Federal Motor Carrier Safety Administration (FMCSA)

NATIONAL REGISTRY OF CERTIFIED MEDICAL EXAMINERS PROGRAM:

Medical Examiner Handbook

2020 Edition

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Introduction

This handbook provides information about FMSCA's regulatory requirements and guidance to Medical Examiners (MEs) who perform physical qualification examinations of interstate commercial motor vehicle (CMV) drivers. Other healthcare professionals, such as primary care providers, treating clinicians, and specialists, may provide additional medical information or consultation, but it is the ME who ultimately decides if the driver meets FMCSA's physical qualification standards.

The FMCSA's safety regulations concerning the physical qualifications of drivers are based upon the Agency's statutory authority found at 49 U.S.C. 31136. These regulations are legally binding on the public subject to their provisions, and function to ensure uniform application of the law and provide details of how the laws are to be followed.

FMCSA provides medical guidance to MEs in the form of advisory criteria, bulletins, interpretations of the regulations, and the contents of this handbook. The purpose of this handbook is to assist MEs in applying the regulations governing the physical qualifications of interstate CMV drivers. Often, this guidance is based on input from medical expert panels or are derived from current clinical best practices.

Unlike regulations, the guidance in this handbook does not have the force and effect of law and is not meant to bind the public in any way. Rather, such guidance is strictly advisory, not mandatory, and is intended only to provide clarity to the public regarding existing requirements under the regulations or FMCSA policies. The public (including MEs) is free to choose whether or not to utilize such guidance or recommendations as a basis for decision-making. In addition, the guidance will not be relied on my FMCSA as a basis for enforcement action or other administrative penalty, and nonconformity with the guidance will not affect rights and obligations under existing statues and regulations.

Consistent with current clinical best practices for any medical condition in applying the physical qualification standards, the ME may consult with the individual's treating provider for additional information concerning the driver's medical history and current condition(s), request appropriate referrals to other healthcare providers, or request medical records, all with appropriate consent.

Part I- The Federal Motor Carrier Safety Administration (FMCSA)

About the FMCSA

The Motor Carrier Safety Improvement Act of 1999 transferred the Office of Motor Carriers from the Federal Highway Administration (FHWA) and established the FMCSA, effective on January 1, 2000. FMCSA is one of nine administrations within the U.S. Department of Transportation (DOT). To learn more, visit the DOT website at **http://www.transportation.gov.**

FMCSA is the lead Federal government agency responsible for regulating and providing safety oversight of CMV drivers. FMCSA's mission is to reduce crashes, injuries, and fatalities involving large trucks and buses. FMCSA partners with industry, safety advocates, and state and local governments to keep our nation's roadways safe and improve CMV safety through regulation, education, enforcement, research, and technology.

The Medical Examiner

The FMCSRs identify a person who is eligible to be an ME by two criteria: professional licensure and scope of practice that includes performing physical examinations.

An ME is a person who is licensed, certified, and/or registered, in accordance with applicable state laws and regulations to perform physical examinations. The ME is deemed qualified by being certified by FMCSA and listed on FMCSA's National Registry. The term includes advanced practice nurses, doctors of chiropractic,

doctors of medicine, doctors of osteopathy, physician assistants, or other medical professionals authorized by applicable State laws and regulations to perform physical examinations. An ME must be knowledgeable of the specific physical and mental demands associated with operating a CMV and the requirements and related guidance for the physical qualification standards in the FMCSRs. An ME must also be proficient in the use of and use the medical protocols necessary to adequately perform the required medical examination of a CMV operator (see §391.43 (c)). Only ME's who are certified and listed on FMCSA's National Registry are allowed to conduct physical qualification examinations of interstate CMV drivers and issue Medical Examiner's Certificates, Form MCSA-5876, to qualified drivers.

Medical Certification

Medical certification in accordance with FMCSA's physical qualification standards is generally required (with a few exceptions) when the driver is operating a CMV in interstate commerce that:

- Has a gross vehicle weight or weight rating, or a gross combination vehicle weight or weight rating of 10,001 lbs. or more;
- Is designed or used to transport more than 8 passengers (including the driver) for compensation;
- Is designed or used to transport more than 15 passengers (including the driver) not for compensation; or
- Transports hazardous materials in quantities that require placarding of the CMV under the hazardous materials regulations.

The FMCSRs under 49 CFR 391.45 state that the following persons must be medically examined and certified in accordance with 49 CFR 391.43 as physically qualified to operate a CMV:

- Any person who has not been medically examined and certified as physically qualified to operate a CMV.
    - Any driver who has not been medically examined and certified as qualified to operate a CMV during the preceding 24 months, unless any one of the following circumstances applies:
- Any driver authorized to operate a CMV only within an exempt intra-city zone pursuant to §391.62, if such driver has not been medically examined and certified as qualified to drive in such zone during the preceding 12 months;
- Any driver authorized to operate a CMV only by operation of the exemption in §391.64, if such driver has not been medically examined and certified as qualified to drive during the preceding 12 months;
- Any driver who has diabetes mellitus treated with insulin for control and who has obtained a Medical Examiner's Certificate, Form MCSA-5876, under the standards in §391.46, if such driver's most recent medical examination and certification as qualified to drive did not occur during the preceding 12 months:
- Any driver whose ability to perform his or her normal duties has been impaired by a physical or mental injury or disease; or
- Beginning June 22, 2021, any person found by an ME not to be physically qualified to operate a CMV under the provisions of paragraph (g)(3) of §391.43.

Driver Examination Forms

The following five forms are used as part of the physical qualification examination of CMV drivers.

Medical Examination Report Form, MCSA-5875

MEs are required to record the results of all CMV driver physical qualification examinations conducted and to provide all of the information required on the Medical Examination Report Form, MCSA-5875. MEs are required to retain the original Medical Examination Report Form, MCSA-5875, for each driver examined, for at least 3 years from the date of the examination.

MEs may provide a copy to the driver if requested. Although the FMCSRs do not require the ME to provide a copy of the Medical Examination Report Form, MCSA-5875, to the employer, the regulations do not prohibit employers from obtaining copies of the Medical Examination Report Form, MCSA-5875, with consent of the driver. MEs must make all records available to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after request.

Medical Examiner's Certificate, Form MCSA-5876

The issuance of a Medical Examiner's Certificate, Form MCSA-5876, is addressed in 49 CFR 391.43(g). If the ME finds that the driver is physically qualified to drive a CMV in accordance with §391.41(b), the ME must complete a Medical Examiner's Certificate, Form MCSA-5876, to provide all of the information required, and furnish the original to the driver. The ME is required to retain a copy or electronic version of the Medical Examiner's Certificate, Form MCSA-5876, on file at the office of the ME for at least 3 years from the date of the examination. MEs may provide a copy of the Medical Examiner's Certificate, Form MCSA-5876, to a prospective or current employer upon request. MEs must make all records available to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after a request.

The Medical Examiner's Certificate, Form MCSA-5876, expires at midnight on the day, month, and year written on the form. There is no grace period for the expiration date. The driver must be examined and certified to continue to legally drive a CMV in interstate commerce.

CMV Driver Medical Examination Results Form, MCSA-5850 (electronic only)

MEs are also required to report the results of all examinations conducted on the CMV Driver Medical Examination Results Form, MCSA-5850, through their individual National Registry account by midnight (local time) of the next calendar day following the examination.

T0 view the regulations regarding the use of the three forms (discussed above) (49 CFR 391.43 (f), (g), (h) and (i)), visit https://www.ecfr.gov/cgi-bin/text,idx?SID=bd896c140e314bf7959b0c393c7d67&mc=true&node=se 49.5.391 143&rgn=div8.

Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870

As a part of the medical certification process for individuals diagnosed with insulin-treated diabetes mellitus (ITDM) in §391.46, the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, must be completed by the Treating Clinician of the individual diagnosed with ITDM attesting that the individual has a stable insulin regimen and properly controlled diabetes. Individuals diagnosed with ITDM and seeking medical certification are required to provide the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, to the certified ME within 45 days of the completion of the form by the Treating Clinician.

Driver Medication Form, MCSA-5895 (Optional)

The 391.41 CMV Driver Medication Form, MCSA-5895, requests additional information regarding medications prescribed by the treating healthcare provider as an optional, voluntary tool for MEs to use in determining if a driver is medically qualified under 49 CFR 391.41 (b)(12).

With the exception of the electronic CMV Driver Medical Examination Results Form, MCSA-5850, the driver examination forms discussed above can be found on the FMCSA website at **https://www.fmcsa.dot.gov/medical/driver-medical-requirements/medical-applications-and-forms**.

Privacy and the Physical Qualification Examination

MEs, like all medical providers, are subject to the applicable Federal and State laws regarding the protection of the privacy of medical information provided during a physical examination. The principal Federal law in this area is the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which mandated the adoption of Federal privacy protections for individually identifiable health information. The U.S. Department of Health & Human Services (HHS), Office of Civil Rights, has issued detailed regulations and interpretations on all aspects of HIPAA, including Standards for Privacy of Individually Identifiable Health Information (the Privacy Rule). A summary of the Privacy Rule is available from HHS at https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html. The Privacy Rule and the HHS summary cover many different circumstances, and should be consulted about any specific issues that may arise in relation to the protection of the medical information provided during a physical examination.

In general, the ME is not allowed to provide protected medical information to another person without the consent of the individual being examined. The Privacy Rule summary outlines several situations when such protected health information may be disclosed without the consent of the individual being examined. In addition, FMCSA has specific regulations that require MEs to disclose protected health information, such as the requirement that the ME must provide a copy of the Medical Examiner's Certificate, Form MCSA-5876, to a prospective or current employing motor carrier who requests it (49 CFR 391.43(g)(2)(i)). Another regulation requires the ME to make all records and information maintained for individuals examined available to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after the request is made (49 CFR 391.43(i)). MEs generally should not disclose the Medical Examination Report Form, MCSA-5875, to an entity other than an authorized representative of FMCSA or an authorized Federal, State, or local enforcement agency representative, such as employing motor carriers, without the consent of the individual examined.

An example of a circumstance when the Privacy Rule would allow protected health information to be disclosed without the consent of the individual examined would be if a ME determines that disclosure of an individual's protected health information is necessary to prevent or lessen a serious and imminent threat to the health or safety of a person and otherwise can satisfy the provisions of the HIPAA Privacy Rules (45 CFR 164.512(j)). FMCSA's statutory authority includes provisions for investigation of nonfrivolous written complaints alleging a "substantial violation" of the FMCSRs (49 U.S.C. 31143(a)). The procedures and standards for submitting and handling such complaints include a definition of a "substantial violation" as "one which could reasonably lead to, or has resulted in, serious injury or death" (49 CFR 386.12(a)). If a ME needs to disclose an individual's protected health information in a complaint to FMCSA (or a State partner applying compatible regulations) alleging a substantial violation of the safety regulations (including a possible substantial violation of the physical qualification standards), such disclosure may be done without the need to obtain the individual's consent.

Regulations Summary - Code of Federal Regulations

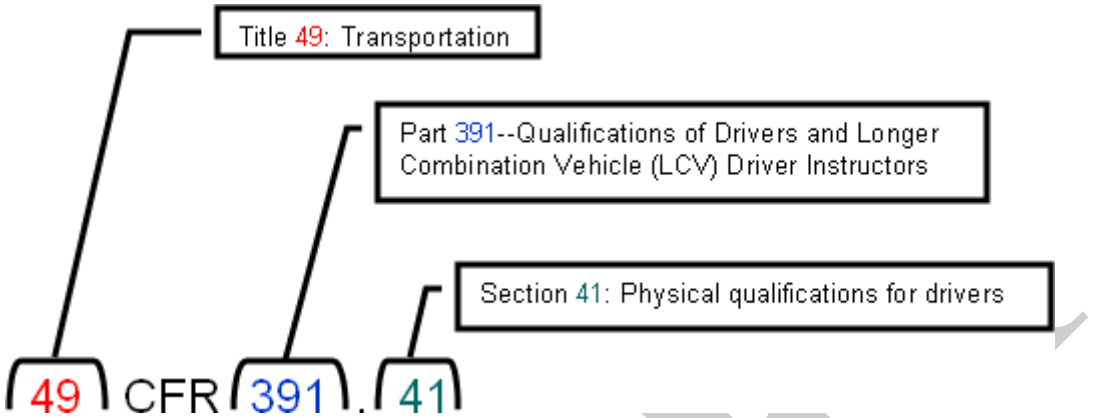
The Code of Federal Regulations (CFR) is the codification of the rules published in the Federal Register by the executive departments and agencies of the Federal government. It is divided into 50 titles that represent broad areas subject to Federal regulation. Title 49 pertains to Transportation. Each title is divided into chapters, which usually bear the name of the issuing agency. Chapter III of Title 49 is "Federal Motor Carrier Safety Administration, Department of Transportation."

Each chapter is further subdivided into parts that cover specific regulatory areas. Part 391 is Qualifications of Drivers and Longer Combination Vehicle (LCV) Driver Instructors. Large parts may be subdivided into subparts. Subpart E of Part 391 is Physical Qualifications and Examinations.

Parts are organized in sections. Citations for the CFRs include the title, part, and section numbers (e.g. 49 CFR 391.41). When the title is understood, the citation may just include the part and section (e.g. §391.41). Some regulations have temporary provisions that are designated with a "T" at the end of the section number (e.g., 49 CFR 390.5T). The temporary provisions are currently in effect. If a temporary provision is available, it should be consulted for the current law.

Regulations are legally binding and must be followed.

The FMCSRs, found at 49 CFR parts 350-399, are legal requirements for interstate commerical vehicles, drivers, and motor carriers. It is common to see references to FMCSA's physical qualification "standards." Such standards are contained in the regulations set forth at 49 CFR 391.41 (b) and are therefore law.



Regulations Summary Table

Regulation	Description
49 CFR part 40	Includes regulations for medical review officers and substance abuse professionals, including drug and alcohol testing procedures
49 CFR part 382	Includes regulations regarding controlled substances and alcohol use and testing
49 CFR part 383	Includes regulations for commercial driver's license standards, requirements, and penalties
49 CFR part 390, 390.5T, and Subpart D	Includes general information and definitions and the regulations governing the National Registry of Certified Medical Examiners
49 CFR 391.43	Describes the responsibilities of the ME, the exceptions for drivers operating in an exempt intracity zone or pursuant to the grandfather provision, the required Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876, and reporting and record keeping requirements
49 CFR 391.46	Describes the physical qualification standards for an individual with diabetes mellitus treated with insulin for control and the requirement for use of the Insulin-Treated Diabetes Mellitus Assessment, Form MCSA-5870.
49 CFR 391.47	Describes the process for conflict resolution when there is a disagreement between an ME for the driver and an ME for the motor carrier concerning driver qualifications
49 CFR 391.49	Describes the Skill Performance Evaluation (SPE) Certification Program, which is an alternative physical qualification standard for the interstate CMV driver with a loss of limb(s) who cannot physically qualify to drive under §391.41(b)(1) or (b)(2). The driver must be otherwise qualified to drive a CMV and meet the provisions of the alternate standard.
49 CFR 391.62	Describes limited exemptions for intra-city zone drivers
49 CFR 391.64	Describes grandfathering for certain drivers who participated in a vision waiver study programs. These drivers may be certified as long as they continue to meet the provisions outlined in 49 CFR 391.64 and continue to meet all other physical qualification standards. However, drivers who participated in the diabetes waiver study program will only be grandfathered until November 19, 2019. After that time, these drivers will be required to comply with the regulations outlined in 49 CFR 391.46.

To view the regulations listed in the Regulations Summary Table, visit: http://www.fmcsa.dot.gov/rules-regulations

Medical Exemptions

An exemption provides temporary regulatory relief from one or more of the FMCSRs for CMV drivers. Relief from a regulation may be granted for up to 5 years and may be renewed. However, it is FMCSA policy to grant medical exemptions involving the physical qualification standards in the FMCSRs for a maximum 2-year period to align with the maximum duration of a driver's medical certification. Currently, FMCSA has one established medical exemption program, the Federal Vision Exemption Program. In addition, FMCSA started issuing hearing and seizure/epilepsy exemptions on a regular basis in 2013, and has authority to consider applications for exemption from any physical qualification standard.

The ME cannot issue an exemption. The role of the ME is to determine if the driver meets the other physical qualification standards. As part of the application procedure, the driver must obtain a physical qualification examination, and the ME determines whether the driver meets the other physical qualification standards if accompanied by a vision, hearing, seizure/epilepsy, or other exemption. The ME is required to indicate on the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876, when a medical exemption is needed.

Please note that medical exemptions are discussed in detail in the Medical Variances section at the end of the handbook.

IMPORTANT REGULATORY DEFINITIONS

MEs should be familiar with frequently used terms in the context of the FMCSRs and the ME's role. Some of the most commonly used terms are provided below.

Definitions from 49 CFR 390.5

"Commercial motor vehicle" means any self-propelled or towed motor vehicles used on a highway in interstate commerce to transport passengers or property when the vehicle-

(1) Has a gross vehicle weight rating or gross combination weight rating, or gross vehicle weight or gross combination weight, of 4,536 kg (10,001 pounds) or more, whichever is greater

(2) Is designed or used to transport more than 8 passengers (including the driver) for compensation; or

(3) Is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation; or

(4) Is used in transporting material found by the Secretary of Transportation to be hazardous under 49 U.S.C. 5103 and transported in a quantity requiring placarding under regulations prescribed by the Secretary under CFR, subtitle B, chapter I, subchapter C.

"Driver" or "Operator" means any person who operates a commercial motor vehicle.

"Interstate Commerce"means trade, traffic, or transportation in the United States

- Between place in a State and a place outside of such State (including a place outside of the United States);
- Between two places in a State through another State or a place outside of the United States; or
- Between two places in a State as part of trade, traffic, or transportation originating or terminating

outside the State or the United States.

“Intrastate Commerce” means any trade, traffic, or transportation in any State which is not described in the term "interstate commerce."

“Medical Examiner” means an individual certified by FMCSA and listed on the National Registry of Certified Medical Examiners in accordance with subpart D of 49 CFR part 390.

“Employee” means any individual, other than an employer, who is employed by an employer and who in the course of his or her employment directly affects commercial motor vehicle safety. Such term includes a driver of a commercial vehicle (including an independent contractor while in the course of operating a commercial motor vehicle), a mechanic, and a freight handler. Such term does not include an employee of the United States, any State, any political subdivision of a State, or any agency established under a compact between States and approved by the Congress of the United States who is acting within the course of such employment.

“Employer” means any person engaged in a business affecting interstate commerce who owns or leases a commercial motor vehicle in connection with that business, or assigns employees to operate it, but such terms do not include the United States, any State, any political subdivision of a State, or an agency established under a compact between States approved by the Congress of the United States.

“Motor Carrier” means a for-hire motor carrier or a private motor carrier. The term includes a motor carrier's agents, officers, and representatives as well as employees responsible for the hiring, supervising, training, assigning, or dispatching of drivers and employees concerned with the installation, inspection, and maintenance of motor vehicle equipment and/or accessories. For purposes of subchapter B, this definition includes the terms "employer" and "exempt motor carrier."

For additional definitions from 49 CFR 390.5, visit http://www.fmcsa.dot.gov/regulations/title 49/section/390.5.

Definitions from 49 CFR 40.3

The Omnibus Transportation Employee Testing Act of 1991 requires drug and alcohol testing of safety sensitive transportation employees in aviation, trucking, railroads, mass transit, pipelines, and other transportation industries. The DOT publishes rules on who must conduct drug and alcohol tests, how to conduct those tests, and what procedures to use when testing.

“Medical Review Officer” (MRO means A person who is a licensed physician and who is responsible for receiving and reviewing laboratory results generated by an employer’s drug testing program and evaluating medical explanations for certain drug test results.

