognitive limits in slightly less hypoxic patients, mean PO2 of 66. A meta-analysis^E done by several of these researchers in 1987 found that neuropsychological effects were correlated with level of hypoxia.

More recent studies^{F G} using driving simulators, done by European researchers, have confirmed that even mildly hypoxic patients have perceptual difficulties and perform less well than controls. At least one recent study^H has correlated hypoxia with PFT and Gold classes. Few studies however have shown higher crash rates among COPD patients, although some Utah driver data^I suggests that persons with any pulmonary condition are at higher risk of crashes.

Restrictive diseases could be scored by similar categories as the GOLD guidelines (mild, moderate, severe, very severe) based on percent FVC and could be subject to the same driving restrictions when hypoxic pulmonary insufficiency develops.

Based on the above research, shorter review periods are required in persons with higher class of disease or those requiring oxygen (even nocturnal or partial use) given that such persons are prone to exacerbations worsening their day to day status, prone to gradual decline, and prone to experience difficulty with stressful driving conditions. Those who cannot maintain adequate oxygenation with supplementation should not drive.

FUNCTIONAL ABILITY PROFILE Chronic Pulmonary Disease¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Any pulmonary condition, recovered or cured; or Minimal, reversible, episodic, controlled pulmonary condition. | N/A |
| 3. | Active impairment | Pulmonary disease | |
| | a. Mild | Gold A-B, mild dyspnea; or Gold C-D, maintains O2 sat 89% or greater on room air. Moderate dyspnea, no hypoxia less than 89%; or Restrictive or other pulmonary disease of mild severity, maintains O2 sat 89% or greater on room air. | 4 years |
| | b. Moderate | Gold C-D, moderate dyspnea. O2 sat 88% or less, or PO2 55 or less on room air, but able to maintain O2 sat 89% or greater on oxygen supplementation; or Restrictive or other pulmonary disease of moderate severity, O2 sat 88% or less on room air but able to maintain O2 sat 89% or greater on oxygen supplementation; or Exercise or sleep induced O2 sat 88% or less. | 2 year If O2 sat less than 88% (on room air) while at rest or driving must use O2 while driving. Note: Those with only sleep or exercise induced hypoxia are not required to use O2 while driving. |
| | c. Severe | Gold D, hypoxia cannot be controlled to maintain O2 sat 89% or greater, or PO2 56 or greater; or severe restrictive or other pulmonary disease, cannot maintain O2 sat 89% or greater; or new condition under investigation, unable to maintain O2 sat 89% or greater on room air. | No driving |

¹ For further discussion regarding PULMONARY DISORDER, please refer to NARRATIVE found at beginning of this section.
² For further explanation of degree of impairment, please refer to SECTION 3.

DEMENTIA

Many disease processes can cause dementia, most commonly Alzheimer's Dementia, stroke, and Parkinson's Disease. Less common causes include Lewy Body and fronto-temporal dementias, HIV and other chronic viral CNS infections, B12 deficiency, chronic alcohol damage, and multiple sclerosis. All dementias cause some mixture of permanent, often progressive, loss or impairment of cognitive skills like memory, visuo-spatial perception, language, abstraction, prosody and/or praxis impairments, and/or executive function (complex reasoning, planning and judgment).

Memory loss is usually the first to occur in Alzheimer's Dementia, but alone is insufficient to make that diagnosis without other cognitive deficits. Memory loss may be absent or at least occur later in several other types of dementia. Dementias must also be differentiated from other cognitive impairments like congenital mental retardation, transient impairments from delirium-producing conditions, or "mild cognitive impairment" (MCI) which entails mild memory or other cognitive deficits but no functional impairment. MCI carries no increased crash risk, nor may mild dementia. However, the potential for progression in both justifies more frequent physician re-evaluations.

The cognitive changes associated with dementia often affect drivers' ability to drive competently and increase crash risks. Those risks are elevated, especially in emergencies and in complicated traffic patterns, such as at intersections, with lane changes, while merging and making left-hand turns. Drivers with a screening Mini Mental Status Examination (MMSE) score of <24 fail road tests 70% of the time, but 30% pass; those with scores of <19 fail 95% of the time, and only 5% pass.^A

Unfortunately, there are no tests of driving competence with 100% sensitivity/specificity. Current evidence does show several potentially useful clinical associations between specific cognitive test results and driving outcomes, although scoring cut-points for safe/unsafe driving often vary among studies. Nevertheless, office tests of attention, executive function, visuo-spatial skills, and memory are useful in assessments of drivers with dementia. These include Trails B, Useful Field of View, clock drawing, and several others. AB

The MMSE is commonly used clinically as a screening evaluation instrument and to classify the severity of Alzheimer's or mixed vascular dementias. Although MMSE copyrights have slowed its use, it still has the longest track record in driving/dementia research. An abnormal score alone is not sufficient to diagnose dementia without further clinical and functional evaluation because it has a 10-20% false positive rate. An ormal score alone is insufficient to clear a person suspected of having dementia to drive since it has a false negative rate as well, especially because it measures insight and executive functions poorly. The MMSE particularly may correlate poorly with driving competence in non-Alzheimer dementias like fronto-temporal types.

Though MMSE scores are used as partial guidelines for driving competence, other more available cognitive tests, especially the Clinical Dementia Rating (CDR) scale, the Montreal Cognitive Assessment Test (20-25 = mild), or the Short Blessed Test (8-15 = mild) may serve equally well.

Although not all experts agree, the Driver Fitness Working Group^A states that the presence of two or more of the following factors may indicate the need for a cognitive assessment by a health care professional. Applicants with greater numbers of risk factors should be considered at greater risk, although the relative risks are not necessarily additive.

- 1. Age 80 years or older
- 2. History of a recent crash or moving violations
- 3. Applicant self-report or caregiver report of impaired skills
- 4. Use of psychoactive medications such as benzodiazepines, neuroleptics, antidepressants, or use of medications for Alzheimer's Disease
- 5. History of active alcohol abuse
- 6. History of falls
- 7. Inability to understand or hear instructions during interactions with the health professional
- 8. Scores with simple screening tools that indicate the possibility of a cognitive deficit

Online programs intended to assist older drivers self-evaluate driving skills may help them to an appropriate decision to retire from driving. Road tests with a driving rehabilitation instructor, occupational therapist or driver educator may also be useful. Family members may also provide useful information about an elder's ability to drive safely.

Online medical textbooks maintain useful reviews of all these issues.^D

When BMV is notified that a licensed driver is diagnosed with dementia^D, the driver will usually be required to submit a "Driver Medical Evaluation" (CR-24) form, completed by an appropriate clinician. Depending on the outcome of the Evaluation, the driver may also be required to take a road test, which must be administered by a BMV Driver's License Examiner.

FUNCTIONAL ABILITY PROFILE Diagnosed Dementia¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|---|---|---------------------------------------|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Cognitive impairment recovered. (Rare, usually within 6 months of identification. Example: recovery following a stroke.) | N/A |
| 3. | Active impairment | Diagnosed progressive dementias with 2 or more functional impairments lasting >6 months, and other causes having been ruled out. For Lewy Body Dementia, see ³ . | |
| | a. Mild | Dementia without concern for unsafe driving in clinician's judgment. Supporting evidence should be submitted and could include documentation of MMSE 24-26+, CDR< 1, or MoCA≥22, without evidence of executive dysfunction or visuo-spatial impairment. | 2 years ⁴ |
| | b. Moderate | Dementia with risk factors for unsafe driving in clinician's judgment, but limited driving may be possible & safe. Supported by documentation i.e., MMSE 20-23, CDR 1-1.5, or MoCA 19-21, without evidence of executive dysfunction or visuo-spatial impairment. | Annually ROAD TEST |
| | c. Severe | Dementia with history of unsafe driving, or driving is not safe in judgment of clinician. Supporting evidence should be submitted and could include: MMSE ≤19, CDR 2 or greater, or MoCA≤18, or deficits in visuospatial or executive function; or new cognitive impairment under investigation, with concern for potentially unsafe driving. | No driving |

¹ For further discussion regarding DEMENTIA, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Lewy Body Dementia exhibiting significant movement disorder manifestations should also be reviewed using the Parkinson's FAP.

⁴ If clinician documentation supports stability over several years and they make a recommendation, the interval for review may be extended. If clinician documents progression of disease and recommends more frequent review and road testing, the interval may be shortened.