“Substance Abuse Professional” (SAP) means A person who evaluates employees who have violated DOT drug and alcohol regulations and makes recommendations concerning education, treatment, follow-up testing, and aftercare.

For additional definitions from 49 CFR part 40, visit http://www.transportation.gov/odapc/part40

Part II- The Job of Commercial Driving

FMCSA Regulations

The FMCSA regulates drivers, the trucks and buses the drivers operate, and motor carriers (both private and for-hire) operating in interstate commerce. It also regulates the shipment and transportation of hazardous materials on the highways in interstate and intrastate commerce. A safety risk in any one or more of these commercial operations components can endanger the safety and health of the public and the driver.

Drivers

Interstate CMV drivers must comply with FMCSA's physical qualification standards. In addition to meeting FMCSA's physical qualifications standards, other regulations affecting the CMV driver include drug and/or alcohol testing, and hours of service.

Truck and Bus Companies (Motor carriers)

Motor carriers, both for-hire and private truck and bus companies must comply with FMCSA regulations governing their drivers.

Motor carriers are responsible for ensuring that the driver meets the general qualification requirements of 49 CFR 391.11. These requirements include that an individual is physically qualified to drive a CMV, as evidenced by having a current Medical Examiner's Certificate, Form MCSA-5876.

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State Regulation

States regulate intrastate commerce and commercial drivers who are NOT subject to direct Federal regulations with respect to physical qualifications. Nearly all States have adopted for application to intrastate drivers the Federal physical qualification standards applicable to interstate CMV drivers. However there are some States that have additional, different, or more stringent requirements that must be followed by intrastate CMV drivers. If a driver is operating exclusively in intrastate commerce, MEs are responsible for knowing the physical qualification regulations for the State or States in which they practice and in which such drivers are operating. FMCSA cannot issue medical variances to intrastate drivers. However, some States do issue waivers to their intrastate drivers.

Driver Medical Certification

The FMCSRs in Part 391 of Title 49 of the CFR (Qualifications of drivers and longer combination vehicle (LCV) driver instructors) establishes the minimum qualifications for persons who drive a CMV. There are seven subparts. An ME must be knowledgeable regarding the physical qualification requirements of the driver specified in Subpart E — Physical qualifications and examinations, which includes 49 CFR 391.41 through 391.49, and, in a few situations, 49 CFR 391.62 and 391.64.

The ME is responsible for ensuring that only the driver who meets the Federal physical qualification standards is issued a Medical Examiner's Certificate, Form MCSA-5876. When an ME issues a Medical Examiner's Certificate it is a certification that the driver is medically qualified. Generally, drivers may be medically certified for a maximum of 2 years. Drivers who operate a CMV only within an exempt intra city zone pursuant to 49 CFR 391.62, are grandfathered pursuant to 49 CFR 391.64, have diabetes mellitus with insulin for control and obtained certification pursuant to 49 CFR 391.46, or have received medical exemptions may be certified for a maximum of 1 year. Drivers may be certified less than the maximum periods if deemed necessary by the ME.

Purpose of the Physical Qualification Examination

The general purpose of the history and medical examination is to detect the presence of physical, mental, or organic conditions of such character and extent as to affect the ability of the driver to operate a CMV safely. This examination is considered by the FMCSA to be a physical qualification examination.

The MEs fundamental task during the physical qualification examination is to establish whether a driver has a disease or disorder that interferes with the ability to operate a CMV safely, presents a risk for sudden death, increases risk for sudden incapacitation, or otherwise endangers the safety and health of the driver, along with the health and safety of the public sharing the road with the driver.

Consistent with current clinical best practices for any medical condition in applying the physical qualification standards, the ME may consult with the individual's treating provider for additional information concerning the driver's medical history and current condition(s), request appropriate referrals to other healthcare providers, or request medical records, all with appropriate consent.

Consider Safety Implications

As MEs conduct the medical examination to determine if the driver meets the physical qualification standards to perform the job of commercial driving, things that the ME could consider include but may not be limited to:

- **Physical condition**
  - Symptoms: Does a benign underlying condition with an excellent prognosis have symptoms that interfere with the ability to drive safely?
  - Incapacitation: Is the onset of potential incapacitating symptoms so rapid that symptoms interfere with safe driving, or can the driver stop the vehicle safely before becoming incapacitated? Is the onset of potential incapacitating symptoms so gradual that the driver is unaware of diminished capabilities, thus adversely impacting safe driving?

- **Mental condition**
  - Cognitive: Can the driver process environmental cues rapidly and make appropriate responses, independently solve problems, and function in a dynamic environment?
  - Behavior: Are the driver interactions appropriate, responsible, nonviolent, and non-aggressive?

- **Medications**
  - Medication interactions: Is the driver taking a combination of medications that may contribute to increased side effects?
  - Side effects: Can side effects interfere with safe driving (e.g., drowsiness, dizziness, orthostatic hypotension, blurred vision, and changes in mental status)?

Medical Examiner Responsibilities

MEs are examining to determine if the driver meets the physical qualification standards, not diagnosing or treating medical conditions. As for all healthcare providers, MEs should educate and suggest the driver seek further evaluation if they suspect an undiagnosed or worsening medical problem. MEs should keep the following in mind:

- Comply with FMCSA regulations.
- Consider FMCSA recommendations.
- Seek further testing/evaluations for those medical conditions of which the ME is unsure.
- Verbally suggest the driver visit his/her personal healthcare provider for diagnosis and treatment of potential medical conditions discovered during the examination.
- Promote public safety by verbally educating the driver about:
  - Side effects caused by the use of prescription and/or over-the-counter medications.
  - Medication warning labels and how to read them.
  - The importance of seeking appropriate intervention for conditions that currently do not preclude certification, but if neglected could result in serious illness and could possibly preclude certification in the future.

Part III Physical Qualification Standards and Guidance

As an ME, you are responsible for determining if the CMV driver meets the physical qualification standards outlined in the FMCSRs and is medically qualified to operate a CMV in interstate commerce. It is important to distinguish between regulations and guidance when doing so.

Regulations

The FMCSRs, including the physical qualification standards in 49 CFR 391.41, are regulations promulgated by FMCSA under its statutory authority. These regulations are legally binding on the public subject to their provisions, and FMCSA has the authority to compel compliance with the FMCSRs. These regulations function to ensure uniform application of the law and provide details of how the law is to be followed.

Guidance

FMCSA's guidance, such as Appendix A to Part 391-Medical Advisory Criteria (at the end of 49 CFR part 391), bulletins, interpretations of the regulations, guidelines, and this handbook, is intended to provide recommendations and information to assist MEs in applying the FMCSRs. Unlike regulations, the guidance in this handbook does not have the force and effect of law and is not meant to bind the public in any way. Rather, such guidance is strictly advisory, not mandatory, and is intended only to provide clarity to the public regarding existing requirements under the law or FMCSA policies. The public (including MEs) is free to choose whether or not to utilize such guidance or recommendations as a basis for decision making. In addition, the guidance will not be relied on by FMCSA as a basis for enforcement action or other administrative penalty, and nonconformity with the guidance will not affect rights and obligations under existing statutes and regulations.

About 49 CFR 391.41

Section 391.41 (Physical qualifications for drivers) describes the physical qualification standards that an individual must meet in order to be qualified to operate a CMV in interstate commerce.

- You can access the Electronic Code of Federal Regulations (eCFR) for the most current information on regulations at https://gov.ecfr.io.

The order in which information is presented below represents how an examination is commonly conducted. Each physical qualification standard is followed by FMCSA's Medical Advisory Criteria, if any, and then by other information to be considered by the ME. The Medical Advisory Criteria are published at the end of 49 CFR part 391 in Appendix A. The Medical Advisory Criteria and other information provided are guidance intended to provide recommendations and information to assist MEs in applying the FMCSRs, basic information related to testing, and things to consider when making a qualification determination. Medical Advisory Criteria that are outdated, obsolete, or no longer relevant have not been included in this handbook.

Vision Regulation - 49 CFR 391.41(b)(10)

Regulation: 49 CFR 391.41(b)(10): "A person is physically qualified to drive a commercial vehicle if that person-

Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70° in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing red, green, and amber."

If corrective lenses are necessary to meet this vision standard, the lenses must be used while driving and must be documented as being required while driving on the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876.

FMCSA notes that, under the 2018 diabetes standard in 391.46(c)(2)(ii), individuals with diabetes mellitus that are treated with insulin are not physically qualified on a permanent basis to operate a CMV if they have either severe non-proliferative retinopathy or proliferative diabetic neuropathy. This does not apply to noninsulin treated diabetes or retinopathy generally.

The Medical Advisory Criteria for 49 CFR 391.41(b)(10) states:

A person is physically qualified to drive a CMV if that person: Has distant visual acuity of at least 20/40 (Snellen) in each eye with or without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber.

The term "ability to recognize the colors of" is interpreted to mean if a person can recognize and distinguish among traffic control signals and devices showing standard red, green and amber, he or she meets the minimum standard, even though he or she may have some type of color perception deficiency. If certain color perception tests are administered, (such as Ishihara, Pseudoisochromatic, Yarn) and doubtful findings are discovered, a controlled test using signal red, green, and amber may be employed to determine the driver's ability to recognize these colors.

Contact lenses are permissible if there is sufficient evidence to indicate that the driver has good tolerance and is well adapted to their use. Use of telescopic lenses are not acceptable for the driving of CMVs.

If an individual meets the criteria by the use of glasses or contact lenses, the following statement shall appear on the Medical Examiner's Certificate, Form MCSA-5876: "Qualified only if wearing corrective lenses." CMV drivers who do not meet the Federal vision standard may call (703) 448-3094 to obtain an application for a Federal vision exemption or go to **https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/regulations/medical/driver-medical-requirements/10451/vision-exemption-package-0918.pdf**

Other Guidance

The driver does not meet the vision standard if the individual fails to meet any part of the vision testing criteria with one eye or both eyes, as applicable.

Vision Testing by a Specialist

The vision testing may be completed by an eye specialist but the ME is responsible for making the physical qualification determination. A specialist vision examination:

- Is required for obtaining and renewing a Federal vision exemption.
- Is required for qualifying drivers under the grandfather provision in §391.64 for certain drivers participating in a previous vision waiver study program.
- May be necessary to obtain adequate evaluation of vision with specialized diagnostic equipment.

When the vision test is completed by an eye specialist, that individual should provide the individual's name, telephone number, license number, and State issuing the license, and sign and date the specialist vision examination report. The ME must attach the specialist vision examination report to the Medical Examination Report Form, MCSA-5875, and write "see the attached documentation" in the vision test result section or write the information on the Medical Examination Report Form, MCSA-5875, in the vision test result section.

Health History and Physical Examination

Health History

MEs should ask the driver about any changes in vision; night vision; ophthalmic disorders such as cataracts, glaucoma, retinopathy, or macular degeneration; use of ophthalmic medications; and any other visual condition that could interfere with driving.

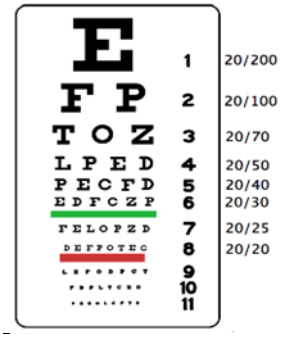
Physical Examination

MEs should examine the eyes for any potential abnormalities, including abnormal pupils, nystagmus, or exophthalmos, that may require consideration under a different physical qualification standard.

Required Tests

Distant visual acuity

The Snellen chart or the Titmus Vision Tester measures static distant visual acuity. The requirement for distant visual acuity is at least 20/40 in each eye and distant binocular visual acuity of at least 20/40. Test results must be recorded in Snellen-comparable values.



Peripheral Vision

The requirement for peripheral vision is at least 70° in the horizontal meridian for each eye. In the clinical setting, some form of confrontational testing or Titmus screener instrument is often used to evaluate peripheral vision.

Confrontation visual field testing involves having the individual looking directly at your eye or nose and testing each quadrant in the individual's visual field by having the individual count the number of fingers that you are showing. It is useful for the ME to instruct the individual to close one eye at a time so that the ME can determine if the individual is seeing appropriately in the visual field.

Titmus screening is using an instrument to screen for visual acuity, depth perception, color perception, and binocular vision.

If the individual fails the screening exam, that individual has the option of seeing a specialist, and then can undergo a new physical qualification exam.

Retinopathy

Non-inflammatory damage to the retina of the eye has many causes, with the predominant one being diabetes mellitus causing microaneurysms and intraretinal hemorrhages. Fluid leakage near the macula (diabetic macular edema) can create partial scotomas in central vision or cause gross hemorrhage in the eye which can obscure vision and eventually lead to retinal detachment and blindness. Subtler visual modalities such as contrast sensitivity, flicker fusion frequency, and color discrimination may also be affected.

Federal Vision Exemption Program

FMCSA has a Vision Exemption Program that grants exemptions for individuals with monocular vision who meet certain criteria. FMCSA defines monocular vision as (1) in the better eye, distant visual acuity of at least 20/40 (with or without corrective lenses) and field of vision of at least 70 degrees in the horizontal meridian, and (2) in the worse eye, either distant visual acuity of less than 20/40 (with or without corrective lenses) or field of vision of less than 70 degrees in the horizontal meridian, or both. The ME should complete the physical qualification examination of the driver with monocular vision and determine if the driver meets the other physical qualification standards. The driver with monocular vision who meets the other physical qualification standards may apply for a Federal vision exemption. However, drivers diagnosed with colorblindness are not eligible for an exemption under the program. Additional information about vision exemptions and the application process is in the Medical Variance section of this handbook.

Hearing Regulation - 49 CFR 391.41(b)(11)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person-

- First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid or,
- If tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5–1951."

If an individual meets the criteria by the use of a hearing aid, the hearing aids must be used while driving and must be documented as being required while driving on the Medical Examination Report Form, MCSA-875, and the Medical Examiner's Certificate, Form MCSA-5876.

The Medical Advisory Criteria for 49 CFR 391.41(b)(11) states:

Since the prescribed standard under the FMCSRs is from the American National Standards Institute, formerly the American Standards Association, it may be necessary to convert the audiometric results from the International Organization for Standardization standard to the American National Standards Institute standard.

If an individual meets the criteria by using a hearing aid, the driver must wear that hearing aid and have it in operation at all times while driving. Also, the driver should be in possession of a spare power source for the hearing aid.

For the whispered voice test, the individual should be stationed at least 5 feet from the ME with the ear being tested turned toward the ME. The other ear is covered. Using the breath which remains after a normal expiration, the ME whispers words or random numbers such as 66, 18, 3, etc. The ME should not use only sibilants (s sounding materials). The opposite ear should be tested in the same manner.

If the individual fails the whispered voice test, the audiometric test should be administered. If an individual meets the criteria by the use of a hearing aid, the following statement must appear on both the Medical Examination Report Form, MCSA-5875 and the Medical Examiner's Certificate, Form MCSA-5876,

"Qualified only when wearing a hearing aid."

The required tests screen for hearing loss in the range of normal conversational tones. Both ears should be tested using a **forced whisper** test or an **audiometric** test.

- MEs must test both ears
- If the driver uses a hearing aid while testing to meet the standard, MEs must select the " hearing aid required to meet standard" box on both the Medical Examination Report Form, MCSA-5875 and the Medical Examiner's Certificate, Form MCSA-5876.

Other Guidance

Hearing Testing by a Specialist

The hearing test may be completed with audiometric testing performed by an audiologist.

When the hearing test is completed by an audiologist, the audiologist should provide the individual's name, telephone number, license number, and State issuing the license, and date and sign the audiology examination form. The ME must attach the specialist audiology report to the Medical Examination Report Form, MCSA-5875, and write "see the attached documentation" in the vision test result section or write the information on the Medical Examination Report Form, MCSA-5875, in the hearing test result section.

The Physical Examination

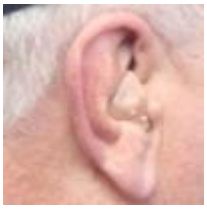
The driver meets the hearing qualification standard if:

- The driver first perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid, or
- The driver has an average hearing loss (average of test results for 500 hertz (Hz), 1,000 Hz, and 2,000 Hz) in one ear at less than or equal to 40 dBs.

The hearing requirement for an audiometric test is based on hearing loss only at the 500 Hz, 1,000 Hz, and 2,000 Hz frequencies that are typical of normal conversation.

- Record hearing test results for each ear at 500 Hz, 1,000 Hz, and 2,000 Hz (ANSI standard).
- Average the readings for each ear by adding the test results and dividing by 3.
- To pass, one ear must show an average hearing loss that is less than or equal to 40 dBs.

Hearing aid and cochlear implant



When a hearing aid is to be worn during audiometric testing, an audiologist or hearing aid center should perform the test using appropriate audiometric equipment. Cochlear implant is an acceptable option for meeting the deficiency as long as the driver can meet the standard.

Federal Hearing Exemption

An individual may qualify for a Federal hearing exemption if the individual is unable to meet the hearing standard. It is the ME's responsibility to determine the feasibility of passing the hearing standard with the use of hearing aids, if possible. In addition, the ME should complete the physical qualification examination of the driver and determine if the driver meets the other physical qualification standards. The driver who meets the other physical qualification standards, but does not meet the hearing standard, may apply for a Federal hearing exemption. Additional information about hearing exemptions and the application process is in the Medical Variance section of this handbook.

High Blood Pressure Regulation - 49 CFR 391.41(b)(6)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person-

Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a commercial motor vehicle safely."

The Medical Advisory Criteria for 49 CFR 391.41(b)(6) states:

A person is physically qualified to drive a CMV if that person: Has no current clinical diagnosis of high blood pressure likely to interfere with ability to operate a CMV safely.

Hypertension alone is unlikely to cause sudden collapse; however, the likelihood increases when target organ damage, particularly cerebral vascular disease, is present. This regulatory criteria is based on the FMCSA's Cardiovascular Advisory Guidelines for the Examination of CMV Drivers, which used the Sixth Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (1997).

Stage 1 hypertension corresponds to a systolic blood pressure of 140-159 mmHg and/or a diastolic blood pressure of 90-99 mmHg. The driver with a blood pressure in this range is at low risk for hypertension-related acute incapacitation and may be medically certified to drive for a one-year period. Certification examinations should be done annually thereafter and should be at or less than 140/90. If less than 160/100, certification may be extended one time for 3 months.

A blood pressure of 160-179 systolic and/or 100-109 diastolic is considered Stage 2 hypertension, and the driver is not necessarily unqualified during evaluation and institution of treatment. The driver is given a one-time certification of three months to reduce his or her blood pressure to less than or equal to 140/90. A blood pressure in this range is an absolute indication for anti-hypertensive drug therapy. Provided treatment is well tolerated and the driver demonstrates a blood pressure value of 140/90 or less, he or she may be certified for one year from date of the initial exam. The driver is certified annually thereafter.

A blood pressure at or greater than 180 (systolic) and 110 (diastolic) is considered Stage 3, high risk for an acute blood pressure-related event. The driver may not be qualified, even temporarily, until reduced to 140/90 or less and treatment is well tolerated. The driver may be certified for 6 months and biannually (every 6 months) thereafter if at recheck blood pressure is 140/90 or less.

Annual certification is recommended if the ME does not know the severity of hypertension prior to treatment. An elevated blood pressure finding should be confirmed by at least two subsequent measurements on different days.

Treatment includes non-pharmacologic and pharmacologic modalities as well as counseling to reduce other risk factors. Most antihypertensive medications also have side effects, the importance of which must be judged on an individual basis. Individuals should be alerted to the hazards of these medications while driving. Side effects of somnolence or syncope are particularly undesirable in commercial motor vehicle drivers.

Secondary hypertension is based on the above stages. Evaluation is warranted if patient is persistently hypertensive on maximal or near-maximal doses of 2-3 pharmacologic agents. Some causes of secondary hypertension may be amenable to surgical intervention or specific pharmacologic disease.

Other Guidance

Blood Pressure (BP)

- BP readings taken during the driver physical should be used for certification decisions.
- BP greater than 139/89 should be confirmed with a second measurement taken later during the examination.

- Record additional BP measurements in the "Second reading" space or in your comments on the Medical Examination Report Form, MCSA-5875.
- The driver may be certified for up to 2 years if the driver's hypertension has resolved without blood pressure medications according to documentation from the treating clinician

Pulse

- Document pulse rhythm by marking the "Regular" or "Irregular" box.
- Record pulse rate.

An ME's fundamental obligation is to establish whether a driver has high BP that is likely to interfere with the ability to operate a CMV safely. The physical qualification examination is based on information provided by the driver (history), objective data (physical examination), and, and if necessary, additional testing requested by the ME. The ME's assessment should reflect physical, psychological, and environmental factors. Medical certification depends on a comprehensive medical assessment of overall health and informed medical judgment about the impact of single or multiple conditions.

Recommendation Table on Hypertension

Diagnosis	Physiology	Certification	Subsequent Certification
Stage 1 (140-159/90-99 mm Hg)	Low risk for near-term incapacitating event.	Yes, one time certification for 3 months. Yes, at recheck if: BP ≤ 140/90; certify 1 year from date of initial exam.	Annual BP < 140/90 at annual exam. If not, but BP < 160/100, the driver may receive a one-time certification for 3 months.
Stage 2 (160-179/100-109 mm Hg)	Low risk for incapacitating event. Risk increased in presence of target organ damage. Indication for pharmacologic therapy	Yes, one time certification for 3 months. Yes, at recheck if: BP < 140/90; certify 1 year from date of initial exam.	Annual BP ≤ 140/90
Stage 3 ≥180/110 mm Hg)	High risk for acute hypertension-related event	No, may not be certified even temporarily Yes, at recheck if: BP ≤ 140/90; treatment is well tolerated; certify for 6 months from date of initial exam.	Every 6 months if BP ≤ 140/90
Secondary Hypertension	Evaluation warranted if persistently hypertensive on maximal or near maximal doses of 2-3 pharmacologic agents. May be amendable to surgical/specific therapy	Based on above stages. Yes if: Stage I or non-hypertensive; at least 3 months after surgical correction.	Annual BP ≤ 140/90

Required Testing

The Medical Examination Report Form, MCSA-5875, set forth at 49 CFR 391.43(f), includes testing that must be completed as part of the physical qualification examination. Because the Medical Examination Report Form, MCSA-5875, is included in the FMCSRs, the information requested from both the driver and ME is required by regulation. Accordingly, the following testing must be completed as part of the physical qualification examination even though not part of a specific physical qualification standard.

Physical Examination — Urinalysis

A urinalysis must be obtained (dip stick) and recorded in the urinalysis section of the Medical Examination Report Form, MCSA-5875.

Test for:

- Specific gravity
- Protein (proteinuria)
- Blood (hematuria)
- Glucose (glycosuria)

Significant abnormalities on the urinalysis should be commented on by the ME and evaluated further if the ME chooses to do so.

Physical Examination — Record Driver Height and Weight

MEs must measure and record driver height (inches) and weight (pounds).

The physical qualification standards do not include any minimum or maximum height and weight requirements. The ME should consider height and weight factors as part of the overall driver physical qualification examination and as they relate to underlying medical conditions in the relevant physical qualification standards.

Physical Examination — ME Responsibilities

The general purpose of the medical examination is to detect the presence of physical, mental, or organic conditions of such character and extent as to affect the driver's ability to operate a CMV safely. This examination is considered by the FMCSA to be a physical qualification examination.

MEs must perform the physical examination as outlined on the Medical Examination Report Form, MCSA-5875.

The physical examination should be conducted carefully and must, at a minimum, be as thorough as the examination of body systems outlined in the Medical Examination Report Form, MCSA-5875. For each body system, the ME should mark "abnormal" if abnormalities are detected, or "normal" if the body system is normal.

MEs should document abnormal findings on the Medical Examination Report Form, MCSA-5875, even if the findings do not preclude qualification. The ME should indicate whether or not the abnormality affects driving ability or whether any additional evaluation is needed to determine if the driver meets the physical qualification standards outlined in the FMCSRs.

It is the ME who ultimately decides if the driver meets FMCSA's physical qualifications. However, consistent with current clinical best practices for any medical condition in applying the physical qualification standards, the ME may consult with the individual's treating provider for additional information concerning the driver's medical history and current condition(s), request appropriate referrals to other healthcare providers, or request medical records, all with appropriate consent.

Cardiovascular Regulation - 49 CFR 391.41(b)(4)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person-

has no current clinical diagnosis of:

- myocardial infarction,
- angina pectoris,
- coronary insufficiency,
- thrombosis, or
- any other cardiovascular disease (CVD) of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure."

The Medical Advisory Criteria for 49 CFR 391.41(b)(4) states:

A person is physically qualified to drive a commercial motor vehicle if that person: Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse or congestive cardiac failure.

The term "has no current clinical diagnosis of" is specifically designed to encompass: "a clinical diagnosis of" a current cardiovascular condition, or a cardiovascular condition which has not fully stabilized regardless of the time limit. The term "known to be accompanied by" is designed to include a clinical diagnosis of a cardiovascular disease which is accompanied by symptoms of syncope, dyspnea, collapse or congestive cardiac failure; and/or which is s likely to cause syncope, dyspnea, collapse or congestive cardiac failure.

It is the intent of the FMCSRs not to qualify, a driver who has a current cardiovascular disease which is accompanied by and/or likely to cause symptoms of syncope, dyspnea, collapse, or congestive cardiac failure. However, the subjective decision of whether the nature and severity of an individual's condition will likely cause symptoms of cardiovascular insufficiency is on an individual basis and qualification rests with the medical examiner and the motor carrier. In those cases where there is an occurrence of cardiovascular insufficiency (myocardial infarction, thrombosis, etc.), it is suggested before a driver is certified that he or she have a normal resting and stress electrocardiogram, no residual complications and no physical limitations, and is taking no medication likely to interfere with safe driving.

Coronary artery bypass surgery and pacemaker implantation are remedial procedures and thus, do not medically preclude qualification. Implantable cardioverter defibrillators do preclude qualification due to risk of syncope. Coumadin is a medical treatment which can improve the health and safety of the driver and should not, by its use, preclude qualification of the commercial motor vehicle driver. The emphasis should be on the underlying medical condition(s) which require treatment and the general health of the driver. The FMCSA should be contacted at (202) 366-4001 for additional recommendations regarding the physical qualification of drivers on coumadin.

Other Guidance

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- An ME's fundamental task during the cardiovascular assessment should be to establish whether a driver has a cardiovascular disease or disorder that might increase the risk for sudden death or

incapacitation, thus endangering driver and public safety and health.
- The examination is based on information provided by the driver (history), objective data (physical examination), and, if necessary, additional testing requested by the ME. The ME's assessment should reflect physical, psychological, and environmental factors.
- Medical certification depends on a comprehensive medical assessment of overall health and informed medical judgment about the impact of single or multiple conditions.

The following disease and conditions are being discussed because they could involve diagnoses of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse or congestive heart failure.

Anticoagulant Therapy

Anticoagulant therapy may be utilized in the treatment of cardiovascular or neurological conditions. The certification decision should be based on the underlying medical disease or disorder requiring medication, not the medication itself.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Whether treatment has been shown to be adequate, effective, safe, and stable.

Aneurysms, Peripheral Vascular Disease, and Venous Disease and Treatments

- Rupture is the most serious complication of an abdominal aortic aneurysm and is related to the size of the aneurysm.
- Deep venous thrombosis can be the source of acute pulmonary emboli or lead to long-term venous complications.
- Intermittent claudication is the primary symptom of peripheral vascular disease of the lower extremities.

Abdominal Aortic Aneurysm

The majority of abdominal aortic aneurysms (AAAs) occur in the sixth and seventh decades of life and occur more frequently in males than in females by a 3:1 ratio. Smoking is a major risk factor. The majority of AAAs are asymptomatic. Clinical examination identifies approximately 90% of aneurysms greater than 6 cm. Auscultation of an abdominal bruit may indicate the presence of an aneurysm. The risk of rupture increases as the aneurysm increases in size. Monitoring of an aneurysm is advised because the growth rates can vary and rapid expansion can occur. Ultrasound has almost 100% sensitivity and specificity for detecting an AAA and can monitor changes in size.

An AAA:

- Less than 4 cm rarely ruptures.
- 4 cm to 5 cm has a 1% to 3% per year rate of rupture.
- 5 cm to 6 cm has a 5% to 10% per year rate of rupture.
- Greater than 7 cm has approximately a 20% per year rate of rupture.

Acute Deep Vein Thrombosis

The CMV driver is at an increased risk for developing acute deep vein thrombosis (DVT) due to long hours of sitting as part of the profession. DVT can be the source of pulmonary emboli that can cause gradual or sudden incapacitation or death. Adequate treatment with anticoagulants decreases the risk of recurrent thrombosis by approximately 80%. MEs must evaluate on a case-by-case basis to determine if the driver meets the cardiovascular standards.

Chronic Thrombotic Venous Disease

Chronic thrombotic venous disease of the legs increases the risk of pulmonary emboli; however, there is insufficient research to confirm the level of risk. MEs must evaluate, on a case-by-case basis, to determine if the driver meets the cardiovascular standards.

Intermittent Claudication

Approximately 7% to 9% of persons with peripheral vascular disease develop intermittent claudication, which is the primary symptom of obstructive vascular disease of the lower extremity. In cases of severe arterial insufficiency, necrosis, neuropathy, and atrophy may occur. When making a physical qualification determination, the ME should consider whether the etiology has been confirmed and treatment has been shown to be adequate, effective, safe, and stable.

Other Aneurysms

Aneurysms can develop in visceral and peripheral arteries and venous vessels. Rupture of any of these aneurysms can lead to gradual or sudden incapacitation and death. Much of the information on aortic aneurysms is applicable to aneurysms in other arteries.

Thoracic Aneurysm

While relatively rare, thoracic aneurysms are increasing in frequency. Size of the aorta is considered the major factor in determining risk for dissection or rupture of a thoracic aneurysm. In general, thoracic aneurysms that are less than 3.5 cm and are asymptomatic are not likely to rupture.

Pulmonary Emboli

Deep vein thrombosis can be one of the sources of pulmonary emboli (PE). PE can cause gradual or sudden incapacitation and is associated with significant morbidity and mortality. Deep vein thrombosis can be one of the sources of pulmonary emboli (PE). PE can cause gradual or sudden incapacitation and is associated with significant morbidity and mortality. When making a physical qualification determination, the ME should consider whether the driver has appropriate long term treatment (anticoagulant).

Superficial Phlebitis

Superficial phlebitis is a benign and self-limited disease. However, MEs should consider whether it is associated with deep vein thrombosis (DVT), which, is often a coexisting condition.

Varicose Veins

The presence of varicose veins does not preclude medically qualifying the CMV driver. Varicose veins are usually benign; however, MEs should consider whether they are associated with venous insufficiency, leg ulcerations, or recurrent deep vein thrombosis that could impact the driver's ability to operate a CMV safely.

Cardiac Arrhythmias and Treatment

The majority of sudden cardiac deaths are thought to be secondary to ventricular tachycardia or ventricular fibrillation and occur most often when there is no prior diagnosis of heart disease.

Implantable Cardioverter Defibrillators

Implantable cardioverter-defibrillators (ICD) are electronic devices that treat cardiac arrest, ventricular fibrillation, and ventricular tachycardia through the delivery of rapid pacing stimuli or shock therapy.

ICDs may be implanted by cardiologists as primary prevention for individuals who have medical conditions family history that place them at increased risk for dangerous ventricular arrhythmias, or as secondary prevention for individuals who have a history of experiencing dangerous sustained ventricular arrhythmias.

ICDs treat but do not prevent arrhythmias. Therefore, the driver remains at risk for syncope as a result of the underlying cardiovascular condition and does not satisfy the cardiovascular standard. Coronary artery bypass surgery and pacemaker implantation are considered remedial procedures and therefore do not preclude medical qualification. Combination ICD/pacemaker devices, however, are ineffective in preventing incapacitating cardiac arrhythmia events and do preclude medical certification because the individual does not satisfy the cardiovascular standard.

ICDs that are disabled may still not allow an individual to be certified as a result of the individual's underlying cardiovascular condition that may result in syncope, collapse, and/or gradual or sudden incapacitation.

A pacemaker is an implantable device designed to treat bradycardia. When assessing the risk for sudden, unexpected incapacitation in a driver with a pacemaker, the underlying disease responsible for the pacemaker indication should be considered.

- Both sinus node dysfunction and atrioventricular (AV) block have variable long-term prognoses, depending on the underlying disease.
- Cerebral hypoperfusion is usually corrected by support of heart rate via the implantation of a pacemaker.

Currently, pacemakers and the lead systems are reliable and durable over the long term.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

Are there signs that the pacemaker is not working properly, such as fainting, a consistently slow heart rate, periods of slow heartbeats (bradycardia) that alternate with periods of fast (tachycardia) or irregular heartbeats (arrhythmia), or weakness and tiredness**?**

Supraventricular Arrhythmias

Supraventricular arrhythmias fall into two main categories: supraventricular tachycardia (SVT) and atrial fibrillation.

Supraventricular Tachycardia (SVT)

SVT is a common arrhythmia that is usually not considered a risk for sudden death. On occasion, SVT can cause loss of consciousness or compromise cerebral function. Treatment by catheter ablation is usually curative and allows drug therapy to be withdrawn.

Atrial Fibrillation

The major risk associated with atrial fibrillation is the presence of an embolus which can cause a stroke. Anticoagulant therapy decreases the risk of peripheral embolization in individuals with risk factors for stroke.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

Is the driver anticoagulated adequately to decrease stroke risk?
Is the driver asymptomatic with a controlled heart rate?

Ventricular Arrhythmias

Ventricular arrhythmias are categorized as ventricular fibrillation and ventricular tachycardia and are responsible for the majority of instances of cardiac sudden death. Most cases are caused by coronary heart disease, but can also occur in people with hearts that are structurally normal.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the cause of the ventricular arrhythmia known? If so, would the underlying cause of the arrhythmia preclude the driver from being physically qualifying?
- Is the driver symptomatic or does the driver have sustained ventricular tachycardia?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Has the driver received medical clearance from the treating medical provider?
-

Cardiovascular Tests for Further Assessments

Detection of an undiagnosed heart or vascular finding during a physical examination may indicate the need for further testing and examination to adequately assess whether a driver meets the physical qualification standards. Diagnostic-specific testing may be required to detect the presence and/or severity of cardiovascular diseases.

Types of cardiovascular tests include**:**

- Echocardiography- Left ventricular ejection fraction (LVEF) may be assessed by echocardiography. Imaging studies have superior sensitivity and specificity compared to the standard exercise tolerance test (ETT) and are indicated in the presence of an abnormal resting electrocardiogram or non-diagnostic standard ETT.
- Exercise Tolerance Test (ETT)- The exercise tolerance test is the most common test used to evaluate workload capacity and detect cardiac abnormalities.

Coronary Heart Diseases and Treatments

The ME should determine whether the nature and severity of the condition of the driver will result in gradual or sudden incapacitation. The major clinical manifestations of coronary heart disease (CHD) are acute myocardial infarction, angina pectoris (either stable or unstable), congestive heart failure, and sudden death.

Prognostic indicators for CHD

The major predictor of CHD is left ventricular function. Other indicators to be considered should include but may not be limited to:

- General health
- Age
- Arrhythmias
- Angina pectoris
- Associated vascular disease
- Severity of CHD

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the treatment been shown to be adequate, effective, safe, and stable?
- Is the driver knowledgeable about medications used while driving?
- Is the driver free from side effects that compromise driving ability?
- Does the driver demonstrate compliancy with the ongoing treatment plan?

MEs should evaluate, on a case-by-case basis, to determine if a driver meets the cardiovascular standards.

Acute Myocardial Infarction

The first few months following an acute myocardial infarction (MI) **pose the greatest risk of mortality**, with the majority of deaths classified as sudden death. Current opinion among clinicians is that post-MI drivers may safely return to any occupational task, provided there is no exercise-induced myocardial ischemia or left ventricular dysfunction.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Status/post myocardial infarction, is the driver still symptomatic?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Angina Pectoris

When evaluating the driver with angina, MEs should distinguish between stable and unstable angina. The presence of unstable angina may be a precursor to a cardiovascular episode known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure.

Stable angina

May be precipitated by predictable circumstances, including:

- Exertion
- Emotion
- Extremes in weather
- Sexual activity

Unstable angina

Has an unpredictable course characterized by:

- Pain occurring at rest.
- Changes in pattern (i.e., increased frequency and longer duration).
- Decreased response to medication.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- How long has the driver been free of angina at rest or not had changes in his/her angina pattern?
- Is the driver still symptomatic?
- Has the treatment been shown to be adequate, effective, safe, and stable?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Coronary Artery Bypass Grafting

Coronary artery bypass grafting (CABG) surgery is frequently the preferred choice of therapy for individuals with multi-vessel coronary heart disease, narrowing of the proximal left main coronary artery, and extensive atherosclerosis in the presence of left ventricular dysfunction or debilitating angina.

Following CABG surgery, individuals are at less risk of sudden death than those who are treated medically. Most drivers who undergo CABG surgery are able to return to work. Greatest risk for complications occur in the first 3 months. The sternum should be completely healed before certifying a driver. A significant risk associated with CABG surgery is the high long-term reocclusion rate of the bypass graft which occurs after 5 years which may indicate the necessity of a stress test.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the sternum healed?
- Is the driver still symptomatic?
- Has treatment been shown to be adequate, effective, safe, and stable with no orthostatic symptoms relating to cardiovascular medications?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Heart Failure

Coronary artery disease is considered as a primary cause of heart failure. It is a progressive disease that results from damaged muscles of the heart that affect their blood pumping action. This reduces the blood supplied throughout the body, leading to fatigue, shortness of breath, reduced physical activity, and swelling of the ankles or legs. Heart failure is measured by left ventricular ejection fraction whose percentage of the total amount of blood in the left ventricle is pumped out with each heartbeat. Ejection fractions of 55-70% are normal; 40-55% are slightly below normal; 35-39% are moderately below normal; and less than 35% is severely below normal.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following: Is the driver still symptomatic?

- Has treatment been shown to be adequate, effective, safe, and stable with no orthostatic symptoms relating to cardiovascular medications?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Percutaneous Coronary Intervention

Percutaneous Coronary Intervention (PCI) was formerly known as angioplasty with a stent. It is a nonsurgical procedure that uses a catheter to place a stent to open up blood vessels that have been narrowed by plaque buildup (atherosclerosis). PCI improves blood flow, thus decreasing heart-related chest pain. Complications are uncommon, but if they do occur they are usually acute complications at the vascular access site. Stress tests are performed by the treating clinician on a biennial basis to assess stent function.

Consideration for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is there evidence of injury at the vascular access site?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Congenital Heart Disease

Heart failure and sudden death are the major causes of death among individuals with congenital heart disease.

Due to the complexity of these problems, the Cardiovascular Advisory Panel Guidelines for the Medical Examination of CMV Drivers recommend that the driver has regular, ongoing follow-up by a cardiologist knowledgeable in adult congenital heart disease. The guidelines are available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gove/files/docs/cardio.pdf.