HYPOGLYCEMIA WITH OR WITHOUT DIABETES MELLITUS

Hypoglycemia can cause altered consciousness, weakness, fatigue, lethargy, motor abnormalities, visual disturbances, tremors or psychiatric disorders. Hypoglycemia requiring the assistance of a third party is incompatible with driving, especially when accompanied by hypoglycemia unawareness.

Other complications of diabetes should be assessed under the appropriate guidelines, e.g. diabetic retinopathy should be referred to the visual acuity profile.

FUNCTIONAL ABILITY PROFILE $\ \, Hypoglycemia \ (With \ or \ Without \ Diabetes \ Mellitus)^1$

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|--|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Condition which caused hypoglycemic episode is fully recovered; or No hypoglycemic episodes within past 3 years and/or low risk for recurrence. | N/A |
| 3. | Active impairment | | |
| | a. Mild | Single episode of hypoglycemia within the past 12 months readily explained by one-time event that is not likely to recur (e.g. accidental overdose of insulin); or History of hypoglycemic episodes, more than 12 months ago, and condition is stable. | 3 years |
| | b. Moderate | One or more hypoglycemic episodes requiring third party assistance 3-12 months ago and condition is stable. Clinician should indicate if person has hypoglycemic unawareness. | 1 year Note: Review drivers with hypoglycemic unawareness every 3 months until profile level 3a. |
| | c. Severe | One or more hypoglycemic episodes requiring third party assistance, with or without hypoglycemic unawareness, within the past 3 months. | No driving |

¹ For further discussion regarding HYPOGLYCEMIA, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

MENTAL DISORDERS

There is no certain way of predicting which persons with mental disorders (the American Psychiatric Association's preferred term for psychiatric illness) will have accidents, but many high risk drivers are such because of symptoms from psychiatric conditions. In a review of medical literature spanning 1960-2000, the National Highway Traffic Safety Administration noted that people with schizophrenia, personality disorders and chronic alcohol abuse are at highest risk for unsafe driving. A (Refer to Substance Use Disorders FAP for guidelines)

Given that many mental disorders wax and wane in severity, this FAP attempts to provide guidelines that protect public safety but allow driving when possible. Recommendations are drawn from a review of medical literature, a review of recommendations from other states, and from the experiences of physicians in Maine.

Diagnosis of a mental disorder is important, but clinicians should also focus on a patient's function, in particular attention and concentration, executive function (or other cognitive changes related to psychiatric diagnosis), psychosis, psychomotor retardation, response disinhibition or impulsivity, intent for dangerousness to self or others, and on whether or not the patient has the insight to recognize limitations or the judgment to stop driving if the limiting symptoms occur.

When assessing safety and stability, clinicians may also consider patient histories and collateral information about motor vehicle crashes, driving citations, relapses in substance use disorder, patient compliance with treatment, and relapses in the mental disorder for which the patient is being treated in order to gain a fuller picture of the patient's ability to drive safely. One episode of poor judgment does not necessarily mean a patient should stop driving. There should be a pattern of concerning behaviors or symptoms.

Many individuals with psychiatric illness are maintained on medications on an outpatient basis. These drugs have varying degrees of sedative side effects and can potentiate other central nervous system depressants. Persons receiving such medications should be screened in terms of severity of side effects incident to medication and the adequacy of the remission of symptoms related to the mental disorder.

Normally, BMV will not require reporting of prescribed medications used as ordered. However, in cases where proper use of prescription medications have resulted in driver impairment, such as OUI, crashes, reports of unsafe driving, or when a clinician is concerned that a patient may be non-compliant with driving recommendations, use of the Opiate Replacement and Prescription Medication FAP is appropriate. Please note that clinicians are responsible to assess their patients for potential risk and advise them whether to drive or not based on their medications and medical conditions.

Medications that are of particular concern for sedation, especially if patients are prescribed more than two or are concurrently prescribed opioids or are abusing drugs or alcohol, include the tricyclic antidepressants, sedative hypnotics, some antipsychotics, and benzodiazepines. Methadone and benzodiazepines are a particularly troubling combination for risk of sedation. (See Substance Use Disorder FAP if that is primary diagnosis).

Special Circumstances

Electroconvulsive Therapy (ECT): A seizure induced by ECT treatment is not considered a Seizure Disorder for purposes of driving a motor vehicle. Transient confusion or cognitive changes would be expected to clear in a day or two after treatment, during which the patient should not drive. However, it is possible for ECT treatments to result in long-lasting cognitive changes that impair the ability to drive safely, usually in the context of evolving dementia. Under these circumstances evaluate according to the Dementia FAP.

Psychogenic Non-epileptic Seizures (PNES): PNES are considered to be a form of Conversion Disorder in DSM-V (the most recent DSM at the time this FAP was written). BC Until a formal diagnosis of PNES has been made (consultation with Neurology and EEG Video Monitoring are especially helpful in this regard), clinicians should use the FAP for Seizures even if PNES is suspected. Once PNES is formally diagnosed, the evaluation of driver safety should be individualized but patients with PNES are very likely to fall in to category 3b or 3c on this FAP. There is no clear consensus in the medical literature about driving limitations for PNES, but in a study in the United Kingdom, 50% of neurologists who specialize in diagnosing PNES felt that driving restrictions should be similar to that for epilepsy. There are reports of motor vehicle crashes related to PNES. Prognosis for cessation of psychogenic seizures is better if PNES resolves spontaneously in the first year or two, but poor if the symptoms have gone on for 10 or more years.

Novel treatments or treatment in development: Transcranial Magnetic Stimulation^E and intravenous ketamine are examples of new or novel treatments at the time of this FAP preparation that have no track record in the medical literature as far as driver safety is concerned (but are not meant to be the only treatments considered here). Practitioners using any new or novel treatments are strongly urged to consider a patient's ability to drive safely as part of their post-treatment assessment protocols.

FUNCTIONAL ABILITY PROFILE Mental Disorders¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|---|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Past history of a psychiatric disorder in sustained remission 2 years or more. No impairment in driving abilities from medication/treatment side effects, and does not meet listed criteria below. | N/A |
| 3. | Active impairment | Please refer to narrative section "Special Circumstances" regarding PNES & ECT. On-going symptoms that meet current DSM criteria for a mental disorder ³ ; and | |
| | a. Mild | Condition stable but less than 2 years; no cognitive impairment; minimal functional impairment from symptoms or medications or other treatments; or Occasional recurrence of mild to moderate symptoms without suicidal or homicidal intent and with insight and judgment adequate to stop driving if functional limitations or medication side effects occur | 1 year |
| | b. Moderate | History of symptoms such as suicidal or homicidal intent, aggressive or violent behaviors, impulsivity, psychosis, inattentiveness, or cognitive changes; with poor insight into limitations that create a risk for driving that occur only during recurrence of the psychiatric disorder. Symptoms have improved with treatment and have been stable for at least 3 months. Cleared by clinician to drive. Clinician should recommend ROAD TEST if, driver is returning to | 6 months ROAD TEST if recommended by clinician |

| | driving after 6 months or more of no driving; or if they are transitioning from Severe Profile Level 3c to Moderate 3b. | |
|-----------|--|------------|
| c. Severe | Persistent or progressive psychiatric symptoms that are not expected to improve despite adequate treatment or due to chronic patient non-compliance, AND 1 or more of the following: Chronic dangerous behaviors toward self or others; chronic suicidal or homicidal intent; chronic delusions or hallucinations that impair driving ability; severe anger, impulsivity or irritability that create a driving hazard; chronic poor insight and judgment about driving limitations leading to dangerous behaviors; significant executive function or cognitive changes related to psychiatric condition; chronic medication or treatment side effects such as sedation, blurred vision or tardive dyskinesia that impair safe vehicle operation; or New condition or onset of symptoms, under investigation and that may pose risk to safe operation of a motor vehicle. | No driving |

¹ For further discussion regarding PSYCHIATRIC DISORDERS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

 $^{^{3}}$ For substance use or withdrawal disorders, please see FAP for Substance Use Disorders.

MUSCULOSKELETAL AND NEUROLOGICAL DISORDERS

There are a wide variety of Neurologic and Musculoskeletal disorders which can impact driving safety. Impairment may be the result of altered muscular, skeletal, neurologic, and/or cognitive function. Motor, sensory, and/or cognitive deficits may adversely affect strength, coordination, reaction time, range of motion, visual perception, processing speed, judgment, problem solving, attention, memory, and/or awareness, in terms of a driver's ability to perform the actions necessary to safely operate a motor vehicle.