The driver with congenital heart disease must meet the qualification standards. Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Anatomic diagnosis
- Severity of the congenital defect
- Results of treatment
- Present fitness status
- Risk of sudden death or incapacitation

Ebstein Anomaly

Ebstein anomaly is a congenital downward displacement of the tricuspid valve. The natural history of the patient with Ebstein anomaly depends on its severity. Adults with a mild form of Ebstein anomaly can remain asymptomatic throughout their lives.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver still symptomatic?
- Does the driver have a tricuspid anomaly? If so, what is the extent of the anomaly?
- Does the driver have cardiac enlargement? If so, what is the extent of the enlargement?
- Does the driver have right ventricular dysfunction? If so, what is the extent of the dysfunction?

Heart Transplantation

The major-medical concern for certification of a CMV driver heart recipient are transplant rejection and post-transplant atherosclerosis.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver have signs of cardiovascular disease?
- Does the driver have signs of rejections?
- Has treatment, including response to medications, been shown to be adequate, effective, safe, and stable?
- Does the driver demonstrate compliancy with the ongoing treatment plan from his/her treating clinician?

Hypertension

See the Blood Pressure section of this handbook.

Myocardial Disease

Myocardial diseases are often progressive and require long-term follow-up. Even so, improved diagnostic testing and treatment can increase the number of drivers with myocardial disease who seek CMV driver medical certification.

Hypertrophic Cardiomyopathy

Hypertrophic cardiomyopathy is a complex disease characterized by marked morphologic, genetic, and prognostic heterogeneity. In most individuals, the disease is characterized by progressive symptoms. For some individuals, sudden death is the first definitive manifestation of the disease. The confirmed diagnosis of hypertrophic cardiomyopathy should be considered to be a cardiovascular disease known to be accompanied by symptoms of palpitations; shortness of breath, especially during exercise; chest pain, especially during exercise; syncope and collapse, especially during or just after exercise or exertion

Restrictive Cardiomyopathy

The Mayo Clinic performed a study on idiopathic restrictive cardiomyopathy between 1979 and 1996. The Clinical Profile and Outcome of Idiopathic Restrictive Cardiomyopathy report indicated a 5-year survival rate of only 64%, compared with an expected survival rate of 85%. A confirmed diagnosis of restrictive cardiomyopathy should be considered a cardiovascular disease known to be accompanied symptoms of palpitations; shortness of breath; fatigue; chest pain; and syncope and collapse.

Syncope

Syncope is a symptom, not a medical condition, that can present an immediate threat to public safety when causing the driver of a commercial motor vehicle to lose control of the vehicle.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver have pre-syncope (i.e., dizziness, lightheadedness) or true syncope (i.e., loss of consciousness)?
- Do medications used by the driver predispose the driver to syncope, fatigue, or electrolyte shifts and imbalances?
- What is the cause of the syncope? Physical qualification determinations for cardiac-based syncope are made in accordance with the cardiovascular standard.
- Physical qualification determinations for other causes of syncope, such as neurological based conditions (e.g. migraine headache, seizures), are made in accordance with the standards for the underlying conditions.
- Has the driver been treated for the underlying cause of the syncope?
- Has treatment, including all medications used by the driver, been shown to be adequate, effective, safe, and stable?

MEs may refer to the Cardiovascular Advisory Panel Guidelines for the Medical Examination of CMV Drivers for diagnosis-specific recommendations. The guidelines are available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/cardio.pdf

Valvular Heart Diseases and Treatments

Murmurs are a common sign of valvular heart conditions; however, the presence of a murmur may be associated with other cardiovascular conditions. MEs must distinguish between functional murmurs and pathological murmurs that preclude medical qualification.

Classification of Murmur Severity

The intensity of murmurs is classified on a scale of I to VI, from the least pronounced murmur to the loudest. Classification is rated as follows:

- Grade I – Must strain to hear a murmur.
- Grade II – Can hear a faint murmur without straining.
- Grade III – Can easily hear a moderately loud murmur.
- Grade IV – Can easily hear a moderately loud murmur that has a thrill.
- Grade V – Can hear the murmur when only part of the stethoscope is in contact with the skin.
- Grade VI – Can hear the murmur with the stethoscope close to the skin; it does not have to be in contact with the skin to detect the murmur.

Murmurs that are:

- Systolic and grade I or II are usually benign if the driver has no signs or symptoms of heart disease.
- Mid-systolic are usually benign if the driver has no signs or symptoms of heart disease.

Aortic Regurgitation

Aortic regurgitation is usually a chronic condition characterized by a prolonged asymptomatic phase and gradual left ventricular (LV) dilatation. Other conditions such as infective endocarditis and aortic dissection can result in acute severe aortic regurgitation. MEs should evaluate on a case-by-case basis. Criteria MEs could use to evaluate aortic regurgitation include but may not be limited to the severity of the diagnosis, LV size and function, and the presence of signs or symptoms.

Mild or moderate aortic regurgitation occurs in the presence of normal LV systolic function and little or no LV enlargement.

Severe aortic regurgitation occurs with a normal LV systolic function but significant LV dilatation.

Aortic Stenosis

The most common cause of aortic stenosis in adults is a degenerative process associated with many of the risk factors underlying atherosclerosis. Aortic stenosis may cause a heart murmur. Symptoms include chest pain, tiredness after exertion, shortness of breath after exertion, and heart palpitations.

MEs should evaluate on a case-by-case basis. Criteria MEs could use to evaluate for aortic stenosis include but may not be limited to the severity of the diagnosis and the presence of signs or symptoms.

Aortic Valve Repair

Aortic valve repair is a technique for repairing the existing aortic valve and usually does not require anticoagulant therapy.

Mitral Regurgitation

Criteria for mitral regurgitation could include but may not be limited to the severity of the diagnosis and the presence of signs or symptoms. The development of symptoms, especially dyspnea, fatigue, orthopnea, and/or paroxysmal nocturnal dyspnea, is a marker of a poor prognosis, including an inability to perform driver tasks and increased risk for sudden cardiac death.

Mitral Stenosis

Criteria for mitral stenosis could be based on valve area size and the presence of signs or symptoms. MEs should inquire about episodes of angina or syncope, fatigue, and the ability to perform tasks that require exertion. Treatment options for mitral stenosis include enlarging the mitral valve or cutting the band of mitral fibers.

Mitral Valve Prolapse

The natural history of mitral valve prolapse is extremely variable and depends on the extent of myxomatous degeneration, the degree of mitral regurgitation, and association with other conditions.

Mitral valve prolapse is usually a benign condition. The condition may be asymptomatic or may manifest with arrhythmia, heart murmur, dizziness or lightheadedness, fatigue, difficulty in breathing, or chest pain. Mitral valve prolapse is a common cause of mitral regurgitation. In some cases, mitral regurgitation may be progressive, resulting in left ventricular (LV) and left atrial enlargement, atrial fibrillation, and congestive heart failure. MEs should assess the nature and severity of the medical condition to determine whether the driver meets the cardiovascular standard.

Prosthetic Valves

Prosthetic valves can be mechanical or biological. There are a wide range of reported complications depending upon the variable methods of reporting, the make and model of the prosthesis, the site of implantation, comorbidities, and underlying left ventricular (LV) function, among other causes.

The clinical course is heavily influenced by factors other than valve-related complications, for example, LV dysfunction, congestive heart failure, progression of disease in other valves, coronary disease, or pulmonary hypertension.

Pulmonary Valve Stenosis

Pulmonary valve stenosis is usually a well-tolerated cardiac lesion normally exhibiting a gradual progression. However, gradual or sudden incapacitation may occur in certain circumstances.

MEs should assess that the nature and severity of the medical condition to determine whether the driver meets the cardiovascular standard.

Respiratory Regulation - 49 CFR 391.41(b)(5)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person-

Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with his/her ability to control and drive a commercial motor vehicle safely."

The Medical Advisory Criteria for 49 CFR 391.41(b)(5) states:
A person is physically qualified to drive a commercial motor vehicle if that person: Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with ability to control and drive a commercial motor vehicle safely.

Since a driver must be alert at all times, any change in his or her mental state is in direct conflict with highway safety. Even the slightest impairment in respiratory function under emergency conditions (when greater oxygen supply is necessary for performance) may be detrimental to safe driving.

There are many conditions that interfere with oxygen exchange and may result in incapacitation, including emphysema, chronic asthma, carcinoma, tuberculosis, chronic bronchitis and sleep apnea. If the ME detects a respiratory dysfunction, that in any way is likely to interfere with the driver's ability to safely control and drive a CMV, the driver must be referred to a specialist for further evaluation and therapy. Anticoagulation therapy for deep vein thrombosis and/or pulmonary thromboembolism does not preclude medical qualification once optimum dose is achieved, provided lower extremity venous examinations remain normal and the treating physician gives

a favorable recommendation.

Other Guidance

The commercial driver spends more time driving than the average individual. Driving is a repetitive and monotonous activity that demands the driver be alert at all times. Symptoms of respiratory dysfunction or disease can be debilitating and can interfere with the ability to remain attentive to driving conditions and to perform heavy exertion. Even the slightest impairment in respiratory function under emergency conditions (when greater oxygen supply may be necessary for performance) can be detrimental to safe driving.

There are many primary and secondary respiratory conditions that interfere with oxygen exchange and may result in gradual or sudden incapacitation including but not limited to:

- Asthma
- Carcinoma
- Chronic bronchitis
- Emphysema
- Obstructive sleep apnea
- Tuberculosis

In addition, medications used to treat respiratory conditions, both prescription and those available without a prescription, may cause cognitive difficulties, compound the risk for excessive daytime sleepiness (EDS), or cause other forms of incapacitation.

Antihistamine Therapy

Both prescription and over-the-counter antihistamines are used to treat respiratory tract congestion.

First generation antihistamines have sedating side effects that may occur without the driver being aware. Many first generation antihistamines are available without prescription.

Second generation antihistamines have less incidence of sedating side effects and most do not interfere with driving. Some are available without prescription.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Whether treatment with antihistamines is likely to interfere with the driver's ability to control and drive a CMV safely. The majority of antihistamines can affect an individual for 12 hours.
- Allergic rhinitis, which involves inflammation of the nasal portion of the upper respiratory tract, should rarely render the driver not medically qualified for commercial driving. The symptoms should be treated with non-sedating antihistamines or with local steroid sprays that do not interfere with driving ability.
- Does the driver have complications relating to the respiratory dysfunction and/or treatment that impairs function, such as severe conjunctivitis affecting vision, inability to keep eyes open, photophobia, uncontrolled sneezing, or sinusitis associated with severe headaches?

Allergy-related Life-threatening Conditions

The following conditions encompass systemic anaphylaxis and acute upper airway obstruction induced by allergens, genetic deficiencies, or unknown mechanisms.

- Stinging insect allergy that may result in acute anaphylaxis following a sting. Preventive measures include carrying an epinephrine injection device in the truck cab and evaluating the driver for immunotherapy.
- Hereditary or acquired angioedema due to deficiency of a serum protein controlling complement function

that may result in an acute, life-threatening airway obstruction or severe abdominal pain requiring urgent medical attention. Prevention and control can and should be accomplished with appropriate prophylactic medication.
- Acute recurrent episodes of idiopathic anaphylaxis or angioedema that may occur unpredictably in some individuals and lead to sudden onset of severe dyspnea, visual disturbance, loss of consciousness, or collapse. Similar episodes occur due to known allergens, including medications, which ordinarily can be avoided.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the individual with a history of an allergy-related life-threatening condition undertaken successful preventive measures and/or treatment?
- Are the nature and severity of the medical condition and the prevention and treatment regimen likely to interfere with the driver's ability to control and drive a CMV safely?

Asthma

Asthma is a common disease. Individuals with asthma generally exhibit reversible airway obstruction that can be treated effectively with pharmaceutical agents such as bronchodilators and corticosteroids; however, asthma ranges in severity from essentially asymptomatic to potentially fatal.

In some drivers, complications of asthma and/or side effects of therapy may interfere with safe driving. MEs should evaluate, on a case-by-case basis, to determine if the driver meets the physical qualification standards.

Hypersensitivity Pneumonitis

Hypersensitivity pneumonitis is an immune-mediated granulomatous interstitial pneumonitis that may present as an acute recurrent, subacute, or chronic illness variously manifested by dyspnea, cough, and fever. The condition may not prevent an individual from qualifying for commercial driving; however, the driver with this condition requires medical care to alleviate symptoms of dyspnea, cough, and fever. Also, the driver should avoid exposure to the causative agent (e.g., transporting the agent) because severe respiratory impairment could occur with repeated exposure.

Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is not a single disease, but a group of medical conditions characterized by chronic reduction of maximal expiratory flow most often caused by:

- Chronic bronchitis
- Emphysema

Most drivers with COPD have a combination of chronic bronchitis and emphysema. COPD has an insidious onset. The driver may have substantial reduction in lung function prior to developing dyspnea on exertion. The cardinal symptoms are:

- Chronic cough
- Sputum production
- Dyspnea on exertion

As the disease progresses, these symptoms can become incapacitating. In the majority of cases, cigarette smoking is a primary etiologic factor.

Considerations for an ME when making a physical qualification determination could include but may not be limited

to the following:

- Is the nature and severity of the medical condition (COPD) stable or likely to interfere with the driver's ability to control and drive a CMV safely?
- Does the driver have an unstable medical condition such as chronic respiratory failure, history of continuing cough with cough syncope, or hypoxemia at rest?

Obstructive Sleep Apnea (OSA)

Section 391.41(b)(5) requires that an individual must have no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with the ability to safely drive a CMV in interstate commerce. The Medical Advisory Criteria (Appendix A to Part 391, Section E), identifies OSA as one of several respiratory dysfunctions that may be detrimental to safe driving as this condition may interfere with driver alertness and may cause gradual or sudden incapacitation.

Symptoms associated with sleep apnea include but are not limited to:

- Loud snoring
- Episodes of stopping to breath for greater than 10 seconds during sleep
- Gasping for air during sleep
- Awakening with a dry mouth
- Morning headache
- Insomnia
- Excessive daytime sleepiness
- Difficulty focusing while awake
- Irritability

FMCSA reminds MEs that the Agency has no rules, or regulatory guidance, or criteria specifically on OSA screening, testing, and treatment beyond the existing requirements in 49 CFR 391.41(b)(5) and the 2000 Medical Advisory Criteria which is not mandatory. The Agency relies on the use of sound screening approaches by certified MEs to identify which individuals are at greater risk for OSA and to refer only those individuals for diagnostic testing. In screening for OSA during the medical certification process, MEs may rely on their medical judgment and may consider relevant medical best practices, and expert recommendations (e.g., The Medical Review Board (MRB)). MEs may confer with treating specialists, and request additional and current information to inform their medical certification determinations. FMCSA urges MEs to educate CMV drivers regarding their risk factors and the health and safety impact of moderate to severe OSA during the medical certification process to explain clearly to drivers the basis for their medical certification decisions.

In November 2016, the MTB and the Motor Carrier Safety Advisory Committee (MCSAC) provided joint recommendations regarding OSA for FMCSA to consider. The Medical Review Board Task 16-1 is available at https://www.fmcsa.dot.gov/advisory-committees/mrb/final-mrb-task-16-01-letter-report-mcsac-and-mrb. Below are the recommendations regarding OSA as set forth in MRB task 16-1.

General Recommendations Regarding OSA

- Certified Medical Examiners (CMEs) must screen drivers presenting for medical certification for OSA diagnostic testing in accordance with Section III.B. MEs cannot issue a medical card for more than 1 year to a driver with an established diagnosis of OSA, regardless of severity.
- A CME may certify a driver with an OSA diagnosis if the driver is being treated effectively (see Sections V through IX).
- For certification purposes, "effective treatment" or "treated effectively" is defined as the resolution of moderate to severe OSA to mild OSA or better, as determined by a board-certified sleep specialist.

No Certification

Drivers should not be certified and referred for OSA diagnostic testing if any of the following conditions exist:

- Individuals who have admitted fatigue or sleepiness during the wake period.

- Individuals who have been involved in a sleep-related motor vehicle crash or accident or near crash.
- Drivers found non-compliant with treatment per Sections V through IX should be disqualified immediately until evaluated and treated effectively.
- The CME should have the discretion to not certify any driver who appears to be at extremely high risk.
- Drivers disqualified for any of the above reasons must remain disqualified until evaluated and treated effectively.

Conditional Certification

Conditional certification should include the following elements:

- A driver determined to be at risk for OSA based on Body Mass Index (BMI) (with or without risk factors) may be certified for 90 days pending sleep study and treatment (if the driver is diagnosed with OSA).
- Within 90 days, if a driver being treated with OSA is compliant with treatment (per Sections V through IX), the driver may be certified for no more than 1 year. Drivers with a diagnosis of moderate to severe OSA should be re-certified based on documented effective treatment and compliance (see Sections V through IX).

1. Referral to OSA Diagnostic Testing Based on Screening (i.e., identifying individuals with undiagnosed OSA)
   - MRB-MRSAC Recommendation: Individuals with the following should be referred for diagnostic sleep evaluations:
     - Individuals with a BMI ≥ 40 mg/kg2.
     - Individuals with a BMI ≥ 33 and < 40 mg/kg2 in addition to and at least 3 or more of the following (For – 3; Against – 1):
       - Hypertension (treated or untreated);
       - Type 2 diabetes (treated or untreated);
       - History of stroke, coronary artery disease, or arrhythmias;
       - Micrognathia or retrognathia;
       - Loud snoring;
       - Witnessed apneas;
       - Small airway (Mallampati Classification of Class III or IV – see photos of Mallampati Classification below);
       - Neck size > 17 inches (male), 15.5 inches (female);
       - Hypothyroidism (untreated);
       - Age 42 and above; or
       - Male or post-menopausal female.
     - Note: One MRB member and several MCSAV members thought that there should be at least 4 of other risk factors in addition to BMI ≥ 33 and < 40 mg/kg2 instead of 3.
     - Sample images show what Mallampati Classification Classes I through IV throat look like[1]:

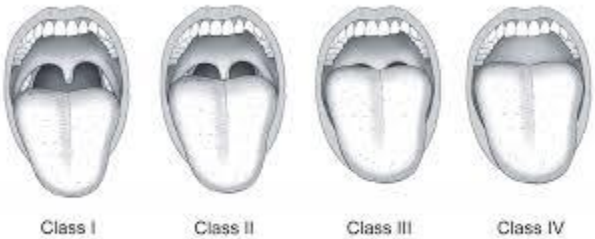


Figure 1

[1] Image is borrowed from Sleep Journal, http://www.journalsleep.org/Articles/290707.pdf (last accessed Aug. 23, 2016).

- Rationale: Based on public comments that other factors should be considered in addition to BMI, the MRB and MCSAC recommend increasing the BMI threshold for recommending a sleep study based on BMI alone to 40, but add factors that in combination (e.g., having 3 or more) could trigger a sleep study recommendation, with a BMI between 33 and 39.
    - Self-reported sleepiness during major wake periods or history of a fatigue-related crash should also be standalone triggers that require a CME to require a sleep study.
    - However, the MRB and MCSAC removed the single-vehicle crash from the list of risk factors above because members expressed concern that CMEs would not have access to crash information except for instances of self-reporting or a referral from an employer.
    - Subjective sleepiness questionnaires would not be helpful because of unlikelihood of truthfulness.
    - Note, craniofacial abnormalities and Mallampati Classification may be difficult for some CMEs to assess.
    - The MRB and MCSAC replaced the "small or recessed jaw" risk factor with "micrognathia or retrognathia" because those terms are more clinical and objective.

- Frequency of OSA Diagnostic Testing

    - MRB-MCSAC Recommendation: If a driver has had a sleep evaluation study in the past that returned a negative diagnosis for sleep apnea or a diagnosis of mild sleep apnea, indications that would warrant a recommendation for a new sleep study would be the appearance of one or more additional risk factors beyond those that required the original sleep study or a 10 percent increase in weight.
        - Caveat: If age of 42 is the only additional risk factor that has changed, there should be a 3-year period between the prior sleep study and a newly recommended sleep study.
        - One MRB member expressed concerns that not enough evidence exists regarding retesting. For this reason, he would recommend that requirement for retesting should be left at the discretion of the CME.