Disorders affecting cognition such as epilepsy, stroke, traumatic brain injury, Parkinson's disease, dementia, and encephalopathy as well as disorders affecting neuromuscular function such as multiple sclerosis, Parkinson's disease, muscular dystrophy, cerebral palsy, myasthenia gravis, amyotrophic lateral sclerosis, spinocerebellar ataxia, foot drop, neuropathy, and spinal cord disorders all may present their own unique barriers to safe motor vehicle operation. What's more, there is considerable overlap in the clinical manifestations of these disorders. A driver with these conditions may have chronic functional limitations that have the potential to affect safe operation of a motor vehicle and should be evaluated. When functional abilities are in question, a road test may be recommended by the clinician or required by BMV.

Many of these conditions may result in symptoms or impairments that fall under more than one Functional Ability Profile (FAP) and will need to be evaluated using more than one FAP. For example, following a stroke a driver may experience a visual field or acuity disturbance and may also need adaptive equipment. This person would need to be evaluated using both the Stroke and the Visual Disorders FAP's. A person with Parkinson's Disease may have cognitive or psychiatric deficits as well as the neurological and motor deficits. They would need to be evaluated using the Parkinson's, as well as the Dementia or Mental Disorders FAP. BMV will use the most restrictive FAP to determine the fitness of a person to drive.

Neurological disorders may have an unpredictable, episodic, or progressive course and require periodic evaluation by a qualified medical practitioner. The treating clinician shall determine the timing of evaluation but should have a working knowledge of a driver's <u>current</u> condition when filling out the Driver Medical Evaluation (CR-24) form. When completing the CR-24 the driver must have been seen within the past 12 months or less.

Individuals with any number of neurological and musculoskeletal conditions may use adaptive equipment when driving. Person's that use adaptive equipment when driving must take a road test. Although referral to a driving rehabilitation specialist may be indicated in some cases, it is not required by BMV. When BMV requires a road test, it will be administered by a BMV Driver's License Examiner. The road test will determine whether the person is allowed to drive and if there are driving restrictions.

Conditions which require review include but are not limited to the following:

Amputation or Limb Deficiency

Amputation or limb deficiencies may be either congenital or acquired of the upper or lower extremities, with functional implications to safe driving being the decreased ability to operate one or more of the vehicle controls. Adaptive driving equipment will require consideration depending on the specific limb deficiency, use of prosthesis and overall functional abilities of the person. Evaluation by a driving rehabilitation specialist may be appropriate depending on the extent of impairment. However, it is not required and does not take the place of the BMV road test. The Miscellaneous Musculoskeletal and Neurological Functional Ability Profile should be used to assess potential for driving impairment.

Arthritis or Joint Disorders

This category would include related conditions such as rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, and spinal stenosis, among others. Affected structures include joints of axial and appendicular skeleton, and/or spinal nerves. These conditions can cause pain, decreased strength and range of motion, and impaired functional mobility, potentially altering the ability to safely operate motor vehicle controls. In assessing these persons for potential driving impairment, overall functional performance of the person in terms of ability to perform activities of daily living should be taken into consideration to help determine if adaptive equipment or strategies may be needed. Miscellaneous Musculoskeletal and Neurological Conditions Functional Ability Profile should be used to assess driving impairment.

Cerebrovascular Accident (CVA or Stroke)

Stroke may have a complicated and variable presentation. Residual impairments may include altered strength, mobility, coordination, motor planning, sensation, spatial planning, body or environmental awareness, vision, communication, judgment, and cognition. Motor deficits or contractures may require upper or lower extremity adaptive equipment for driving. Due to the possibility of multiple potential deficits, a comprehensive evaluation by a driving rehabilitation specialist may be indicated but is not required. Use the TBI/Stroke Functional Ability Profile to assess impairment. Other medical issues following a stroke may include seizures, cognitive impairment, and/or visual disorders which need to be evaluated separately using the proper Functional Ability Profile for those conditions. Please note that a transient ischemic attack (TIA) by definition has no residual deficit and is therefore not subject to the Stroke FAP.

Miscellaneous Musculoskeletal and Neurological Conditions

Neurologic and musculoskeletal conditions with the potential to impair a person's ability to safely operate a motor vehicle are numerous, and therefore have not all been specifically listed. Even if these conditions have not been adequately identified in any of the other categories, they still should be evaluated. Examples of neuromuscular conditions which would be appropriately evaluated using the Miscellaneous Musculoskeletal and Neurological Conditions FAP include but are not limited to muscular dystrophy, cerebral palsy, amyotrophic lateral sclerosis, peripheral/other neuropathies, syringomyelia, as well as any generalized deconditioning syndrome due to any etiology which reduces functional capacity to drive. These conditions may require personal medical equipment or adaptive accessories to operate a motor vehicle, cause deficits in mobility, sensation, strength, coordination, reaction time, range of motion, and/or other abilities needed to safely operate a motor vehicle. Referral to a driving rehabilitation specialist, although not required, may be indicated in some cases. Also, persons who have an implanted spinal cord/dorsal column stimulator are advised to turn off the device prior to driving due to the potential for unexpected changes in stimulation with activity that could possibly be unsafe. When visual, cognitive, psychiatric or other conditions also exist, they should be evaluated separately using the appropriate profile.

Multiple Sclerosis (MS)

Multiple Sclerosis is a highly variable disorder. Some people may have few if any perceptible symptoms associated with the disorder, while others may be significantly impaired. MS may cause visual impairment, cognitive impairment, alterations in sensation, muscle weakness, incoordination, spasticity, joint contracture. Upper and/or lower extremity orthotics may be required, and a person may also be operating an adapted vehicle from a mobility device (such as a wheelchair). These deficits may cause difficulties with manipulation of vehicle controls, and driver performance in complex driving environments. Comprehensive evaluation for adaptive equipment and an evaluation by a driving rehabilitation specialist may be beneficial but is not required. The progressive nature of MS warrants periodic reassessment of driving risk using the MS Functional Ability Profile. Psychiatric, cognitive, or visual deficits should be evaluated separately using the appropriate Functional Ability Profile.

Parkinson's or Parkinsonian Syndromes

Parkinson's Disease and Parkinsonism physical signs include tremor, bradykinesia, postural instability, and rigidity, along with complex cognitive issues such as dementia and mood disturbance. These deficits may cause slowed reaction times, difficulties with vehicle controls, and impaired performance in complex driving environments. Evaluation by a driving rehabilitation specialist may be indicated. The progressive nature of the disorder warrants periodic reassessment using the Parkinson's Functional Ability Profile. Psychiatric or cognitive issues should be evaluated separately using the appropriate Functional Ability Profile.

For the purpose of this FAP, Progressive Supranuclear Palsy, Multisystem Atrophy, Corticobasal Ganglionic Degenerations, Medication Induced Parkinsonism and Lewy Body Dementia are considered Parkinsonian Syndromes. The cognitive implications of Lewy Body Dementia should be reviewed using the Dementia FAP.

Spinal Cord Injury (SCI)

SCI of the cervical, thoracic, or lumbosacral regions is the result of a medical condition, lesion or trauma to the neural elements within the spinal canal. This causes impairment of motor and sensory function to the upper or lower limbs and trunk which is variable and depends on the level of injury. Although common terms to describe spinal cord injury are paraplegia and tetraplegia (quadriplegia), The American Spinal Injury Association (ASIA) Impairment Scale more precisely grades the degree of impairment according to the spinal level of preserved motor and sensory function. Safe driving after SCI may be impaired due the altered ability to operate vehicle controls; so the use of orthotics, adaptive driving equipment, and an adapted motor vehicle for use with mobility device/wheelchair are often required. Comprehensive evaluation by a driving rehabilitation specialist should be considered. Miscellaneous Musculoskeletal and Neurological Conditions Functional Ability Profile should be used to assess driving impairment.

Traumatic Brain Injury (TBI)

TBI causes dysfunction of the central nervous system resulting from trauma or forces to the head significant enough to alter brain function. Cognitive changes after TBI can affect mood, memory, executive function, judgment, initiation, attention, and problem-solving. In addition, because self-awareness and judgment may be affected, a person may not be able recognize their impairments. Depending on the extent of the injury, other deficits may include altered gait, balance and sensation, as well as impaired muscle and joint function due to weakness, spasticity, and contracture. These persons may require ankle-foot orthoses or upper extremity orthotics to improve mobility and use of extremities. Factors that impact on ability to drive safely after TBI can be extensive, and a comprehensive driving evaluation by a driving rehabilitation specialist should be considered. Use the Stroke/TBI Functional Ability Profile to assess impairment. Other medical impairments following TBI may include seizures, cognitive, and visual disorders, which need evaluation separately using the proper Functional Ability Profile for those conditions.

FOR REFERENCES, SEE BIBLIOGRAPHY AT END OF DOCUMENT.

$FUNCTIONAL\ ABILITY\ PROFILE$ Cerebrovascular Accident (CVA/Stroke) or Traumatic Brain Injury $(TBI)^1$

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|---|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | History of Stroke or TBI without residual physical or cognitive deficits or impairments. | N/A |
| 3. | Active impairment | History of Stroke or TBI with residual ³ cognitive and/or physical impairments or deficits. For TIA, see. ⁴ | Please document residual deficits on Driver Medical form. |
| | a. Mild | Residual ³ cognitive or physical deficits, but unlikely risk to safely operating a motor vehicle and does not require assistive medical equipment or nonstandard accessory driving devices. ⁵ | N/A Clinician may request ROAD TEST if unsure ⁵ |
| | b. Moderate | Residual ³ cognitive or physical deficits that could potentially impair ability to safely drive, and/or requires assistive medical equipment or nonstandard accessory driving device(s). | 4 years ROAD TEST |
| | c. Severe | Residual ³ cognitive and/or physical deficits that are significant enough to impair ability to safely drive. Or, a person with physical or cognitive changes when stroke is suspected and condition is being investigated. | No driving |

¹ For further discussion regarding CEREBROVASCULAR ACCIDENT OR TRAUMATIC BRAIN INJURY, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Stroke and TBI may lead to other cognitive or physical impairments such as seizures, visual deficits such as hemianopsia or diplopia, or cognitive deficits, such as dementia, impairment to reasoning or judgment, these need to be evaluated using the appropriate FAP. The most restrictive Profile will determine the driving privileges.

⁴ Please note that a transient ischemic attack (TIA) by definition has no residual deficit and is therefore not subject to this FAP.

⁵ If a provider has concerns regarding an individual's ability to operate a vehicle safely that are not captured in this FAP then a road test may be requested. Include documentation of all pertinent medical concerns, and rationale for requesting road test.

FUNCTIONAL ABILITY PROFILE Miscellaneous Musculoskeletal and Neurological Disorders¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | History of injury, deficiency, disorder, or other condition recovered, no longer requires treatment and maintains normal function. | N/A |
| 3. | Active impairment | Chronic condition such as amputation or limitation of limb, arthritis, joint dis-orders, spinal cord injury, or others which may affect neuromuscular function; and currently require treatment or cause impairments, restrictions, or deficits. | For spinal cord/dorsal column stimulator see ³ . |
| | a. Mild | Chronic condition that does not pose risk for safe driving and does not require use of assistive medical equipment or nonstandard accessory driving devices; or Clinician documents stable condition that is unlikely to deteriorate and driver has already passed road test. | N/A |
| | b. Moderate | Chronic condition, which may impair ability to drive safely and/or requires personal assistive medical equipment (such as prosthesis, orthosis, or any type of nonstandard accessory driving device such as hand/foot controls). | 4 years ⁴ ROAD TEST |
| | c. Severe | Chronic condition, which causes impairments that interfere with the ability to drive safely despite use of personal assistive medical equipment, or any nonstandard accessory driving devices. | No driving |

¹ For further discussion regarding MISCELLANEOUS MUSCULOSKELETAL AND NEUROLOGICAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Persons who have an implanted spinal cord/dorsal column stimulator are advised turn off the device prior to driving due to the potential for unexpected changes in stimulation with activity that could possibly be unsafe.

⁴Interval for review may be more frequent if recommended by clinician.

FUNCTIONAL ABILITY PROFILE Multiple Sclerosis¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|--|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | There is no recovery from multiple sclerosis | N/A |
| 3. | Active impairment | Multiple sclerosis may affect many domains of the nervous system including cognition, vision, motor skills, coordination etc. In addition it may cause fatigue and/or psychiatric symptoms. ³ | |
| | a. Mild | Symptoms well controlled, or condition is quiescent. No side effects from medications that could potentially impair driving. | 4 years |
| | b. Moderate | Symptoms or medication side effects that may potentially impair safe driving. | 2 years ROAD TEST |
| | c. Severe | Symptoms or side effects of medication severe enough to preclude safe driving. | No driving |

 $^{^{1}}$ For further discussion regarding MULTIPLE SCLEROSIS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Multiple Sclerosis is a highly variable disorder. Some people may have few if any perceptible symptoms associated with the disorder, while others may be significantly physically or cognitively impaired. Symptoms may fall under more than one FAP and all appropriate FAP's should be used. For example, a driver may require adaptive equipment or have a significant visual field or acuity disturbance. The most restrictive FAP will determine driving privileges or restrictions.

FUNCTIONAL ABILITY PROFILE

Parkinson's and Parkinsonian Syndromes¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|--|
| 1. | No diagnosed condition | No known disorder ³ | N/A |
| 2. | Condition fully recovered | Parkinson's Disease ³ is a lifelong condition and there is no recovery. Drug induced Parkinsonism may be considered recovered when symptoms resolve after the causative medication is stopped. | N/A |
| 3. | Active impairment | Parkinson's Disease ³ may cause tremor, autonomic instability, rigidity, bradykinesia and/or dyskinesia, cognitive or psychiatric symptoms. ⁴ | |
| | a. Mild | Mild physical symptoms that do not pose risk for safe operation of a vehicle. No cognitive or psychiatric symptoms. Medications do not cause drowsiness. | 2 years ⁵ |
| | b. Moderate | Physical symptoms and/or side effects of medication may potentially interfere with the safe operation of a motor vehicle. May have early cognitive or psychiatric symptoms ⁴ . | 1 year ROAD TEST |
| 15 - 6 - 4 4 | c. Severe | Physical symptoms or side effects of medications are incompatible with safe operation of a motor vehicle. For cognitive or psychiatric symptoms, see ⁴ . | No driving |

¹ For further discussion regarding PARKINSON'S OR PARKINSONIAN SYNDROMES, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ For the purpose of this FAP, Lewy Body Dementia, Multisystem Atrophy, Corticobasal Ganglionic Degenerations, medication induced Parkinsonism, Vascular Parkinsonism, and Progressive Supranuclear Palsy are considered Parkinsonian Syndromes.

⁴ Cognitive or Psychiatric symptoms should be evaluated using the Dementia or Mental Disorders FAP.

⁵When Parkinsonian Syndrome is caused by medications and patient is stable, the clinician may recommend extending the review interval up to 4 years.

NARCOLEPSY

Narcolepsy is a chronic disorder of the central nervous system characterized by the brain's inability to control sleep-wake cycles. The prevalence is not clear, but estimated at .02 to .1 % of the US population. At various times throughout the day, people with narcolepsy can experience irresistible and sudden bouts of sleep: the onset of sleep is usually heralded by awareness of sleepiness which usually becomes more predictable over time and with experience. In addition to daytime sleepiness, other symptoms can include cataplexy (70%) which is the sudden loss of voluntary muscle tone triggered by strong emotions, sleep paralysis (25-50%), sleep hallucinations (20-40%), and disturbed night sleep (70-80%). Symptoms commonly begin in the teen years through the mid-twenties or early thirties, with the first symptom generally that of excessive daytime sleepiness.

There are significant implications for driving safety given the core symptoms of this disorder but there is a paucity of data regarding narcolepsy and driving safety. People with untreated symptoms of narcolepsy have three to four fold risk of crashes compared to the general population (self-reported data). ABC The few studies that examined crash risk and narcolepsy were performed in untreated individuals and utilized driving simulators: the applicability to real world driving is not known. Narcolepsy is a treatable condition, and both behavioral interventions and medications are used. Medications used to treat sleepiness include stimulants (amphetamine/ methylphenidate), modafinil, and Xyrem (sodium oxybate). Patients are counseled to take planned naps, and a brief (20 minute) nap generally significantly improves sleepiness. Cataplexy is treated with SNRI/SSRI'si, tricyclic antidepressant medications, and/or sodium oxybate.

Narcolepsy is a lifetime condition that requires ongoing monitoring and assessment, as response to medications may wane over time, or cataplexy may develop years after other symptoms. Given that daytime sleepiness can be profound, careful monitoring for increasing levels of sleepiness and emergence of cataplexy are essential. Practice parameters recommend regular follow up to determine adherence and response to treatment; a patient stabilized on medications should be seen regularly; at least once per year, and ideally twice yearly. Further testing for residual sleepiness with an in lab study (MSLTii or MWTiii) may be appropriate, in some circumstances. These tests are not routinely performed, but may be used to assess an individual's ability to remain awake (or propensity to fall asleep) if sleepiness poses a risk for public or personal safely.