    - Rationale: Some public comments expressed concern with the situation where a driver was sent for a sleep study due to risk factors in the CME guidelines, the study came back negative for sleep apnea, and the driver gets referred for another sleep study the next time he/she is examined because the same risk factors are still present. It could be an unnecessary cost imposed on these drivers.

Method of Diagnosis and Severity

- Methods of diagnosis include in-laboratory polysomnography (which is preferred), as well as at-home sleep apnea testing that ensures chain of custody.
    - In-laboratory polysomnography should be considered when the clinician suspects:
        - Another medical disorder occurring during sleep (e.g., a seizure disorder, restless leg syndrome, narcolepsy, central sleep apnea), and/or
        - The individual has significant co-morbidities (e.g., neuromuscular disorder or chronic obstructive pulmonary disease (COPD)).
    - All sleep studies must be interpreted by a board-certified sleep specialist.
    - New OSA screening technologies will likely emerge.

- The driver should be tested while on usual chronic medications.
- If the CME, in consultation with the sleep specialist, determines that the in-home sleep study is inadequate, then an in-laboratory test must be performed.

Treatment: Positive Airway Pressure (PAP)

- Based on the available medical literature, PAP therapy is the preferred OSA treatment.

- Adequate PAP pressure should be established through one of the following methods:
  - Titration study with polysomnography.
  - Auto-titration system.

- A driver may be certified initially for up to 1 year (per Section III.A) if the following conditions are met:
  - The driver must document PAP use for a time period no less than 30 consecutive days (minimum records requirement – initial certification), and
  - The driver's PAP use records must demonstrate at least 4 hours per night use on 70 percent of nights (minimum compliance standard), and
  - The driver does not report excessive sleepiness during the major wake period.

- A driver may be re-certified for up to 1 year (per Section III.A) if the following conditions are met:
  - The driver must document PAP use for a time period no less than the number of days between the expiration of the driver's previous medical card and the time at which they receive their medical exam (minimum records requirement – re-certification), and
  - The driver's PAP use records must demonstrate at least 4 hours per night use on 70 percent of nights (minimum compliance standard), and
  - The driver does not report excessive sleepiness during the major wake period.

- If a driver fails to meet compliance standards, the CME may provide a 30-day certification to allow the driver to produce 30 days of consecutive PAP use data that meets the minimum compliance standard.
  - After the driver demonstrates compliance with 30 days of PAP use data, the CME may issue a 60-day certification to allow the driver to produce 60 days of consecutive PAP use data that meets the minimum compliance standard.
  - After the driver demonstrates compliance with 60 days of PAP use data, the CME may issue a 90-day certification to allow the driver to produce 90 days of consecutive PAP use data that meets the minimum compliance standard.
  - After the driver demonstrates compliance with 90 days of PAP use data, the CME may issue a 1-year certification.
  - If the driver cannot produce 30 days of consecutive PAP use data, the driver must be disqualified and cannot be re-certified until he or she is able to provide 30 days of compliant PAP use data.

Infectious Respiratory Diseases

Acute Infectious Diseases

For illnesses, such as the influenza or bronchitis, the driver should undergo proper treatment for the illness. Many of these conditions are of short duration

Atypical Tuberculosis

Atypical tuberculosis (TB) covers the same broad spectrum of symptoms and disability as TB. Many individuals are colonized, but not infected with atypical organisms, usually Mycobacterium avium - intracellulare. The broad group of atypical Mycobacteria are considered noninfectious and do not pose the problem of contagion. The major issue to be determined is the amount of disease the individual has and the extent of the symptoms. Many cases of Mycobacteria cause very few symptoms. The X-ray findings are often migratory and are associated with cough, mild hemoptysis, and sputum production.

Atypical TB is not generally treated with medication; however, if the driver is using medication, MEs should assess for side effects that are likely to interfere with safe driving ability.

The certification considerations include, but are not limited to, the amount of disease the driver has experienced and the severity of the symptoms. The potential risk is that if the disease is progressive, respiratory insufficiency may develop.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the etiology and treatment confirmed?

Pulmonary Tuberculosis

Although modem therapy has been extremely successful in controlling this disease, pulmonary tuberculosis (TB) persists in some individuals while on therapy or in individuals who are noncompliant with therapy. Advanced TB may cause respiratory insufficiency; however, risk of recurrence after adequate therapy is low.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the etiology and treatment confirmed?
- Is the driver compliant with his/her medications?

Non-infectious Respiratory Diseases

This category includes a number of diseases that cause significant long-term structural changes in the lungs and/or thorax and, therefore, interfere with the functioning of the lungs. Obvious difficulty breathing in a resting position is an indicator for additional pulmonary testing. Certification is determined by clinical evaluation.

Chest Wall Deformities

Acute or chronic chest wall deformities may affect the mechanics of breathing with an abnormal vital capacity as the predominant abnormality. Examples of these disorders include kyphosis, kyphoscoliosis, pectus excavatum, ankylosing spondylitis, massive obesity, and recent thoracic/upper abdominal surgery or injury. The driver certified with a chest wall deformity should have airway function that is not likely to interfere with the driver's ability to control and drive a CMV safely.

No specific medication exists for treatment of this category. However, individuals may be particularly sensitive to the side effects of alcohol, antidepressants, and sleeping medications, even in small doses.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the nature and severity of the medical condition (chest wall deformities) stable or likely to interfere with the driver's ability to control and drive a CMV safely?
- Does the driver have an unstable medical condition such as chronic respiratory failure, history of continuing cough with cough syncope, or hypoxemia at rest (if capillary refill is > 2 seconds).

Cystic Fibrosis

Until recently, few individuals with cystic fibrosis (CF) lived into adulthood, but with modern therapy the number of survivors continues to increase. Treatment for CF may require almost continuous antibiotic therapy and daily respiratory therapy to mobilize abnormal secretions. Chronic debilitating illness may result in limited physical strength. Some individuals have a mild form of the disease that may not be diagnosed until early adulthood.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- What is the extent of the individual's disease and symptoms?
- What is the extent of the individual's ability to obtain therapy while working?

Interstitial Lung Disease

The interstitial lung diseases (ILDs) are a heterogeneous group of diseases classified together because of common clinical X-ray, physiologic, and pathologic features. Occupational and environmental exposures are common causes of ILDs.

A history of breathlessness while driving, walking short distances, climbing stairs, handling cargo or equipment, and entering or exiting the cab or cargo space should initiate a careful evaluation of pulmonary function for any secondary conditions that may preclude physical qualification.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the nature and severity of the medical condition (ILD) stable or likely to interfere with the driver's ability to control and drive a CMV safely?
- Does the driver have an unstable medical condition such as chronic respiratory failure, history of continuing cough with cough syncope, or hypoxemia at rest (if capillary refill is > 2 seconds).

Pneumothorax

Pneumothorax (air in the pleural space) may follow trauma to the chest or may occur spontaneously.

Traumatic Pneumothorax

A medical history and physical examination will provide the details of the event but may not help to ascertain recovery. Complete recovery should be confirmed by chest X-rays performed by the treating clinician.

Spontaneous Pneumothorax

If spontaneous pneumothorax complicates an existing lung disease (e.g., emphysema), then the underlying lung disease will determine the chance of a recurrent pneumothorax and the certification outcome. Chest X-rays performed by the treating clinician (especially views in deep inspiration and full expiration) should confirm the resolution of air from the pleural space but may show some residual pleural scarring or apical blebs or bullae.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver still symptomatic or does the driver have chest pain or shortness of breath?
- What is the underlying lung disease? Would that disease otherwise preclude the driver from being physically qualified?
- Has resolution of the single spontaneous pneumothorax been confirmed?

Secondary Respiratory Conditions and Underlying Disorders

Cor Pulmonale

Cor pulmonale refers to enlargement of the right ventricle secondary to disorders affecting lung structure or function.

The major risks are:

- Dizziness
- Hypotension

- Syncope
- Common side effects of vasodilators that may interfere with driving

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Are side effects likely to interfere with the driver's ability to control and drive a CMV safely?
- Has treatment with vasodilators been shown to be adequate, effective, safe, and stable?

Rheumatic, Arthritic, Orthopedic, Muscular, Neuromuscular or Vascular Disease, and Loss or Impairment of Limbs Regulations - 49 CFR 391.41(b)(7), (b)(1), and (b)(2)

49 CFR 391.41(b)(7)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person ─

Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a commercial motor vehicle safely."

The Medical Advisory Criteria for 49 CFR 391.41(b)(7) states:

A person is physically qualified to drive a CMV if that person: Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease which interferes with the ability to control and operate a commercial motor vehicle safely.

Certain diseases are known to have acute episodes of transient muscle weakness, poor muscular coordination (ataxia), abnormal sensations (paresthesia), decreased muscular tone (hypotonia), visual disturbances and pain which may be suddenly incapacitating. With each recurring episode, these symptoms may become more pronounced and remain for longer periods of time. Other diseases have more insidious onsets and display symptoms of muscle wasting (atrophy), swelling and paresthesia which may not suddenly incapacitate a person but may restrict his/her movements and eventually interfere with the ability to safely operate a motor vehicle. In many instances these diseases are degenerative in nature or may result in deterioration of the involved area.

Once the individual has been diagnosed as having a rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease, then he/she has an established history of that disease. The ME, when examining an individual, should consider the following: The nature and severity of the individual's condition (such as sensory loss or loss of strength); the degree of limitation present (such as range of motion); the likelihood of progressive limitation (not always present initially but may manifest itself over time); and the likelihood of sudden incapacitation. If severe functional impairment exists, the driver does not qualify. In cases where more frequent monitoring is required, a certificate for a shorter period of time may be issued.

Other Guidance

Disorders of the musculoskeletal system affect driving ability and functionality necessary to perform heavy labor tasks associated with the job of commercial driving. Medical certification means the driver is physically able to safely drive and perform nondriving tasks. Drivers have a multitude of job demands. The least physically demanding part may be the actual driving. For example, the duties of a CMV driver may include loading and unloading, making multiple stops, driving cross-country and in heavy city traffic, working with load securement devices, and changing tires.

Other common driving tasks include, but are not limited to:

- Manipulating the wheel
- Shifting gears
- Maintaining pressure on the pedals
- Braking
- Monitoring traffic

Other job tasks may include, but are not limited to:

- Performing pre-trip and post-trip safety checks
- Ensuring the vehicle is loaded properly
- Securing the load
- Evaluating and managing vehicle breakdowns
- Responding to emergency situations

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver have physical limitations that may be caused by pain, weakness, decreased range of motion, or decreased strength?
- Does the driver have a missing or impaired leg, foot, toe, arm, hand or finger?
- Does the driver has sufficient power grasp and prehension of hands and fingers to maintain steering wheel grip?
- Does the driver have sufficient strength and mobility in the lower limbs to operate pedals properly?

49 CFR 391.41(b)(1)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person ─

Has no loss of a foot, a leg, a hand, or an arm, or has been granted a skill performance evaluation certificate pursuant to §391.49."

Medical Advisory Criteria for 49 CFR 391.41(b)(2):

None

49 CFR 391.41(b)(2)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person ─

Has no impairment of:

- Hand or finger which interferes with prehension or power grasping; or
- An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or
- Any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle, or
- Has been granted a skill performance evaluation certificate pursuant to§391.49."

The Medical Advisory Criteria for 49 CFR 391.41(b)(2) states:

A person who suffers loss of a foot, leg, hand or arm or whose limb impairment in any way interferes with the safe performance of normal tasks associated with operating a commercial motor vehicle is subject to the Skills Performance Evaluation Certificate Program pursuant to §391.49, assuming the person is otherwise qualified.

With the advancement of technology, medical aids and equipment modifications have been developed to compensate for certain disabilities. The Skill Performance Evaluation Certificate Program (formerly the Limb Waiver Program) was designed to allow persons with the loss of a foot or limb or with functional impairment to qualify under the Federal Motor Carrier Safety Regulations by use of prosthetic devices or equipment modifications which enable them to safely operate a commercial motor vehicle. Since there are no medical aids equivalent to the original body or limb, certain risks are still present, and thus restrictions may be included on individual Skills Performance Evaluation Certificates when a State Director for the Federal Motor Carrier Safety Administration determines they are necessary to be consistent with safety and public interest.

If the driver is found otherwise medically qualified (§391.41(b)(3) through (13)), the medical examiner must check on the Medical Examiner's Certificate, Form MCSA-5876, that the driver is qualified only if accompanied by a Skills Performance Evaluation Certificate. The driver and the employing motor carrier are subject to appropriate penalty if the driver operates a motor vehicle in interstate or foreign commerce without a current Skill Performance Evaluation certificate for his/her physical disability.

Other Guidance

Alternative physical qualification standards for the loss or impairment of limbs— 49 CFR 391.49

When the loss of (hand, foot, leg, or arm) or a fixed impairment to an extremity may interfere with the ability of the driver to operate a CMV, MEs are responsible for determining if the driver meets the physical qualification standards. A driver may be allowed to drive if the qualification requirements for an SPE Certificate under 49 CFR 391.49 are met and the driver is granted an SPE Certificate.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is there a fixed deficit of an extremity but the driver is otherwise medically qualified during the physical examination?
- Is there a valid SPE Certificate and documentation of compliance with medical requirements (required for subsequent certification with a current SPE Certificate)?
- The driver must be otherwise qualified before certification in accordance with 49 CFR 391.49.

Musculoskeletal Tests

Detection of an undiagnosed musculoskeletal finding during the physical examination may indicate the need for further testing and examination to adequately assess whether the driver meets the physical qualification standards. Diagnostic-specific testing may be required to detect the presence and/or severity of the musculoskeletal condition. The additional testing may be ordered by the ME, primary care provider, or musculoskeletal specialist (e.g., orthopedic surgeon, physiatrist).

When requesting additional evaluation, the specialist must understand the role and function of a driver; therefore, it is helpful if you include a description of the role of the driver and a copy of the applicable medical standard(s) and guidelines with the request.

Grip Strength Tests

The FMCSRs do not require any specific test for assessing grip power. Examples of grip strength tests include, but are not limited to:

- Dynamometer designed to measure grip strength.
- Sphygmomanometer used as a screening test for grip by having the applicant repeatedly squeeze the inflated cuff while noting the maximum deflection on the gauge.

Seizures, Epilepsy or Loss of Consciousness Regulation - 49 CFR 391.41(b)(8)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person ─

Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability control a commercial vehicle".

The Medical Advisory Criteria for 49 CFR 391.41(b)(8) states:

A person is physically qualified to drive a CMV if that person: Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a motor vehicle.

Epilepsy is a chronic functional disease characterized by seizures or episodes that occur without warning, resulting in loss of voluntary control which may lead to loss of consciousness and/or seizures. Therefore, the following drivers cannot be qualified:

- A driver who has a medical history of epilepsy;
- A driver who has a current clinical diagnosis of epilepsy; or
- A driver who is taking antiseizure medication,

If an individual has had a sudden episode of a nonepileptic seizure or loss of consciousness of unknown cause which did not require antiseizure medication, the decision as to whether that person's condition will likely cause loss of consciousness or loss of ability to control a motor vehicle is made on an individual basis by the ME in consultation with the treating physician. Before certification is considered, it is suggested that a 6 month waiting period elapse from the time of the episode. Following the waiting period, it is suggested that the individual have a complete neurological examination. If the results of the examination are negative and antiseizure medication is not required, then the driver may be qualified.

In those individual cases where a driver has a seizure or an episode of loss of consciousness that resulted from a known medical condition (e.g., drug reaction, high temperature, acute infectious disease, dehydration or acute metabolic disturbance), certification should be deferred until the driver has fully recovered from that condition and has no existing residual complications, and not taking antiseizure medication.

Drivers with a history of epilepsy/seizures off antiseizure medication and seizure-free for 10 years may be qualified to drive a CMV in interstate commerce. Interstate drivers with a history of a single unprovoked seizure may be qualified to drive a commercial motor vehicle in interstate commerce if seizure-free and off antiseizure medication for a 5-year or more

Other Guidance

Any driver who has had a seizure may be eligible for a Federal seizure exemption from the regulation and should consult the required criteria for an exemption as noted below. Detailed information regarding seizure exemptions can be found in the Medical Variance section of this handbook.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Per the Medical Advisory Criteria, the driver who has completed a waiting period off anticonvulsant medication and has been seizure free for 10 years, and who the ME believes given the nature and severity of the medical condition is not likely to lose consciousness to lose the ability to control a CMV, may be physically qualified to drive a CMV in interstate commerce.
- Anticonvulsive therapy is frequently used for diagnoses other than epilepsy/seizures. The ME should ask

about epilepsy/seizures in those individuals. If anticonvulsive therapy is being used to treat a diagnosis other than epilepsy/seizures, the ME should evaluate such other diagnosis under the appropriate medical qualification standard.

Acute Seizures — Systemic Metabolic Illness

Seizures are the normal reaction of a properly functioning nervous system to adverse events. In the presence of systemic metabolic illness, seizures are generally related to the consequences of a general systemic alteration of biochemical homeostasis and are not known to be associated with any inherent tendency to have further seizures. The risk for recurrence of seizures is related to the likelihood of recurrence of the inciting condition.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the underlying systemic metabolic dysfunction been corrected?
- What is the risk of recurrence?

Single Unprovoked Seizure

An unprovoked seizure occurs in the absence of an identifiable acute alteration of systemic metabolic function or acquired brain injury that affects the structural integrity of the brain. There may be a known or unknown cause of the seizure. Unprovoked seizures are common, affecting 4% of the population by age 80.

While individuals who experience a single unprovoked seizure do not have a diagnosis of epilepsy, they are clearly at a higher risk for having further seizures. Approximately 30% to 40% of patients with a first seizure will have a second unprovoked seizure. The overall rate occurrence is within the first 5 years following the seizure.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Per the Medical Advisory Criteria, to be physically qualified, the driver should be seizure free and off anticonvulsant medication for at least 5 years for an initial unprovoked seizure.
- A second unprovoked seizure, regardless of the elapsed time between seizures, may constitute a medical history of epilepsy.
- Anticonvulsants are also prescribed for other conditions that do not cause seizures, including some psychiatric disorders (for antimanic and mood-stabilizing effects) and to lessen chronic pain.
- The ME should assess what anticonvulsant medications are being used to treat the driver. If anticonvulsive therapy is being used to treat a diagnosis other than epilepsy/seizures, the ME should evaluate such other diagnosis under the appropriate medical qualification standard.

Childhood Febrile Seizures

Febrile seizures occur in children before 5 years of age and seldom occur after 5 years of age. Most of the increased risk for unprovoked seizure is appreciated in the first 10 years of life.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver's history of seizures limited to childhood febrile seizures?

Headaches, Vertigo, Dizziness

Headaches

Headache and chronic "nagging" pain may be present to such a degree that it is likely to interfere with the driver's ability to control a CMV. The medication used to treat headaches may further interfere with a driver's ability to control a CMV. Complaints should be thoroughly examined when determining whether a driver is medically qualified. Disorders with incapacitating symptoms, even if periodic or in the early stages of disease, should be evaluated carefully and on a case-by-case basis.

Chronic or chronic-recurring headache syndromes can potentially interact with other neurological diagnostic categories in two ways:

- Through complications (e.g., stroke in relation to migraine)
- As a result of associated features of a particular syndrome (e.g., the visual distortion or disequilibrium associated with a migraine attack)

The following types of headaches may interfere with the ability to drive a CMV safely:

- Migraines
- Tension-type headaches
- Cluster headaches
- Post-traumatic head injury syndrome
- Headaches associated with substances or withdrawal
- Cranial neuralgias
- Atypical facial pain

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Frequency and duration of the headaches.
- Symptoms associated with headaches such as visual disturbances, and light or noise sensitivity that are likely to cause a loss of ability to control a CMV.
- Side effects of treatment and/or medication.

Vertigo and Dizziness

The normal ability to maintain balance and orientation while operating a CMV depends upon peripheral nervous system (PNS) sensory input from three major systems and the appropriate motor integration in the central nervous system (CNS). The three PNS sensory systems are vestibular, visual, and proprioception. Inappropriate interactions of these systems or interactions within the CNS may produce an unsafe degree of vertigo or dizziness that endangers the health and safety of the driver and the public.

The most common medications used to treat vertigo are antihistamines, benzodiazepines, and phenothiazines. Special consideration should be given to the use of benzodiazepines or phenothiazines based on their side effects for the treatment of vertigo. Special consideration should be given to the possible sedative side effects of antihistamines. The ME should determine if these drugs produce sedation in the individual driver.

There are risks associated with vertigo and dizziness that must be considered by the medical examiner. Multiple conditions may affect equilibrium or balance resulting in acute incapacitation or varying degrees of chronic spatial disorientation. The ME should consider whether the vertigo and dizziness effects listed below are likely to cause any loss of ability to control a CMV. These include, but are not limited to:

- Cognitive abilities
- Judgment
- Attention
- Concentration
- Sensory or motor function

- Coordination and balance

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- What are the driver's symptoms?
- What is the frequency and duration of the symptoms?
- What is the response to treatment for diagnoses of benign positional vertigo and acute and chronic peripheral vestibulopathy?

Infections of the Central Nervous System

For a nervous system (CNS) infection consider the diagnosis and if the driver has a history of early seizures with the condition.

A driver with a current clinical CNS diagnosis or signs and symptoms of a CNS infection should have the etiology confirmed and treatment should be shown to be adequate/effective, safe, and stable by the treating medical provider.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Per the Medical Advisory Criteria, to be physically qualified the driver should be seizure free and off anticonvulsant medication for 1 year for bacterial meningitis without early seizures and for viral encephalitis without early seizures.
- Being seizure free and off anticonvulsant medication for 5 years for bacterial meningitis with early seizures.
- seizure free and off anticonvulsant medication for 10 years for viral encephalitis for early seizure
- The diagnosis of aseptic meningitis generally should not preclude driving.

Neuromuscular Diseases

As a group, neuromuscular diseases are usually insidious in onset and slowly progressive. The rate of progression will vary and is generally measured in months to years. Neuromuscular disease generally does not interfere with the ability to control a CMV.

MEs should consider the effects of neuromuscular conditions on the physical abilities of the driver to control the CMV including steering, braking, clutching, and reaction time.

MEs are ultimately responsible for determining if a driver meets the physical qualification standards to be medically certified on a case-by-case basis.

Autonomic Neuropathy

Autonomic neuropathy affects the nerves that regulate vital functions, including the heart muscle and smooth muscles.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is etiology confirmed and has treatment has been shown to be adequate/effective, safe, and stable by the treating medical provider?
- Is this cardiovascular autonomic neuropathy that causes resting tachycardia and orthostatic blood pressure (i.e. Postural Orthostatic Tachycardia Syndrome (POTS)) controlled and not likely to cause loss of consciousness or any loss of ability to control a CMV?

Conditions Associated with Abnormal Muscle Activity

This group of disorders is characterized by abnormal muscle excitability caused by abnormalities either in the nerve or in the muscle membrane.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Certain diseases are considered high risk due to abnormal excitability such as myotonia, Isaac's syndrome, and Stiff-man syndrome.
- MEs should address each diagnosis on a case-by-case basis. MEs should look to see if the etiology is confirmed and treatment has been shown to be adequate/effective and safe.

Neurological Disorders with Significant Sequelae

Disease Process	Examples
Congenital Myopathies	Central Core disease, Centronuclear myopathy, Congenital muscular dystrophy, Rod myopathy
Metabolic Muscle Disease	Homocystinuria, phenylketonuria, maple syrup urine disease
Motor Neuron Disease	Amyotrophic lateral sclerosis (ALS), Progressive bulbar palsy, pseudobulbar palsy
Neuromuscular Junction Disorder	Myasthenia gravis, Lambert-Eaton Myasthenic syndrome, Neuromyotonia
Peripheral Neuropathy	Causes: Diabetes, Autoimmune disease, Vascular disease, Medications, Alcoholism, Vitamin deficiencies
Dementia	Alzheimer's, Pick's disease, Vascular dementia, Lewy body dementia, frontotemporal dementia
Static Neurological Conditions	Static encephalopathy, Arachnoiditis

Progressive Neurological Conditions

Based on an ME's evaluation and assessment; any driver having neurological signs or symptoms may require evaluation by a neurologist for more detailed and qualified evaluation of neurological status in relation to certification for driving a CMV.

Central Nervous System Tumors

The CNS is the seat of our intelligence and emotions, and an affliction of the CNS impacts everyday functioning in a direct and visible manner. Brain tumors may alter cognitive abilities and judgment, and these symptoms may occur early in the course of the condition. Sensory and motor abnormalities may be produced both by brain tumors and by spinal cord tumors, depending on the location. CNS tumors cause either focal or generalized neurologic symptoms.

They include seizures, changes in vision, hearing, speech and swallowing. For some benign tumors, certification may be possible after successful surgical treatment.

Cerebrovascular Disease

Static neurological conditions include common cerebrovascular disease, as well as head and spinal cord injuries.

Cerebrovascular events may cause cognitive, judgment, attention, concentration, and/or motor and sensory impairments that can interfere with normal operation of a CMV. Drivers with several types of cerebrovascular disease are also at risk for recurring events that can happen without warning. Drivers with ischemic cerebrovascular disease are also at high risk for acute cardiac events, including myocardial infarction or sudden cardiac death. Recurrent cerebrovascular symptoms or cardiac events can occur with sufficient frequency to cause concern about the safe control of a CMV.

The common types of cerebrovascular disease are:

- Transient ischemic attack/minor stroke with minimal or no residual impairment
- Embolic or thrombotic cerebral infarction with moderate to major residual impairment
- Intracerebral or subarachnoid hemorrhage

Head injury recommendations include complete physical examination, neurological examination, and neuropsychological testing with normal results and the use of the seizure guidelines to determine certification status. Spinal cord injury resulting in paraplegia precludes physical qualification. Any weakness should be evaluated to determine whether the deficit interferes with the job requirements of a commercial driver.

Embolic and Thrombotic Strokes

Stroke is a major cause of long-term disability. Embolic and thrombotic cerebral infarctions are the most common forms of cardiovascular disease. Risk for complicating seizures is associated with the location of the lesions.

- Cerebellum and brainstem vascular lesions are not associated with an increased risk for seizures.
- Cortical and subcortical deficits are associated with an increased risk for seizures.
- Evaluation by a neurologist may be necessary to confirm the area of involvement.

Individuals with embolic or thrombotic cerebral infarctions will have residual intellectual or physical impairments. Fatigue, prolonged work, and stress may exaggerate the neurological residuals from a stroke. After undergoing a stroke, the greatest period of recurrence of a stroke occurs at 7-9 months. Most will recover from a stroke within 1 year of the event.

The neurological examination should include assessment of:

- Cognitive abilities
- Judgment
- Attention
- Concentration
- Vision
- Physical strength and agility
- Reaction time

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following::

- Is the driver at risk for seizures or loss of consciousness?
- Are there any neurological residuals? If present, are residuals likely to cause any loss of ability to control a CMV?

- Does the drug regimen cause side effects that are likely to cause any loss of ability to control a CMV?

Intracerebral and Subarachnoid Hemorrhages

Intracerebral hemorrhage results from bleeding into the substance of the brain and subarachnoid hemorrhage reflects bleeding primarily into the spaces around the brain. Bleeding occurs as a result of a number of conditions including hypertension, hemorrhagic disorders, trauma, cerebral aneurysms, neoplasms, arteriovenous malformations, and degenerative or inflammatory vasculopathies.

Subarachnoid and intracerebral hemorrhages can cause serious residual neurological deficits in:

- Cognitive abilities
- Judgment
- Attention
- Physical skills

The risk for seizures following intracerebral and subarachnoid hemorrhages is associated with the location of the hemorrhage:

- Cerebellum and brainstem vascular hemorrhages are not associated with an increased risk for seizures.
- Cortical and subcortical hemorrhages are associated with an increased risk for seizures.
- Appropriate evaluation by a neurologist might be required to confirm the area of involvement.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver at risk for seizures or loss of consciousness?
- Are there any neurological residuals? If present, are residuals likely to cause any loss of ability to control a CMV
- Does the drug regimen cause side effects that are likely to cause any loss of ability to control a CMV?

Multiple Sclerosis

Multiple sclerosis (MS) is a potentially disabling disease of the central nervous system (the brain, optic nerve, and spinal cord). In MS, the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between the brain and the rest of the body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

Multiple sclerosis signs and symptoms may differ greatly from person to person and over the course of the disease depending on the location of affected nerve fibers. Symptoms often affect movement, such as:

- Numbness or weakness in one or more limbs that typically occurs on one side of the body at a time, or the legs and trunk.
- Electric-shock sensations that occur with certain neck movements, especially bending the neck forward (Lhermitte sign).
- Tremor, lack of coordination, or unsteady gait.
- Partial or complete loss of vision, usually in one eye at a time, often with pain during eye movement.
- Prolonged double vision or blurry vision.
- Fatigue
- Dizziness
- The likelihood of seizures in MS patients is 3 times higher than would be expected in the general population

Most individuals with MS have a relapsing-remitting disease course. They experience periods of new symptoms or relapses that develop over days or weeks and usually improve partially or completely. These relapses are followed

by quiet periods of disease remission that can last months or even years.

The worsening of symptoms usually includes problems with mobility and gait. The rate of disease progression varies greatly among individuals with secondary-progressive MS.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver's condition likely to cause any loss of ability to control a CMV?
- Is there numbness of extremities, unsteady gait or coordination, reduction in visual acuity or problems with color recognition, or other symptoms that are likely to cause any loss of ability to control a CMV?
- Are there side effects from medications that are likely to cause any loss of ability to control a CMV?

Traumatic Brain Injury

Traumatic brain injury (TBI) or concussion is an insult to the brain caused by an external physical force, which may produce a diminished or altered state of consciousness, including coma, resulting in long-term impairment of cognitive or physical function**.**

Disturbances of behavioral or emotional functioning may result in total or partial disability and/or psychological maladjustment. Many individuals with TBI suffer loss of memory and reasoning ability, experience speech and/or language problems, and exhibit emotional and behavioral changes that may impair a driver's ability to operate a CMV safely.

TBI is classified by depth of dural penetration and duration of loss of consciousness. The three classes are:

- Severe head injury penetrates the dura and causes a loss of consciousness lasting longer than 24 hours. There is a high risk for unprovoked seizures, and the risk does not diminish over time.
- Moderate head injury does not penetrate the dura but causes a loss of consciousness lasting longer than 30 minutes, but less than 24 hours.
- Mild head injury has no dural penetration or loss of consciousness, lasting for fewer than 30 minutes. A distinction should be made between mild TBI with or without early seizures.

The length of time an individual is seizure free and off anticonvulsant medication is considered the best predictor of future risk for seizures.

The MEP and MRB recommendations (2010) on TBI include the following:

- Drivers with sustained penetrating injuries to the brain or severe TBI (loss of consciousness for at least 24 hours) should be permanently precluded from operating a CMV.
- Drivers with moderately severe TBI (i.e., loss or altered consciousness for over one hour but less than 24 hours should be precluded from operating a CMV for 3 years. Subsequent clearance should be based on a detailed assessment by an MD/DO and an evaluation by a neurologist was opined to be required as part of the assessment. If the driver is able to be cleared, certification every 6 months while under treatment is recommended.
- Drivers with mild TBI (<1 hour of loss or altered consciousness) should be medically qualified if the treating medical provider opines they are symptom free.
- Drivers treated with seizure medication were recommended to be unqualified until fulfilling seizure criteria.
- Skill performance evaluations are necessary for those with impaired extremities.
- Both the neurologist and ME were recommended to be limited to MD/DOs.

FMCSA reminds MEs that the Agency has no rule that limits MEs to evaluating certain diseases and disorders based on professional licensure.

Table- Neurological Events Waiting Periods based on MRB and MEP Recommendations

Waiting Period	Diagnosis
10 years	• History of epilepsy • Viral encephalitis with early seizures
5 years	• Single unprovoked seizure, no identified acute change, • Bacterial meningitis and early seizures • Moderate traumatic brain injury (TBI) with early seizures • Stroke with risk for seizures • Intracerebral or subarachnoid hemorrhage with risk for seizures
3 years	• Moderate TBI without seizures
2 years	• Acute seizure with acute structural central nervous system insult • Surgically removed supratentorial or spinal tumors
1 year	• Acute seizure with acute systemic/metabolic illness • Transient ischemic attack, stroke, or intracerebral or subarachnoid hemorrhages with no risk for seizures • Surgically repaired arteriovenous malformations/aneurysm with no risk for seizures • Surgically removed infratentorial meningiomas, acoustic neuromas, pituitary adenomas, and benign spinal tumors or other benign extra-axial tumors with no risk for seizures • Surgically removed Infections of the central nervous system e.g. bacterial meningitis, viral encephalitis without early seizures
Based on risk of recurrence of primary condition	• Acute seizure with acute systemic/metabolic illness

Diabetes Mellitus Regulations - 49 CFR 391.41(b)(3) and 391.46 (Insulin-Treated)

49 CFR 391.41(b)(3)

Regulation: "A person is physically qualified to drive a commercial vehicle if that person ─

Has no established medical history or clinical diagnosis of diabetes mellitus currently treated with insulin for control, unless the person meets the requirements in §391.46."

49 CFR 391.46

Regulation: Physical qualification standards for an individual with diabetes mellitus treated with insulin for control.

(a)Diabetes mellitus treated with insulin. An individual with diabetes mellitus treated with insulin for control is physically qualified to operate a commercial motor vehicle provided:

- The individual otherwise meets the physical qualification standards in §391.41 or has an exemption or skill performance evaluation certificate, if required; and
- The individual has been evaluated by the individual's treating clinician (a healthcare professional who manages, and prescribes insulin for, the treatment of the individual's diabetes mellitus as authorized by the healthcare professional's State licensing authority) and received a physical qualification examination by a certified ME listed on the National Registry.
- Evaluation by the treating clinician. Prior to the examination required by §391.45 or the expiration of a medical examiner's certificate, the individual must be evaluated by his or her "treating clinician."

    - During the evaluation of the individual, the treating clinician must complete the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870.
    - Upon completion of the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, the treating clinician must sign and date the form and provide his or her full name, office address, and telephone number on the form.
    - Physical qualification examination. At least annually, but no later than 45 days after the treating clinician signs and dates the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, an individual with diabetes mellitus treated with insulin for control must be medically examined and certified by a ME as physically qualified in accordance with §391.43 and as free of complications from diabetes mellitus that might impair his or her ability to operate a CMV safely. The ME must receive a completed Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, signed and dated by the individual's treating clinician for each required examination. The form is retained by the ME as part of the Medical Examination Report Form, MCSA-5875.

- The ME must determine whether the individual meets the physical qualification standards in §391.41 to operate a CMV. In making that determination, the ME must consider the information in the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, signed by the treating clinician and, utilizing independent medical judgment, apply the following qualification standards in determining whether the individual with diabetes mellitus treated with insulin for control may be certified as physically qualified to operate a CMV.

    - The individual is not physically qualified to operate a CMV if he or she is not maintaining a stable insulin regimen and not properly controlling his or her diabetes mellitus.
    - The individual is not physically qualified on a permanent basis to operate a CMV if he or she has either severe non-proliferative diabetic retinopathy or proliferative diabetic retinopathy.
    - The individual is not physically qualified to operate a CMV up to the maximum 12-month period under §391.45(e) until he or she provides the treating clinician with at least the preceding 3 months of electronic blood glucose self-monitoring records while being treated with insulin.
    - The individual who does not provide the treating clinician with at least the preceding 3 months of electronic blood glucose self-monitoring records while being treated with insulin is not physically qualified to operate a CMV for more than 3 months. If 3 months of compliant electronic blood glucose self-monitoring records are then provided by the individual to the treating clinician and the treating clinician completes a new Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, the ME may issue a Medical Examiner's Certificate, Form MCSA-5876, that is valid for up to the maximum 12-month period.

- Blood glucose self-monitoring records. Individuals with diabetes mellitus treated with insulin for control must self-monitor blood glucose in accordance with the specific treatment plan prescribed by the treating clinician. Such individuals must maintain blood glucose records measured with an electronic glucometer that stores all readings, that records the date and time of readings, and from which data can be electronically downloaded. A printout of the electronic blood glucose records or the glucometer must be provided to the treating clinician at the time of any of the evaluations required by this section.

- Severe hypoglycemic episodes. An individual with diabetes mellitus treated with insulin for control who experiences a severe hypoglycemic episode after being certified as physically qualified to operate a CMV is prohibited from operating a CMV, and must report such occurrence to and be evaluated by a treating clinician as soon as is reasonably practicable. A severe hypoglycemic episode is one that requires the assistance of others, or results in loss of consciousness, seizure, or coma. The prohibition on operating a CMV continues until a treating clinician:

    - Has determined that the cause of the severe hypoglycemic episode has been addressed;
    - Has determined that the individual is maintaining a stable insulin regimen and proper control of his or her diabetes mellitus; and
    - Completes a new Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870.

- The individual must retain the Form and provide it to the medical examiner at the individual's next medical examination.

Pursuant to 49 CFR 391.45(e), the maximum period of certification for an individual certified under the standards in §391.46 is 1 year.

The Medical Advisory Criteria for 49 CFR 391.41(b)(3):

None

Other Guidance

On September 19, 2018, FMCSA published the Qualifications of Drivers; Diabetic Standard final rule (83 FR 47486). As a result, FMCSA revised its regulations to permit individuals with a stable insulin regimen and properly controlled ITDM to be qualified to operate CMVs interstate commerce. For detailed information regarding this final rule, visit the FMCSA website at https://www.fmcsa.dot.gov/regulations/medical/federal-motor-carrier-safety-administration-fmcsa-eliminates-federal-diabetes.

Renal Dialysis

Renal dialysis is a medical process that becomes necessary when the normal functions of the kidneys become compromised by kidney failure. Dialysis is needed when one's own kidneys can no longer function at an optimal level and one loses 85% to 90% of kidney function. Dialysis can be done in a hospital, in a dialysis clinic, or at home depending on medical condition. There are two types of dialysis which include hemodialysis and peritoneal dialysis.

- Hemodialysis uses a machine and is sometimes called an artificial kidney. The individual usually goes to a special clinic for treatments several times a week.
- Peritoneal dialysis uses the lining of the abdomen, called the peritoneal membrane, to filter the blood.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Evaluate on a case-by-case basis to determine if the driver meets requirements for safe driving.
- Assess the driver's symptoms post dialysis. Is the driver having excessive fatigue, muscle cramps, or hypotension? Fatigue is very common during the period right after the dialysis is performed.

Mental Disorders Regulation - 49 CFR 391.41(b)(9):

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person—

Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his/her ability to drive a commercial motor vehicle safely."

The Medical Advisory Criteria for 49 CFR 391.41(b)(9)

A person is physically qualified to drive a commercial motor vehicle if that person: Has no mental, nervous, organic or functional disease or psychiatric disorder likely to interfere with ability to drive a motor vehicle safely.