Those with narcolepsy are frequently followed by specialists (neurologists or sleep medicine specialists).

Given the risk for crashes if symptoms are not effectively treated, additional information regarding current symptoms must be included in the narrative section of the Driver Medical Evaluation and specifically address presence or absence and severity of cataplexy, degree of residual daytime sleepiness, and adherence to medications and behavioral strategies.

Footnotes:

- ¹ Serotonin and Norepinephrine Reuptake Inhibitor/Selective Serotonin Reuptake Inhibitor medications.
- ⁱⁱ Multiple Sleep Latency Test: performed in Sleep Centers. Objective determination of an individual's underlying sleepiness by measuring latency to sleep in 5 trials of 20 minutes each after documentation of adequate sleep the night prior to testing. Pathologic sleepiness is defined as a mean sleep latency of less than 5 or 6 minutes. May be used to assess efficacy of treatment.^G
- iii Maintenance of Wakefulness Test: performed in Sleep Centers. Objective assessment of ability to stay awake while passive and sedentary in a non-stimulating environment. The strongest evidence for an individual's ability to maintain wakefulness is provided by a capacity to remain awake through 4 trials of 40 minutes each. AASM standards state that MWT testing is indicated when assessing individuals whose inability to remain alert constitutes a safety hazard and in patients with Narcolepsy. May be used to assess efficacy of treatment. H

FOR REFERENCES. SEE BIBLIOGRAPHY AT END OF DOCUMENT.

FUNCTIONAL ABILITY PROFILE Narcolepsy¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | This is a chronic lifelong condition. Do not use this profile level. | N/A |
| 3. | Active impairment | This diagnosis must be made by a physician, (preferably a sleep specialist or neurologist), and applies to patients who have a confirmed diagnosis of narcolepsy. Clinician assessment recommended at least every 6 months. | A <u>physician</u> must complete the Driver Medical Evaluation with narrative that includes items in ³ . |
| | a. Mild | No cataplexy, minimal or no subjective sleepiness (Epworth Sleepiness Scale ⁴ of 7 or less), and consistent use of medications and behavioral strategies. | 2 year |
| | b. Moderate | Predictable mild cataplexy controlled with behavioral strategies and medication, ESS ⁴ 8 or more, consistent use of medications and behavioral strategies for sleepiness, and avoidance of driving if sleepy. | 1 year |
| | c. Severe | Unpredictable cataplexy, inconsistent use of medications or no effective medication yet found, and ESS ⁴ 8 or more; or Suspected narcolepsy under investigation with concern for safety. | No driving |

¹ For further discussion regarding NARCOLEPSY, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Brief narrative to include: presence/absence of cataplexy (type of symptoms and frequency), degree of residual sleepiness, description of treatment, effectiveness of treatment, and adherence to treatment.

⁴ Epworth Sleepiness Scale: validated sleep questionnaire containing eight items that ask for self-reported disclosure of expectation of "dozing" in a variety of situations. Dozing probability ratings are none (0), slight (1), moderate (2), or high (3) in eight hypothetical situations. A scale of 0 to 7 is normal, 8-12 is mild, 13-16 is moderate, and 17 or greater is severe. (Hirshkowitz M, Gokcebayu N, Iqbal S, et al: Epworth Sleepiness Scale and sleep disordered breathing: Replication and extension. Sleep Res 1995; 24:249).

OBSTRUCTIVE SLEEP APNEA

Driver sleepiness is a major cause of motor vehicle crashes. Most crashes due to drowsy driving likely occur in healthy but sleep deprived individuals, but drivers with obstructive sleep apnea (OSA) are at increased risk for car accidents.

OSA (and possibly central sleep apnea) can cause impairment in daytime performance. It is associated with increased risk of motor vehicle crashes, with estimates ranging from 2% to 7% in those with OSA compared to those without. AB The condition is common (2-8% in older literature, with more recent estimates suggesting that 25% of adult men in the US are affected), and the frequency of occurrence increases with age, BMI (body mass index) and comorbid conditions such as diabetes.

People with sleep apnea may have delayed reaction times and inattentiveness in addition to frank sleepiness. Some are unaware of their sleepiness and cognitive impairment. It is important to recognize that excessive daytime sleepiness and crash risk may not correlate with the severity of the sleep apnea. A recent study demonstrated that increased risk of motor vehicle crashes is present in those with mild OSA as well as those with severe disease. ^C The diagnosis of OSA is made through polysomnography (PSG), with insurers increasingly insisting upon Home Sleep Studies (HST) although the gold standard is still in lab polysomnography.

Treatment of OSA generally improves daytime sleepiness. Use of continuous positive airway pressure (CPAP) is a highly effective treatment with studies suggesting that daytime symptoms improve within two weeks of positive airway pressure (PAP) treatment. ^D It is the only treatment modality demonstrated to reduce crash risk. ^E Not using CPAP for as little as one night may cause daytime impairment. ^F

Other treatment options for OSA include bariatric surgery for morbid obesity, use of oral mandibular advancement devices, upper airway surgery and craniofacial surgery. Hypoglossal nerve stimulators have been approved by the FDA for treatment of OSA. Assessment of treatment efficacy with PSG after surgery or with use of an oral device is recommended.

It is difficult for clinicians to assess sleepiness (and possible impairment while driving) in a patient with OSA. Sleepiness cannot be measured easily by objective testing. Maintenance of Wakefulness Tests (MWT) and Multiple Sleep Latency Tests (MSLT) are the best objective measures of daytime sleepiness in those with OSA, but are performed only in Sleep Centers, are expensive and time consuming. They are not routinely used to assess daytime sleepiness in drivers. The clinician must use subjective reports as well as objective data from CPAP downloads to assess adherence to treatment and level of daytime sleepiness.

The diagnosis of obstructive sleep apnea should only be made by a physician or NP/PA with specialized training in Sleep Medicine. Those with OSA are frequently followed by a sleep specialist or a neurologist.

The Epworth Sleepiness Scaleⁱ is a widely used measure of subjective daytime sleepiness although the sensitivity and specificity of the scale is less than ideal. A score of 7 or less out of 24 is considered normal (not sleepy). The acceptable range cutoff value is subject to debate, with some researchers suggesting that 7 or less is normal (not sleepy): others suggesting 12 or less).

Patients on PAP therapy should have data downloaded from their device to measure adherence with therapy. Medicare guidelines^I are the standard for adherence to treatment and require an average of 4 hours PAP use per night 70% of the time.

PAP devices also calculate an AHI (apnea/hypopnea index). The AHI determines the severity of OSA: an AHI of 15 or fewer obstructive events per hour is considered mild.

The clinician must educate patients that driving safety is ultimately the individual's responsibility. Insufficient sleep time, medications, shift work and illness may affect one's ability to drive safely despite consistent use of PAP therapy.

Footnotes:

Epworth Sleepiness Scale: A validated sleep questionnaire containing eight items that ask for self-reported disclosure of expectation of "dozing" in a variety of situations. Dozing probability ratings are none (0), slight (1), moderate (2), or high (3) in eight hypothetical situations. A scale of 0 to 7 is normal, 8-12 is mild, 13-16 is moderate, and greater than 16 is severe. (*Hirshkowitz M, Gokcebayu N, Iqbal S, et al: Epworth Sleepiness Scale and sleep disordered breathing: Replication and extension. Sleep Res 1995*; 24:249)

FUNCTIONAL ABILITY PROFILE Obstructive Sleep Apnea¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|---|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | Recovered after Treatment(s) other than CPAP, such as surgical intervention, weight loss or dental device ³ . Polysomnogram (PSG) demonstrates an AHI ⁴ (apnea/ hypopnea index) of less than 15. ESS (Epworth Sleepiness Scale) ⁵ score of less than 8. No report of accident or near miss. | N/A |
| 3. | Active impairment | See footnote regarding PAP therapy. This diagnosis should be made only after a sleep study. Neurology or sleep med specialists are often the clinicians to provide follow-up. | |
| | a. Mild | AHI ⁴ < 15 on diagnostic PSG and not sleepy, ESS less than 8. Not on treatment. | Three years |
| | b. Moderate | PAP download demonstrates adherence to treatment. ⁶⁷ AHI ⁴ less than 15 on download. ESS less than 8. No crashes or near misses. | Yearly |
| | c. Severe | History of falling asleep while driving or near miss, or strong suspicion of OSA with concern for unsafe driving; and/or Non-responsive or non-adherent ⁷ to therapy. | No driving |

¹ For further discussion regarding OBSTRUCTIVE SLEEP APNEA, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ For those with dental device, repeat PSG must be done with device in place.