Emotional or adjustment problems contribute directly to an individual's level of memory, reasoning, attention, and judgment. These problems often underlie physical disorders. A variety of functional disorders can cause drowsiness, dizziness, confusion, weakness or paralysis that may lead to incoordination, inattention, loss of functional control and susceptibility to accidents while driving. Physical fatigue, headache, impaired coordination, recurring physical ailments and chronic "nagging" pain may be present to such a degree that certification for commercial driving is inadvisable. Somatic and psychosomatic complaints should be thoroughly examined when determining an individual's overall fitness to drive. Disorders of a periodically incapacitating nature, even in the early stages of development, may warrant not certifying the individual.

Many bus and truck drivers have documented that "nervous trouble" related to neurotic, personality, or emotional or adjustment problems is responsible for a significant fraction of their preventable accidents. The degree to which an individual is able to appreciate, evaluate and adequately respond to environmental strain and emotional stress is critical when assessing an individual's mental alertness and flexibility to cope with the stresses of CMV driving.

When examining the driver, MEs should keep in mind that individuals who live under chronic emotional upsets may have deeply ingrained maladaptive or erratic behavior patterns. Excessively antagonistic, instinctive, impulsive, openly aggressive, paranoid or severely depressed behavior greatly interfere with the driver's ability to drive safely. Those individuals who are highly susceptible to frequent states of emotional instability (schizophrenia, affective psychoses, paranoia, anxiety or depressive neuroses) may warrant not being qualified. Careful consideration should be given to the side effects and interactions of medications in the overall qualification determination.

Other Guidance

Conditions Associated with Psychological Disorders

Safe and effective operation of a CMV requires high levels of physical strength, skill, and coordination as well as the ability to maintain adequate attention and react promptly and appropriately to traffic, emergency situations, and other job-related stressors.

Risk factors associated with personality disorders can interfere with driving ability by compromising:

- Attention, concentration, or memory affecting information processing and the ability to remain vigilant to the surrounding traffic and environment
- Visual-spatial function (e.g., motor response latency)
- Impulse control, including the degree of risk taking
- Judgment, including the ability to predict and anticipate
- Ability to problem solve (i.e., executive functioning), including the ability to respond to

simultaneous stimuli in a changing environment when potentially dangerous situations could exist

The driver with**:**

- Active psychotic disorder may exhibit unpredictable behavior and poor judgment.
- Mood disorder may, during a
    - Manic episode exhibit grandiosity, impulsiveness, irritability, and aggressiveness.
    - Depressive episode exhibit slowed reaction time and poor judgment.
- Personality disorders, depending on severity and type, may exhibit inflexible and maladaptive behaviors and have an increased crash rate.

An ME's fundamental task during the psychological assessment is to establish whether a driver has a psychological disease or disorder that increases the risk for periodic, residual, or insidious onset of cognitive, behavioral, and/or functional impairment that endangers public safety.

The examination is based on information provided by the driver (history), objective data (physical examination), and additional testing if requested by the medical examiner. An MEs assessment should reflect physical, psychological, and environmental factors.

Medical certification depends on a comprehensive medical assessment of overall health and informed medical judgment about the impact of single or multiple conditions on the whole person.

It is the degree of inappropriateness and the cumulative effect of driver presentation and interaction that provide a cue that a driver may require more in-depth mental health evaluation.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Are there signs of alcoholism or problem drinking, drug abuse, or tremors?
- Are there potential negative effects of medication use, including over-the-counter medications, while driving?

Categories of Risk Associated with Psychological Disorders

There are three categories of risk associated with psychological disorders.

- The **mental disorder**, including symptoms and/or disturbances in performance that are an integral part of the disorder and may pose hazards for driving.
- **Residual symptoms** occurring after time-limited reversible episodes or initial presentation of the full syndrome that can interfere with safe CMV driving.
- **Psychopharmacology**, as many psychotropic medications can compromise performance to the degree that CMV driving would be hazardous.

The recommendations do not support automatic exclusion from CMV driving based solely on the diagnosis. Typically, the more serious the diagnosis, the more likely it is that the driver may not be medically qualified. Careful consideration should also be given to the side effects and interactions of medications in the overall qualification determination.

Many of the medications used to treat psychological disorders have effects and/or side effects that render driving unsafe.

Psychological Disorder Therapies

Antidepressant Therapy

MEs should do a case-by-case assessment of drivers treated with antidepressant medication. Evidence indicates that some antidepressant drugs significantly interfere with skills performance and that these medications vary widely in the degree of impact. With long-term use of antidepressants, many drivers will develop a tolerance to the sedative effects. MEs must consider both the specific medicine used and the pertinent characteristics of the driver.

First generation antidepressants have consistently been shown to interfere with safe driving. First generation antidepressants include Tricyclics.

Second generation antidepressants have fewer side effects and are generally safe; however, these medications can still interfere with safe driving and require case-by-case evaluation. Second generation antidepressants include selective serotonin reuptake inhibitors (SSRIs); serotonin and norepinephrine reuptake modulators; and unicyclic aminoketones. MEs should consider the underlying reason for treatment when determining certification.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the medication has been shown to be adequate/effective, safe, and stable?
- Are the risks for this driver from first generation antidepressants?
- What is the severity of the underlying mental disorders?

The 391.41 CMV Driver Medication Form, MCSA-5895, requests additional information regarding medications prescribed by the treating healthcare provider, as an optional, voluntary tool for MEs to use in determining if a driver is medically qualified under 49 CFR 391.41. The form can be found on FMCSA's website at: https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/regulations/medical/83586/39141-cmv-driver-medication-form-mcsa-5895.pdf.

Antipsychotic Therapy

Antipsychotic drugs include typical and atypical neuroleptics. These agents are used to treat schizophrenia, psychotic mood disorders, and some personality disorders. Some cases of nausea and chronic pain are also treated with antipsychotic agents. Many of the conditions are associated with behaviors and symptoms such as impulsiveness, disturbances in perception and cognition, and an inability to sustain attention. Often the behaviors and symptoms are only partially corrected by neuroleptics.

Neuroleptics can cause a variety of side effects that can interfere with driving, such as motor dysfunction that affects coordination and response time, sedation, and visual disturbances (especially at night).

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Has the medication been shown to be adequate/effective, safe, and stable?
- What is the dose and duration of drug therapy?
- What is the severity of the underlying mental disorder?

The ME could use the 391.41 CMV Driver Medication Form, MCSA-5895, to get specific information regarding medications.

Anxiolytic and Sedative Hypnotic Therapy

Anxiolytic drugs used for the treatment of anxiety disorders and to treat insomnia are termed sedative hypnotics. Studies have demonstrated that benzodiazepines, the most commonly used anxiolytics and sedative hypnotics, impair skills performance in pharmacologically active dosages.

The effects of benzodiazepines on skills performance generally also apply to virtually all non- benzodiazepines

sedative hypnotics, although the impairment is typically less profound.

Barbiturates and other sedative hypnotics related to barbiturates cause greater impairment in performance than benzodiazepines. Epidemiological studies indicate that the use of benzodiazepines and other sedative hypnotics are probably associated with an increased risk of automobile crashes but the medical examiner should evaluate on a case-by-case basis.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the hypnotic short-acting (half-life of less than 5 hours), the lowest effective dose, and used for a short period (less than 2 weeks)?
- Does the driver have symptoms or side effects that are likely to interfere with the driver's ability to drive a CMV safely?
- Is the anxiolytic non-sedating?

The ME could use the 391.41 CMV Driver Medication Form, MCSA-5895, to get specific information regarding medications.

Central Nervous System Stimulant Therapy

Psychiatric uses of CNS stimulants (e.g., dextroamphetamine, methylphenidate, and pemoline) include primary treatment of narcolepsy and adult attention deficit hyperactivity disorder (ADHD), both of which are associated with psychomotor deficits related to sleepiness or hyperactivity.

CNS stimulants may also be used as adjuncts to antidepressants. CNS stimulants improve performance on simple tasks, but not on tasks requiring complex intellectual functions. For some conditions (e.g., fatigue, brain damage, adult ADHD), low doses of CNS stimulants can enhance:

- Vigilance and attention
- Performance of simple tasks (not complex intellectual functions)

Before qualifying a driver with ADHD who is using a CNS stimulant could use the 391.41 CMV Driver Medication Form, MCSA-5895, to get specific information regarding medications.

Electroconvulsive Therapy

Electroconvulsive therapy (ECT) is sometimes used to treat depression. ECT produces an acute organic mental syndrome characterized by confusion, disorientation, and loss of short-term memory even with low-dose, brief pulse, unilateral treatment. Clinical experience has shown that acute side effects usually resolve rapidly and almost invariably within a few months.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the driver symptom free following a course of ECT?
- Is the undergoing maintenance ECT?

Lithium Therapy

Lithium (Eskalith) is used for the treatment of bipolar and depressive disorders. Studies suggest that there is little evidence of lithium interfering with driver skill performance.

Considerations for an ME when making a physical qualification determination could include but may not be limited

to the following:

- Does the driver have symptoms or side effects that are likely to interfere with the driver's ability to drive a CMV safely?
- Does the driver have lithium levels that are maintained in the therapeutic range?
- What is the severity of the underlying mental disorder?

Adult Attention Deficit (Hyperactivity) Disorder

Children who had attention deficit hyperactivity disorder (ADHD) or attention deficit disorder, (ADD) often continue to show signs of the disorder into adulthood.

Essential features of adult ADHD or ADD include age-inappropriate levels of inattention, impulsiveness, and hyperactivity. Symptoms include mood lability, low frustration tolerance, and explosiveness.

Risks to safe driving associated with adult ADHD or ADD include co-morbid antisocial or borderline personality disorder and/or other disorders, side effects of medication, and a high incidence of substance abuse; however, a significant percentage of individuals with adult ADHD or ADD show a moderate to marked degree of improvement on central nervous system stimulant medication.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver comply with the treatment program?
- Does the driver tolerate treatment without side effects that are likely to interfere with the driver's ability to drive a CMV safely (e.g., sedation or impaired coordination, substantially compromised judgment, suicidal behavior or ideation, or a personality disorder that is repeatedly manifested by overt, inappropriate acts)?

Bipolar Mood Disorder

Mood disorders are characterized by their pervasiveness and symptoms that interfere with the ability of the individual to function socially and occupationally. The two major groups of mood disorders are bipolar and depressive disorders. Bipolar disorder is characterized by one or more manic episodes and is usually accompanied by one or more depressive episodes.

The onset of manic episodes may be sudden or gradual. Symptoms include excessively elevated, expansive, or irritable moods. During a manic episode, judgment is frequently diminished, and there is an increased risk of substance abuse. Some episodes may present with delusions or hallucinations.

Treatment for bipolar mania may include lithium and/or anticonvulsants to stabilize mood and antipsychotics when psychosis manifests.

Symptoms of a depressive episode include loss of interest and motivation, poor sleep, appetite disturbance, fatigue, poor concentration, and indecisiveness. A severe depression is characterized by psychosis, severe psychomotor retardation or agitation, significant cognitive impairment (especially poor concentration and attention), and suicidal thoughts or behavior. In addition to the medication used to treat mania, antidepressants may be used to treat bipolar depression.

Other psychiatric disorders, including substance abuse, frequently coexist with bipolar disorder.

The certification determination is not based on diagnosis alone. The actual ability to drive a safely should not be determined solely by diagnosis but instead by an evaluation focused on function and relevant history.

Considerations for an ME when making a physical qualification determination could include but may not be

limited to the following:

- How long has the driver been symptom free following a nonpsychotic major depression unaccompanied by suicidal behavior?
- How long has the driver been symptoms free following a severe depressive episode, a suicide attempt, or a manic episode?
- Does the driver tolerate treatment without side effects that are likely to interfere with the driver's ability to drive a CMV safely (i.e., sedation or impaired coordination)?
- Does treatment include first-generation antidepressants, which includes Tricyclics that may interfere with the driver's ability to drive a CMV safely?

Major Depression

Major depression consists of one or more depressive episodes that may alter mood, cognitive functioning, behavior, and physiology. Symptoms may include a depressed or irritable mood, loss of interest or pleasure, social withdrawal, appetite and sleep disturbance that lead to weight change and fatigue, restlessness and agitation or malaise, impaired concentration and memory functioning, poor judgment, and suicidal thoughts or attempts. Hallucinations and delusions may also develop, but they are less common in depression than in manic episodes.

Most individuals with major depression will recover; however, some will relapse within 5 years. A significant percentage of individuals with major depression will commit suicide; the risk is the greatest within the first few years following the onset of the disorder.

Although precipitating factors for depression are not clear, many patients experience stressful events in the 6 months preceding the onset of the episode. In addition to antidepressants, other drug therapy may include anxiolytics, antipsychotics, and lithium. Prophylactic treatment may prevent or shorten future episodes. Electroconvulsive therapy is also used to treat some cases of severe depression.

Determination is not based on diagnosis alone. The actual ability to drive s CMV safely should not be determined solely by diagnosis but instead by an evaluation focused on function and relevant history.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- How long has the driver been symptom free following a nonpsychotic major depression unaccompanied by suicidal behavior?
- How long has the driver been symptom free following a severe depressive episode, a suicide attempt, or a manic episode?
- Does the driver tolerate treatment without side effects that are likely to interfere with the driver's ability to drive a CMV safely(i.e., sedation or impaired coordination)?

Post-Traumatic Stress Disorder (PTSD)

Post-traumatic stress disorder is an anxiety disorder that develops following frightening, stressful, or distressing life events. The disorder can be associated with behavior changes, mood swings, and suicidal ideations. There are two primary types of treatment for PTSD consisting of medications and psychotherapy. The most common and effective types of psychotherapy used to treat PTSD include exposure therapies (cognitive behavioral or cognitive processing therapy. Most psychotherapy approaches help individuals with this condition are time limited and can be successfully completed by most individuals with mild to medium severity in a year. Some individuals will take less time, and more severe forms of PTSD can often take longer to treat.

Medications are nearly always used in conjunction with psychotherapy for PTSD. Medications can lessen some of the symptoms but won't relieve an individual's feelings related to the original trauma. Medication options include antidepressants such as the SSRI antidepressants. These types of antidepressants decrease anxiety, depression, and

panic. They may also reduce aggression, impulsivity, and suicidal thoughts. Benzodiazepines are often prescribed for rapid relief of anxiety but are also associated with dependence. Available data reveals that although benzodiazepines can provide immediate relief of symptoms, over time that can exacerbate PTSD. Other treatment for PTSD includes antipsychotic medications and mood stabilizers.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver comply with the treatment program?
- Does the driver tolerate treatment without side effects that are likely to interfere with the driver's ability to drive a CMV safely, as suicidal behavior or ideation?

Antisocial Personality Disorders

Any personality disorder characterized by excessive, aggressive, or impulsive behaviors warrants further inquiry for risk assessment to establish whether such traits are serious enough to adversely affect behavior in a manner that interferes with safe driving.

The ME should consider whether the disorder is severe enough to have repeatedly been manifested by overt acts that interfere with safe operation of a commercial vehicle.

Determination is not based on diagnosis alone. The actual ability to drive a CMV safely should not be determined solely by diagnosis but instead by an evaluation focused on function and relevant history.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Is the etiology confirmed and has treatment been shown to be adequate, effective, safe, and stable?
- Does the driver have prominent negative symptoms, including substantially compromised judgment, attentional difficulties, suicidal behavior or ideation, or a personality disorder that is repeatedly manifested by overt, inappropriate acts?

Schizophrenia and Related Psychotic Disorders

Schizophrenia is the most severe condition within the spectrum of psychotic disorders. Characteristics of schizophrenia include psychosis (e.g., hearing voices or experiencing delusional thoughts), negative or deficit symptoms (e.g., loss of motivation, apathy, or reduced emotional expression), and compromised cognition, judgment, and/or attention. There is also an increased risk for suicide.

Related conditions include:

- Schizophreniform disorder
- Brief reactive psychosis
- Schizoaffective disorder
- Delusional disorder

Risks for Commercial Driving with Psychotic Disorders

Clinical experience shows that a person who is actively psychotic may behave unpredictably in a variety of ways. For example, a person who is hearing voices may receive a command to do something harmful or dangerous, such as self-mutilation. Delusions or hallucinations may lead to violent behavior. Antipsychotic therapy may cause sedation and motor abnormalities (e.g., muscular rigidity or tremors) and impair coordination, particularly as the medication is being initiated and doses are adjusted.

Determination may not be based on diagnosis alone. The actual ability to drive a CMV safely should not be

determined solely by diagnosis but instead by an evaluation focused on function and relevant history. However, it is unlikely that individuals who are highly susceptible to frequent states of emotional instability (schizophrenia, affective psychoses, paranoia, anxiety or depressive neuroses) would satisfy the physical qualification standard.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- How long has the driver been symptom free if the individual has a brief reactive psychosis or schizophreniform disorder?
- How long has the driver been symptom free if the individual has any other psychotic disorder?
- Does the individual have a diagnosis of schizophrenia or active psychosis?
- Does the driver tolerate treatment without side effects that are likely to interfere with the driver's ability to drive a CMV safely (i.e., sedation or impaired coordination)?

Drug Abuse and Alcoholism Regulations - 49 CFR 391.41(b)(12) and (b)(13)

49 CFR 391.41(b)(12)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person -

(1) Does not use any drug or substance identified in 21 CFR 1308.11 Schedule I, an amphetamine, a narcotic, or any other habit-forming drug.
(2) Does not use any non-Schedule I drug or substance that is identified in the other Schedules in 21 CFR part 1308 except when the use is prescribed by a licensed medical practitioner, as defined in §382.107, who is familiar with the driver's medical history and has advised the driver that the substance will not adversely affect the driver's ability to safely operate a commercial motor vehicle."

The Medical Advisory Criteria for 49 CFR 391.41(b)(12) states:

A person is physically qualified to drive a CMV if that person does not use any drug or substance identified in 21 CFR 1308.11 Schedule I, an amphetamine, a narcotic, or other habit-forming drug. A driver may use a non-Schedule I drug or substance that is identified in the other Schedules in 21 CFR part 1308 if the substance or drug is prescribed by a medical practitioner licensed to prescribe controlled substances who: Is familiar with the driver's medical history, and assigned duties; and has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a CMV.

The intent of the medical certification process is to medically evaluate a driver to ensure that the driver has no medical condition which interferes with the safe performance of driving tasks on a public road. If a driver uses an amphetamine, a narcotic or any other habit-forming drug, it may be cause for the driver to be found medically unqualified. If a driver uses a Schedule I drug or substance, it will be cause for the driver to be found medically unqualified. Motor carriers are encouraged to obtain a practitioner's written statement about the effects on transportation safety of the use of a particular drug.

A test for controlled substances is not required as part of this biennial certification process. The Federal Motor Carrier Safety Administration or the driver's employer should be contacted directly for information on controlled substances and alcohol testing under Part 382 of the FMCSRs.
The ME could use the 391.41 CMV Driver Medication Form, MCSA-5895, to get specific information regarding medications.

The term "uses" is designed to encompass instances of prohibited drug use determined by a physician through established medical means. This may or may not involve body fluid testing. If body fluid testing takes place, positive test results should be confirmed by a second test of greater specificity. The term "habit-forming" is intended to include any drug or medication generally recognized as capable of

becoming habitual, and which may impair the user's ability to operate a commercial motor vehicle safely.

The driver is medically unqualified for the duration of the prohibited drug(s) use and until a second examination shows the driver is free from the prohibited drug(s) use. Recertification may involve a substance abuse evaluation, the successful completion of a drug rehabilitation program, and a negative drug test result. Additionally, given that the certification period is normally two years, the medical examiner has the option to certify for a period of less than 2 years if this medical examiner determines more frequent monitoring is required.

49 CFR 391.41(b)(13)

Regulation: "A person is physically qualified to drive a commercial motor vehicle if that person—

Has no current clinical diagnosis of alcoholism."