⁴ AHI: apnea/hypopnea index: number of obstructive events per hour of sleep.

⁵ Epworth Sleepiness Scale: validated sleep questionnaire containing eight items that ask for self-reported disclosure of expectation of "dozing" in a variety of situations. Dozing probability ratings are none (0), slight (1), moderate (2), or high (3) in eight hypothetical situations. A scale of 0 to 7 is normal, 8-12 is mild, 13-16 is moderate, and 17 or greater is severe. (Hirshkowitz M, Gokcebayu N, Iqbal S, et al: Epworth Sleepiness Scale and sleep disordered breathing: Replication and extension. Sleep Res 1995; 24:249).

⁶ Treatment with positive airway pressure therapy. PAP devices include but are not limited to, CPAP (continuous positive airway pressure), BiPAP (bi-level positive airway pressure), and ASV (adaptive servo-ventilation).

⁷ Adherence to or compliance with CPAP treatment derived from Medicare guidelines: use of PAP an average of four or more hours per night at least 70% of the time.

SEIZURES & EPILEPSY

Epilepsy is defined as a disorder in which a person has had two or more unprovoked seizures. A seizure is a disruption in the normal electrical activity in the brain resulting in temporary cerebral dysfunction. Epilepsy excludes people with provoked (otherwise known as symptomatic) seizures such as from eclampsia, central nervous system infection, secondary to an adverse drug reaction, acute stroke, metabolic derangement, or alcohol withdrawal. Seizures and epilepsy shall be evaluated using this FAP. The disorders causing provoked seizures as well as many other physiological processes may cause an alteration in consciousness sufficient to preclude the safe operation of a motor vehicle and shall abide by the FAP in the appropriate section, if known, or that entitled, "Unexplained Alteration or Loss of Consciousness".

Guidelines for special circumstances

- 1. First ever unprovoked seizures, will be no driving for 6 months off medication or no driving until a minimum of 3 months seizure free on medication. Then follow the rules for epilepsy.
- 2. If a person has a provoked seizure that is that is very unlikely to recur such as a seizure caused by a medication that is subsequently stopped, then driving may resume when the treating clinician feels it is reasonable. If the likelihood of recurrence of a provoked seizure is not known, e.g., a head injury or brain infection, no driving is allowed until seizure free for at least 6 months. If the reason for the seizure is captured in a different FAP, such as substance use disorder, a profile level for the other FAP should also be submitted and the more restrictive FAP will determine driving restrictions.
- 3. Suspected psychogenic non-epileptic seizures (PNES) should be evaluated using this FAP. However, once a diagnosis of PNES is confirmed, the mental disorders FAP should be used.
- 4. Seizures caused by Electroconvulsive Therapy are excluded from this FAP.
- 5. Seizures occurring in the setting of medically supervised medication changes are not to drive until the treating clinician believes the person is medically stable. Generally, at least one month on a new medication regimen. When medication is tapered, with the intention to stop anti-seizure medications, no driving allowed while tapering and for 3 months after the medication has been stopped. The person will then be considered profile 3a until profile 2 is appropriate.
- **6.** If there is a pattern of at least one year of nocturnal only seizures then driving is permitted and the person shall be considered profile 3a. This diagnosis should be made by a neurologist or other appropriately qualified clinician.
- 7. If there is an established pattern (6 months or longer) of only simple partial seizures, without any alteration of consciousness <u>and</u> do not affect the ability to operate a motor vehicle, then driving is permitted and the person shall be considered profile 3a. Example: Arm parasthesias without weakness or alteration of consciousness after brain tumor resection. This diagnosis should be made by a neurologist or other appropriately qualified clinician.

FUNCTIONAL ABILITY PROFILE Seizures and Epilepsy¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|--|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | History of epilepsy: 2 years seizure free, off medications (e.g., after resolution of a childhood epilepsy syndrome or successful tapering off of seizure medications when a person has been free of seizures for an extended period of time.); or, Seizure provoked by known cause, with very low risk for reoccurrence (e.g., resolution of a subdural hematoma or resection of a meningioma that had caused seizures). Refer to "Guidelines" #2, in the narrative section. | N/A |
| 3. | Active impairment | For special circumstances such as provoked seizures, medication changes, nocturnal or partial seizures only and first unprovoked seizure, refer to "Guidelines" in narrative section. | |
| | a. Mild (controlled) | History of epilepsy: On or off medication. Seizure free 3 months or more. | 2 years |
| | b. Moderate | N/A | N/A |
| | c. Severe (uncontrolled) | Seizure ¹ within previous 3 months, refractory epilepsy or medication non-adherence. | No driving |

¹ For further discussion regarding SEIZURES AND EPILEPSY, please refer to NARRATIVE found at beginning of this section.

 $^{^{2}}$ For further explanation of degree of impairment, please refer to SECTION 3.

SUBSTANCE USE DISORDER / PRESCRIPTION MEDICATIONS

Driving while impaired by drugs or alcohol is an obvious public safety hazard. In Maine, close to a quarter of fatal motor vehicle accidents involve alcohol. 2012 OUI records in Maine (the most recent available at the time of this writing) indicate that although younger age groups drink and drive at higher rates, alcohol-related driving episodes occur in all driver age groups. A Prescription medications, even when taken as prescribed, also have the potential for side effects, dependence, or interactions which may alter the ability to drive, or exacerbate a decline in function related to an underlying medical condition. It is important for clinicians to know that a driver who is impaired due to prescribed medication use can also be charged with OUI.

Clinicians are responsible to assess their patients for potential risks and advise them whether to drive or not based on their medications and medical conditions. Being alert to other medical or social history information that points to drug or alcohol abuse, such as gastrointestinal symptoms, falls or injuries, muscle or neurologic symptoms, infections, and social or work problems is part of that process. With this in mind, the clinician's role is to recognize high-risk individuals from a medical perspective, and assess their physical and mental fitness to drive safely. Compliance with treatment and recovery is also a critical factor in determining whether a patient is stable and fit to return to safe driving. In addition, criteria for defining use versus abuse may be different in a community setting compared to use when in a treatment/recovery program where abstinence is a criteria.

Substance Use Disorder

A diagnosis of Substance Use Disorder^B can involve either substance abuse or dependence, and is diagnosed when a patient continues to use a substance or combination of substances at the expense of significant medical, social or legal consequences. Physical dependence occurs when a person develops a physiologic tolerance to a substance or substances. Physical dependence on a prescribed medication when taken as ordered does not constitute a Substance Use Disorder in and of itself. In addition, be aware that many patients who exhibit "drug-seeking" behaviors are likely exhibiting physical dependence (which may be iatrogenic from legitimate treatment by the medical provider), but this is not necessarily the result of a Substance Use Disorder. Since there is almost no research data or medical literature available regarding the length of time necessary for a person to demonstrate lasting recovery, or any definitive marker indicating the ability to drive safely, the recommendations that follow take into account guidelines from other states and the experience of physicians in Maine who treat these illnesses. *Please note that the descriptions of "mild, moderate or severe" under "Degree of Impairment/Potential for at Risk Driving" in the FAP for Substance Use Disorder, do NOT correspond to the similarly named categories in current DSM.*

In order to evaluate a patient for Substance Use-related fitness to drive safely, the clinician must take into account many factors. These include the substance/substances being used (e.g. alcohol, benzodiazepines, opiates, sedative-hypnotics, marijuana/cannabis, stimulants, heroin, cocaine, methamphetamine, and/or other street drugs), interactions of the abused substance with any prescribed medications, the patient's insight into his/her abuse behaviors, his/her judgment about driving when intoxicated or impaired, the risk for polysubstance use and abuse, and the patient's ability or motivation to comply or participate in rehabilitation and recovery. In the context of alcohol or drug use this can be particularly challenging given the intermittent and/or relapsing nature of Substance Use Disorders

Other medical risks or side effects related to Substance Use Disorder also need to be taken into account. For example, a person may have difficulty driving safely during periods of withdrawal from substances, especially alcohol and benzodiazepines where delirium and seizures are a risk. Opiates or heavy marijuana use can cause physical symptoms that would impair muscle control, concentration and attention. Chronic heavy alcohol abuse also puts a person at increasing risk for cognitive impairment and neuromuscular decline, both of which mean

potentially unsafe vehicle operation. Please note that a driver who suffers a convulsive seizure caused by abuse of or withdrawal from street drugs, prescription medications or alcohol is unfit to drive for a minimum of 6 months per NHTSA Driver Fitness Medical Guidelines.^C Clinicians also need to be aware of the risks to public safety by drivers that combine substances of abuse, and/or mix them with legitimately prescribed medications. Epidemiologic studies show that in 20-25% of fatal crashes, drivers were found to have used a combination of two or more drugs/alcohol.^D Among the most significant substance mixtures are alcohol in combination with either marijuana or a stimulant such as cocaine; marijuana used along with either a stimulant, benzodiazepine or an opiate; and benzodiazepines combined with opiates. Methadone and benzodiazepines are an especially worrisome combination due to a greatly increased risk of sedation.

Currently, the legal environment surrounding marijuana/cannabis has seen several changes, and clinicians will need to be more aware of related safety risks. Over a 10-year study period, cannabis has been detected in the blood in an increasing numbers of drivers involved in fatal accidents (from 4.2% in 1999 to 12.2% in 2010 in one study^E of 23,591 fatal accidents). Another study found that there was a dose-response relationship to urine concentrations of 11-nor-9-carboxy-delta-9-tetrahydrocannabinol (psychoactive compound in cannabis) and motor vehicle accidents.

Opioid Replacement Therapy and Prescription Medications

This FAP may be used when a person is prescribed opioid medications for replacement therapy or pain management, or any other medications that may potentially impair driving. Medications of particular concern for driving include the tricyclic antidepressants, sedative hypnotics, some antipsychotics, and benzodiazepines, especially if patients are prescribed more than two or are concurrently prescribed opioids, using medical marijuana, or are abusing drugs or alcohol. Methadone and benzodiazepines are a particularly troubling combination for risk of sedation. Data on buprenorphine and driving indicate that once established on a dose and in stable recovery, most people can safely drive, although this must be assessed on an individual basis. General Marijuana, although not a prescription medication, is included here due to its' potential to produce side effects that could impair driving.

Normally, BMV does not require reporting when prescribed medications are used as ordered. However, in cases where proper use of prescription medications has resulted in driver impairment, leading to OUI, crashes, reports of unsafe driving, or when a clinician is concerned that a patient may be non-compliant with driving recommendations, use of the Opioid Replacement and Prescription Medications FAP is appropriate.

Statistically, once a patient is on an established dose of methadone, the risk for sedation or at-risk driving is minimal (barring any other polysubstance abuse or polypharmacy). However, on an individual basis, in the period of time immediately following an opiate replacement dose, there may be an increased risk for sedation to the point that the patient should be counseled not to drive. This is particularly pertinent in the case of methadone, since patients may have to drive to receive a dose at a methadone clinic and then drive home, and is especially worrisome if the patient is also on a benzodiazepine.

Resources and Tools for Clinicians:

(These resources are not part of rules. They are provided for informational purposes only.)

- Maine's Prescription Monitoring Program. As of April, 2015, the link to sign up as a PMP "data requester" is http://www.maine.gov/pmp.
- Screening tools for alcohol risk exist, such as CAGE^l and AUDIT.^J
- Laboratory assessment may give objective evidence for substance use or compliance with a recovery program. However, urine drug testing is fraught with pitfalls. Medical providers are strongly encouraged to educate themselves before interpreting drug test data (for example via the paper on rational urine drug testing cited here ^K). Medical providers need to be aware of the parameters for detection of the laboratory they use.^L
- ► Biomarkers for Alcohol^L—see Appendix

FUNCTIONAL ABILITY PROFILE Substance Use Disorder¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|---|--|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | History of substance-use disorder, in sustained recovery for 2 or more years, and must not fit any of the profile level descriptions below. | N/A |
| 3. | Active impairment | Substance use at any point in the past two years that meets current DSM Criteria for a Substance Use Disorder; and | |
| | a. Mild | No motor, judgment or intellectual impairment with NO history of medical detox, drug or alcohol related seizure ³ , adverse driving or legal consequences of substance use for the past 12 months, & no more than 1consequence in last 5 years. | 1 year Until criteria met for fully recovered. |
| | b. Moderate | History of substance abuse significant enough to cause motor, judgment, or intellectual impairment. History may include drug or alcohol related events such as motor vehicle crash, OUI or serious medical consequences. (E.g. medical detoxification or seizure³ from use or withdrawal) Must be abstinent at least 3 months with up to one event in one year or two events in 5 years, EXCEPT in case of convulsive seizure³ related to abuse of or withdrawal from alcohol or drugs. Such cases must be abstinent at least 6 months; or History of two or more events in 1 year, three or more in 5 years, must be abstinent at least 1 year. | 6 months (To resume driving after specified period of abstinence, driver must be medically cleared and pass a ROAD TEST.) |
| | c. Severe | Substance abuse significant enough to cause permanent motor, judgment, or intellectual impairment. For dementia related to substance use, see footnote ⁴ ; or | No driving |

| History of drug or alcohol related event(s) including motor vehicle crash, OUI, or | |
|--|--|
| medical consequences (including medical detoxification or seizure ³ from use or | |
| withdrawal). Driver has not been abstinent | |
| long enough to meet criteria for Moderate Profile Level 3.b. | |

¹ For further discussion regarding SUBSTANCE USE DISORDER, please refer to NARRATIVE found at beginning of this section.

 $^{^{2}}$ For further explanation of degree of impairment, please refer to SECTION 3.

³ For other types of seizures, refer to Seizure /Epilepsy FAP.

⁴ If patient has dementia related to substance use, use Dementia FAP.

$\label{eq:FUNCTIONAL} \textbf{ABILITY PROFILE} \\ \textbf{Opioid Replacement Therapy and Prescription Medications}^1$

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|---------------------------------------|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | No longer on opiate replacement therapy, with no relapses and no evidence of prescription abuse for at least 2 years; or No longer prescribed the medication that caused impairment or no on-going side effects that could impair driving x 1 year. ³ | N/A |
| 3. | Active impairment ³ | On prescription medication of concern ⁴ ; or On opiate replacement therapy, (e.g., suboxone or methadone or similar prescription); and | |
| | a. Mild | Stable and functioning well with no other Substance Use Disorder issues ³ and no sedation or unsafe side effects. No impairment of motor, judgment or intellectual functions from prescription medications; or Off prescription medications but not long enough to meet criteria for "Condition fully recovered". | 1 year |
| | b. Moderate | Experiences sedating side effects from medication, but with judgment to avoid driving while having these side effects, and no other Substance Use Disorder issues ³ . NOTE: If there is a history of poor judgment about driving under these circumstances, leading to OUI, crashes, or reports of unsafe driving, must demonstrate they have the judgment to avoid driving while having these side effects or be off medication for at least 3 months, AND pass ROAD TEST to resume driving. | 1 year ROAD TEST |

| c. Severe | i. Experiences sedation or side effects from medication, with poor judgment about driving under these circumstances, leading to OUI, crashes or reports of unsafe driving; or | No driving |
|-----------|---|--|
| | ii. Has problems with substances of abuse that increase the risk for dangerous driving in combination with prescription medications ³ . | Comply with appropriate profile level on Substance Use Disorder FAP |

¹ For further discussion regarding OPIOID REPLACEMENT THERAPY AND PRESCRIPTION MEDICATIONS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Comply with "Substance Use Disorders" FAP when patient misuses prescription medications or non-prescribed drugs.

⁴ Normally, prescribed medications used as ordered do not need to be reported to BMV. Clinicians are responsible to assess their patients for potential risk, and advise them whether to drive or not based on their medications and medical conditions. However, in cases where proper use of prescription medications has resulted in driver impairment, such as OUI, crashes, reports of unsafe driving, or when a clinician is concerned that a patient may be non-compliant with driving recommendations, use of this FAP is appropriate.

UNEXPLAINED ALTERATION / LOSS OF CONSCIOUSNESS

The Functional Ability Profile (FAP) for alteration/loss of consciousness shall pertain to drivers who have an **unexplained** alteration in their thought process that would preclude safe operation of a motor vehicle. This is a relatively common occurrence. Through medical investigation the cause may be identified or **explained** and the person should then be categorized under the appropriate FAP. Medical work up should evaluate possible cardiac and/or neurologic causes. An explained alteration of consciousness (AOC) with low to no likelihood of recurrence is not generally subject to the FAP rules. Examples of this include concussion with recovery, adverse drug reaction, or medical illness with recovery such as pneumonia, sepsis, vasovagal episode, cough syncope, or anaphylactic reactions.

FUNCTIONAL ABILITY PROFILE **Unexplained Alteration of Consciousness (AOC)**¹

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|---|--|---|
| 1. | No diagnosed condition | No known disorder | N/A |
| 2. | Condition fully recovered | History of unexplained AOC but none in 4 years | N/A |
| 3. | Active impairment | | |
| | a. Mild | History of AOC greater than 1 year ago. | 2 years |
| | b. Moderate | History of any unexplained AOC within 6 months – 1 year ago. | 1 year |
| | c. Severe | Any unexplained AOC within the past 6 months | No driving |

¹ For further discussion regarding UNEXPLAINED ALTERATION OF CONSCIOUSNESS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

VISUAL DISORDERS

The main elements of vision necessary for safe driving are visual acuity, peripheral vision and freedom from double vision (diplopia). These three items are elaborated in the following pages as Functional Ability Profile charts on visual parameters. Other, not so easily measured visual factors are discussed below:

Defects in color vision, important in distinguishing traffic signals, are usually compensated for by learning traffic light positions and are not in themselves reasons to deny driving and are usually tested adequately by the road evaluation.

Night vision, contrast sensitivity, and glare recovery may be impaired in the presence of corneal scars, cataracts, and retinal aging or disease. Evidence is inconclusive that testing these parameters of visual function can determine which drivers are safe.

Sometimes an ocular defect or disease does not cause the applicant to fail the eye examination. If the examining clinician suspects that the condition may affect driving, it is reasonable to ask that a road test be given by a BMV driver examiner to look at specific aspects of driving. For example, a patient with retinitis pigmentosa who wants to drive at night may pass all the office eye exams but the disease's effect on the patient's night driving remains uncertain. The clinician might recommend a night road test evaluation.

Drivers with hemianopsia must meet standard vision requirements described in this Functional Ability Profile. They must also pass the Esterman field test as described in the Peripheral Vision Profile Table. Individuals with a history of traumatic brain injury or stroke should be evaluated using both the Visual Disorders and the Cerebrovascular Accident (CVA/Stroke) or Traumatic Brain Injury(TBI) FAP's.

Individuals with deficits in useful field of view and visual processing speed, as well as other visuo-spatial deficits, should be assessed for other cognitive impairments using the Dementia FAP.

FUNCTIONAL ABILITY PROFILE Visual Disorders¹: Visual Acuity

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|---|--|
| 1. | No diagnosed condition | Sees 20/40 or better in best eye without correction. | N/A |
| 2. | Condition fully recovered | Visual acuity correctable to 20/40 or better in best eye. Restrict to corrective lenses. | N/A |
| 3. | Active impairment | Those needing corrective lenses to meet visual acuity requirements will be restricted to wearing them when they drive. See note ³ below re: telescopic or bioptic lenses. | |
| | a. Mild | Vision correctable to 20/40 in best eye but could deteriorate due to glaucoma, diabetic retinopathy, macular degeneration, or other potentially progressive diseases. | 2 years or interval recommended by vision examiner |
| | b. Moderate | Vision correctable to at least 20/100 in best eye; restrict to daytime driving (See note ⁴ below). | 1 year or interval recommended by vision examiner |
| | c. Severe | Best corrected vision currently less than 20/100 in each eye. | No driving |

¹ For further discussion regarding VISUAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

- A recommendation from an optometrist or ophthalmologist advising that the individual's vision is adequate to permit the safe operation of a motor vehicle; and
- A BMV night time driver's examination that demonstrates the driver's ability to operate a motor vehicle safely; and
- A review of the individual's driving record shows the ability to operate a motor vehicle safely and in accordance with all applicable laws, rules, and regulations governing the operation of motor vehicles.

² For further explanation of degree of impairment, refer to SECTION 3.

³ <u>Telescopic or bioptic lenses (BTL's) may not be used</u> for purposes of meeting any of the visual acuity requirements. Drivers who meet the Visual Acuity requirements without BTL's may use them for taking the road test and for driving.

⁴The daytime only restriction may be changed based on:

FUNCTIONAL ABILITY PROFILE Visual Disorders¹: Peripheral Vision

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|----------------|---|--|--|
| 1. | No diagnosed condition | Binocular total visual field of at least 120° & a minimum of 50° to left and 50° to right of fixation. | N/A |
| 2. | Condition fully recovered | Past history of visual field defect but current total is 120° or more with at least 50° to left and 50° to right of fixation. | |
| 3. | Active impairment | See notes ^{3 4 5 & 6} re: testing. For hemianopsia, see note ⁶ below. | |
| | a. Mild | Binocular or monocular visual field total 120° or better with minimum of 50° to left and 50° to right of fixation, with potential for deterioration. | 4 years |
| | b. Moderate | i. Binocular or monocular visual field total less than 120° but at least 110° and at least 50° to left and 50° to right of fixation. Must pass Esterman. See note ⁵ . 1 year or as rec mended by visi examiner. Road depends on Esterman. | |
| | | ii. Binocular or monocular visual field total at least 110°, but less than 50° to left or 50° right of fixation. Must pass Esterman ⁵ , and road test required. | 1 year or as recommended by vision examiner. ROAD TEST. |
| | c. Severe | Binocular or monocular visual field total less than 110°. | No driving |

¹ For further discussion regarding VISUAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.

³ Testing of peripheral vision must be done <u>without the use of Fresnel paste on prism lenses</u>. Prisms incorporated into correction are allowed.

⁴Peripheral vision should be measured with a 10 mm white test object at 330 mm, preferably without corrective lenses, in the horizontal meridian. Contacts or permanent prism lenses may be used. Confrontational visual fields or alternate field tests other than the 10 mm white at 330 mm are acceptable. The minimum peripheral visual field must be 120°, with at least 50° to left and 50° to right of fixation. For exception, see note⁵ below.

⁵The binocular Esterman test may be used for drivers with at least 110° but less than 120°. If test passed without missing any points, no road test will be required. Missing one to three points on the Esterman test requires passing a road test. Missing four points on the Esterman test will disqualify for driving.

⁶If hemianopsia is present driver will also need evaluation using the TBI/Stroke profile and must pass the Esterman field test as stated above.

FUNCTIONAL ABILITY PROFILE Visual Disorders¹: Double Vision

| Profile Levels | Degree of Impairment ² / Potential for At Risk Driving | Condition Definition / Example | Interval for Review and Other Actions |
|-------------------|---|--|---|
| 1. | No diagnosed condition | Never sees double. | N/A |
| 2. | Condition fully recovered | History of diplopia that has recovered or eyes crossed but no diplopia without patch. | N/A |
| 3. | Active impairment | If diplopia is due to a head injury or stroke, also require an evaluation using that profile. | |
| | a. Mild | Intermittent diplopia or constant double vision correctable by patching one eye. | 4 years |
| | b. Moderate | Monocular diplopia in the <u>only eye</u> meeting visual acuity requirements, with potential for correction. | No driving |
| | c. Severe | Monocular diplopia in the only eye meeting visual acuity requirements, without potential for correction. | No driving |

¹ For further discussion regarding VISUAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

 $^{^{2}}$ For further explanation of degree of impairment, please refer to SECTION 3.

APPENDIX

Potential Biomarkers of Alcohol Use¹

Note: Medical providers are strongly encouraged to read the information in this reference to get more details about the appropriate use of these lab tests. The tests are listed here as a basic introduction. Medical providers need to understand the subtleties of these lab tests and the potential for false positives and false negatives when using these tests clinically.

| Biomarker | Screens for Heavy Drinking | Identifies Relapse to Heavy Drinking | Monitors Abstinence | Time to return to normal Range with abstinence |
|------------------------------|-------------------------------|---|------------------------|--|
| CDT | yes | yes | | 2-3 weeks |
| Ethyl Glucuronide (urine) | | yes | yes | 1-3 days |
| EtS | | yes | yes | 1-3 days |
| GGT | yes | | | 2-4 weeks |
| MCV | yes | | | several months |
| Phosphatidyl ethanol | | yes | | 2-4 weeks |
| AST, ALT | yes | | | 2-4 weeks |

¹The role of Biomarkers in the Treatment of Alcohol use Disorder, Revision Spring 2012. Volume 11, Issue 2. www.samhsa.gov

This reference is available free, online, and is included for information only. It is not a part of rules.

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