The Medical Advisory Criteria for 49 CFR 391.41(b)(13) states:
A person is physically qualified to drive a CMV if that person: Has no current clinical diagnosis of alcoholism.

The term "current clinical diagnosis of" is specifically designed to encompass a current alcoholic illness or those instances where the individual's physical condition has not fully stabilized, regardless of the time element. If an individual shows signs of having an alcohol-use problem, he or she should be referred to a specialist. After counseling and/or treatment, he or she may be considered for certification.

Other Guidance

Drug and Alcohol Use

There is overwhelming evidence that drug and alcohol use and/or abuse interferes with driving ability. Although there are separate standards for alcoholism and other drug problems, much substance abuse is polysubstance abuse, especially among persons with antisocial and some personality disorders.

Alcohol and other drugs cause impairment through both intoxication and withdrawal. Episodic abuse of substances by commercial drivers that occurs outside of driving periods may still cause impairment during withdrawal. However, when in remission, alcoholism is not disabling unless transient or permanent neurological changes have occurred.

Alcohol and other drug dependencies and abuse are profound risk factors associated with personality disorders that may interfere with safe driving.

Even in the absence of abuse, the commercial driver should be made aware of potential effects on driving ability resulting from the interactions of drugs with other prescription and nonprescription drugs and alcohol (e.g., alcohol enhances hypoglycemic effects of sulfonylureas in individuals with diabetes).

The Office of Drug & Alcohol Policy & Compliance oversees intermodal (e.g., Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration, Federal Transit Administration, and Federal Aviation Administration) drug and alcohol testing programs in accordance with the Omnibus Transportation Employee Testing Act of 1991.

MEs are not prohibited from conducting non-DOT drug/alcohol testing as a part of the physical qualification examination for persons who have admitted drug/ alcohol use to assist the ME with making a qualification determination. The non-DOT drug and or alcohol testing process does not require the use of a certified Substance Abuse Professional under the provisions of Part 40 or Part 382 of the FMCSRs. Drivers may be required to provide documentation from a professional qualified to render a substance abuse evaluation or an opinion concerning successful treatment.

See the FMCSA Drug and Alcohol Program at https://www.fmcsa.dot.gov/regulations/drug-alcohol-testing-program for more information about the regulations and guidelines governing CMV drivers.

If a driver has a current drinking problem, clinical alcoholism, or uses a Schedule I drug or other substance such as an amphetamine, a narcotic, or any other habit-forming drug, the effects and/or side effects may interfere with driving performance, thus endangering public safety.

The examination is based on information provided by the driver (history), objective data (physical examination), and any additional testing if deemed necessary by the ME. The MEs assessment should reflect physical, psychological, and environmental factors.

Medical certification depends on a comprehensive medical assessment of overall health and informed medical judgment about the impact of single or multiple conditions on the whole person.

The effects and/or side effects of scheduled medications may interfere with safe driving. The driver may experience an altered state of alertness, attention, or even temporary confusion. Scheduled medications may cause physical symptoms such as hypotension, sedation, or increased bleeding that can interfere with task performance or put the driver at risk for gradual or sudden incapacitation. Combinations of medications and/or supplements may have synergistic effects that potentiate side effects, causing gradual or sudden incapacitation.

The demands of commercial driving may complicate adherence to prescribed dosing intervals and precautions. Irregular meal timing, periods of sleep deprivation or poor sleep quality, and irregular or extended work hours can alter the effects of medicine and contribute to missed or irregular dosing. Physical demands may increase pain and the need for medication.

Three types of medications and substances may be used by the commercial driver:

- Prescription
- Over-the-counter (OTC)
- Supplements and herbs

Every year, more medications are available without prescription and provider supervision. Nonprescription medications are not necessarily safe to use while driving.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver use alcohol regularly and frequently?
- Does the driver uses narcotics or other habit forming drugs?
- Is there potential for possible interactions with nonscheduled and over-the counter medications.
- Does the driver have signs of alcoholism or drug abuse, such as tremors, needle track marks, or multiple skin eruptions?

About 49 CFR Part 382. Alcohol and Drug Rules

The purpose of this part is to establish programs designed to help prevent crashes and injuries resulting from the misuse of alcohol or use of controlled substances by drivers of CMVs.

49 CFR 382.207 Pre-duty use of alcohol

“No driver shall perform safety sensitive functions within 4 hours after using alcohol.”

"No employer having actual knowledge that a driver has used alcohol within four hours shall permit a driver to perform or continue to perform safety-sensitive functions."

The effects of alcohol on behavior vary with the individual and with the concentration of alcohol in the individual's blood. The level of alcohol achieved in the blood depends on the amount of alcohol consumed and the time period over which it was consumed.

EXAMPLE: 150 lb. person – each drink adds 0.02% to blood alcohol concentration and each hour that passes removes 0.01% from it.

Key Points About 49 CFR Part 382

Who must be tested?

- All drivers, including part-time, holding a commercial driver's license (CDL) and operating CMVs (greater than 26,000 combined gross vehicle weight rating, or transporting 16 passengers or more passengers, or placarded hazardous materials) on the public roadways must be U.S. Department of Transportation (DOT) drug and alcohol tested. This means any driver required to possess a CDL, including:
    - Drivers employed by Federal, State, and local government agencies
    - Owner operators
    - Equivalently licensed drivers from foreign countries

When is drug and/or alcohol testing required?

- **Pre-employment:**
    - Drug testing is required; however, a driver may be exempted from testing if the driver was in a testing program within the last 30 days and tested within the last 6 months or in a program for the previous 12 months.
    - Alcohol testing is **not** required; however, the employer may require alcohol testing before the driver can perform safety-sensitive functions. The employer may make the job offer contingent upon passing an alcohol test.

- **Post-accident** drug and/or alcohol testing is required for all fatal crashes and when the driver is cited for a moving traffic violation.
- **Reasonable suspicion** testing is conducted when a trained supervisor or company official observes behavior or appearance that is characteristic of drug and/or alcohol misuse.
- **Random** drug and/or alcohol testing is conducted on a random, unannounced basis just before, during, or just after performance of safety-sensitive functions.
- **Return-to-duty** and **follow-up** testing is conducted when an individual who has violated the prohibited drug and/or alcohol conduct standards returns to performing safety-sensitive duties.

Employer responsibilities include:

- Implementing and conducting drug and alcohol testing programs
- Providing a list of substance abuse professionals (SAPs)
- Ensuring that the driver who is returning to a safety-sensitive position has complied with SAP recommendations
- Conducting follow-up testing to monitor that the driver is compliant with DOT alcohol conduct guidelines and abstaining from unauthorized drug use

Employer responsibilities do not include:

- Providing SAP evaluations
- Paying for driver SAP evaluation, education, or treatment

Alcoholism

Except where absolute criteria exist (i.e., a current clinical diagnosis of alcoholism), the ME makes the final determination as to whether the driver meets the physical qualification standards for driver certification.

MEs should use whatever tools or additional assessments they feel are necessary. If the driver shows signs of alcoholism, MEs should have the driver consult a specialist for further evaluation.

A driver MUST submit to alcohol testing if there is reasonable suspicion that the U.S. Department of Transportation (DOT) prohibitions concerning alcohol are violated. Suspicion MUST be based on specific observations concerning driver behavior, speech, or body odor.

Interpretation for 49 CFR 391.41

When an interstate driver tests positive for alcohol or controlled substances under Part 382, the driver is not required to be medically examined again or to obtain a new Medical Examiner's Certificate, Form MCSA-5876, provided the driver is seen by a SAP who evaluates the driver and does not make a clinical diagnosis of alcoholism. The SAP provides the driver with documentation allowing the driver to return to work.

If the SAP determines that alcoholism exists, the driver is not qualified to drive a CMV in interstate commerce. The ultimate responsibility rests with the motor carrier to ensure the driver is medically qualified and to determine whether a new medical examination should be completed.

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Does the driver have residual physical impairment due to alcohol that would preclude physical qualification under the applicable standard?
- Has the driver successfully completed counseling and/or treatment?

Drug Abuse

All drug test results are reviewed and interpreted by a physician who is certified as an MRO. When there is a positive result, the MRO contacts the driver and conducts an interview to determine if there is an alternative medical explanation for finding drugs in the urine specimen. The MRO notifies the employer only after determining that a positive test result was caused by unauthorized driver use of a controlled substance.

All urine specimens are tested for:

- Marijuana metabolites
- Cocaine metabolites
- Amphetamines
- Opioids
- Phencyclidine (PCP)

A driver MUST be removed from safety-sensitive duty when the driver has a positive drug test result caused by the unauthorized use of a controlled substance. To be returned to safety-sensitive duties the driver MUST:

- Be evaluated by a substance abuse professional (SAP)
- Comply with recommended rehabilitation
- Have a negative result on a return-to-duty drug test

Considerations for an ME when making a physical qualification determination could include but may not be limited to the following:

- Drivers taking Schedule I controlled substances, including marijuana (even if in a State that allows medicinal use), cannot be physically qualified.
- Drivers taking scheduled amphetamines and narcotics, as well as other drugs and substances on Schedules II through V, may be medically certified if they are prescribed by a medical practitioner licensed to prescribe controlled substances who is familiar with the driver's medical history, and such medical practitioner has advised the driver that the substance will not adversely affect the driver's ability to safely operate a CMV. However, the final decision on certification is made by the ME who determines whether a drug used by a driver that is listed on Schedules II through V will impair the driver's ability to safely operate a CMV.
- Assess for side effects including dizziness, hypotension, sedation, depressed mood, cognitive deficits, decreased reflex responses, or unsteadiness.

The 391.41 CMV Driver Medication Form, MCSA-5895, requests additional information regarding controlled medications prescribed by a licensed medical practitioner as an optional, voluntary tool for MEs to use in determining if a driver is medically qualified under 49 CFR 391.41 (b)(12). The form can be found on FMCSA's website at: https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/regulations/medical/83586/39141-cmv-driver-medication-form-mcsa-5895.pdf

About 21 U.S.C. Sec. 812 Schedules of Controlled Substances

49 CFR 391.41(b)(12) identifies driver use of Schedule I drugs as precluding medical qualification. The 1970 Comprehensive Drug Abuse Prevention and Control Act provides the framework for the current Drug Enforcement Administration (DEA) drug schedules.

There are five schedules of controlled substances identified in 21 U.S.C. Sec. 812, I, II, III, IV, and V. The drug schedules are based on addiction potential and medical use but not on side effects. The lists are updated annually.

Key Points About 21 USC Sec. 812

Schedule I
These drugs have no currently accepted medical use in the United States, have a high abuse potential, and are not considered safe, even under medical supervision. These substances include many opiates, opiate derivatives, and hallucinogenic substances. Heroin and marijuana are examples of Schedule I drugs. The exception criteria of 49 CFR 41(b)(12)(ii) does not apply to any Schedule I substance.

Schedule II
These drugs have currently accepted medical uses but have a high abuse potential that may lead to severe psychological or physical dependence. Schedule II drugs include opioids, depressants, and amphetamines. The opioids in Schedule II include natural opioids (e.g., morphine) and synthetic opioids (e.g., OxyContin).

Schedules III - V
These drugs have decreased potential for abuse than preceding schedules. Abuse may lead to moderate or low physical dependence or high psychological dependence. Schedule III drugs include tranquilizers. Schedule IV drugs include drugs such as chloral hydrate and phenobarbital. Schedule V drugs have the lowest potential for abuse and include narcotic compounds or mixtures.

Side effects are not part of the DEA schedule rating criteria. Therefore, a substance can have little risk for

addiction and abuse but still have side effects that interfere with driving ability.

Medical Examination Report Form, , MCSA-5875

MEs must perform the driver physical qualification examination in accordance with the requirements outlined in, and record the findings on, the Medical Examination Report Form, MCSA-5875.

Driver certification is determined based on whether or not the driver meets the physical qualification standards in 49 CFR 391.41(b).

The purpose of this overview is to familiarize you with the sections and data elements on the Medical Examination Report Form, MCSA-5875, including, but not limited to:

- Organization of the form
- Required signatures
- Minimum documentation

Completing the Medical Examination Report Form
Section 1- Driver Information

This section is filled out by the driver which consists of Personal Information, the Driver's Health History, and the CMV Driver's Signature.

By signing the Medical Examination Report Form, MCSA-5875, the driver:

- Certifies that information is "accurate and complete"
- Acknowledges that providing inaccurate or false information or omitting information could:
    - Invalidate the examination and any certificate issued based on it
    - Result in civil or criminal penalties against the driver

Section 2 - Examination Report

This section is filled out by the ME which consists of a Driver Health History Review, Testing, the Physical Examination, and Medical Examiner's Determination for either the Federal or State regulations.

- **Driver Health History Review**: The ME is responsible to review answers provided by the driver in the driver health history section and discuss any "yes" and "not sure" responses. In addition, MEs should be sure to compare the medication list to the health history responses ensuring that the medication list matches the medical conditions noted. FMCSA also provides a voluntary form (391.41 CMV Driver Medication Form, MCSA-5895) that MEs may use to obtain additional information from a driver's prescribing provider regarding medications prescribed and underlying conditions. MEs should explore with the driver any answers that seem unclear and record any information that the driver omitted.

  The ME conducting the driver's physical qualification examination is required to complete the entire medical examination even if the ME detects a medical condition that the ME considers will preclude physical qualification, such as deafness. MEs are expected to determine the driver's physical qualification for operating a CMV. Thus, if the ME finds a condition that precludes physical qualification for which a driver may apply for and receive an FMCSA medical variance, that must be recorded on the driver's Medical Examiner's Certificate, Form MCSA-5876, as well as on the Medical Examination Report Form, MCSA-5875.

- **Testing**:
    - Pulse rate and rhythm, height, and weight: MEs should record these as indicated on the form

- Blood Pressure: MEs should record the blood pressure (systolic and diastolic) of the driver being examined. A second reading is optional and should be recorded if found to be necessary.
- Urinalysis: MEs should record the numerical readings for the specific gravity, protein, blood, and sugar.
- **Vision:** The current vision standard is provided on the form. When other than the Snellen chart is used, give test results in Snellen-comparable values. When recording distance vision, MEs should use 20 feet as normal. MEs should record the vision acuity results and indicate if the driver can recognize and distinguish among traffic control signals and devices showing red, green, and amber colors; has monocular vision; has been referred to an ophthalmologist or optometrist; and if documentation has been received from an ophthalmologist or optometrist.
- **Hearing:** The current vision standard is provided on the form. When other than the Snellen chart is used, give test results in Snellen-comparable values. When recording distance vision, MEs should use 20 feet as normal. MEs should record the vision acuity results and indicate if the driver can recognize and distinguish among traffic control signals and devices showing red, green, and amber colors; has monocular vision; has been referred to an ophthalmologist or optometrist; and if documentation has been received from an ophthalmologist or optometrist.
- Hearing: The current hearing standard is provided on the form. Hearing can be tested using either a whisper test or audiometric test. MEs should record the test results in the corresponding section for the test used.

- **Physical Examination**: MEs should check the body systems for abnormalities and indicate normal or abnormal for each body system listed. MEs should discuss any abnormal answers in detail in the space provided and indicate whether it would affect the driver's ability to operate a CMV.

In this next section, MEs should complete either the Federal or State determination, **NOT both**.

- Medical Examiner Determination (Federal): MEs should use this section for examinations performed in accordance with the FMCSRs (49 CFR 391.41-391.49). MEs should complete the ME determination section completely. When determining a driver's physical qualification, please note that English language proficiency (49 CFR part 391.11: General qualifications of drivers) is not factored into that determination.

    - Does not meet standards: Select this option when a driver is determined to be not qualified and provide an explanation of why the driver does not meet the standards in 49 CFR 391.41.
    - Meets standards in 49 CFR 391.41; qualifies for 2-year certification: Select this option when a driver is determined to be qualified and will be issued a Medical Examiner's Certificate, Form MCSA-5876, for 2 years.
    - Meets standards, but periodic monitoring is required: Select this option when a driver is determined to be qualified but needs periodic monitoring and provide an explanation of why periodic monitoring is required. Select the corresponding time frame that the driver is qualified and if selecting other, specify the time frame.
    - Determination that driver meets standards: Select all categories that apply to the driver's certification (e.g., wearing corrective lenses, accompanied by a waiver/exemption, driving within an exempt intracity zone, etc.).
    - Determination pending: Select this option when more information is needed to make a qualification decision and specify a date, on or before the 45 day expiration date, for the driver to return to the medical exam office for follow-up. This will allow for a delay of the qualification decision for up to 45 days. If the disposition of the pending examination is not updated via the National Registry on or before the 45 day expiration date, FMCSA will notify the ME and the driver in writing that the examination is no longer valid and that the driver is required to be examined and certified to operate a CMV in interstate commerce. Please note that when selecting this category, CMV drivers are eligible to continue operating if they have time left on the their previous certification. Therefore, this should be factored into the decision to place a driver in a determination pending status.
    - MER amended: A Medical Examination Report Form, MCSA-5875, may only be amended while in determination pending status for situations where new information (e.g., test results, etc.) has been received or there has been a change in the driver's medical status since the initial examination, but prior to a final qualification determination. Select this option when a Medical

Examination Report Form, MCSA-5875, is being amended; provide the reason for the amendment, sign and date. In addition, initial and date any changes made on the Medical Examination Report Form, MCSA-5875. A Medical Examination Report Form, MCSA-5875, cannot be amended after an examination that has been in determination pending status for more than 45 days or after a final qualification determination has been made. In these situations, the driver is required to obtain a new physical examination and a new Medical Examination Report Form, MCSA-5875.

- Incomplete examination: Select this when the physical examination is not completed for any reason (e.g., driver decides they do not want to continue with the examination and leaves) other than situations outlined under determination pending.

- Medical Examiner information, signature and date: Provide your name, address, phone number, occupation, license, certificate, or registration number and issuing state, national registry number, signature and date.

- Medical Examiner's Certificate Expiration Date: Enter the date the driver's Medical Examiner's Certificate (MEC) expires.

- Medical Examiner Determination (State): MEs should use this section for examinations performed in accordance with the FMCSRs (49 CFR 391.41-391.49) with any applicable State variances (which will only be valid for intrastate operations). MEs must complete the ME determination section completely.

  1. Does not meet standards in 49 CFR 391.41 with any applicable State variances: Select this option when a driver is determined to be not qualified and provide an explanation of why the driver does not meet the standards in 49 CFR 391.41 with any applicable State variances.
  2. Meets standards in 49 CFR 391.41 with any applicable State variances: Select this option when a driver is determined to be qualified and will be issued a Medical Examiner's Certificate, Form MCSA-5876, valid for 2 years.

- Meets standards, but periodic monitoring is required: Select this option when a driver is determined to be qualified but needs periodic monitoring and provide an explanation of why periodic monitoring is required. Select the corresponding timeframe that the driver is qualified and if selecting other, specify the time frame.

- Determination that driver meets standards: Select all categories that apply to the driver's certification (e.g., wearing corrective lenses, accompanied by a waiver/exemption, etc.).

- Medical Examiner information, signature and date: Provide your name, address, phone number, occupation, license, certificate, or registration number and issuing state, National Registry number, Medical Examiner's Certificate, Form MCSA-5876, expiration date, signature, and date.

If updating an existing exam, MEs must resubmit the new exam results, via the Medical Examination Results Form, MCSA-5850, to the National Registry, and the most recent dated exam will take precedence.

Determine Certification Status — ME Responsibility

FMCSA relies on the ME, to assess and determine if the CMV driver meets the physical qualification standards outlined in 49 CFR 391.41. In some cases the ME will also consider any reports and recommendations from the primary care provider and/or specialists treating the driver to supplement the physical qualification examination and ensure adequate medical assessment, but it is the ME's responsibility for making a physical qualification determination and issuing a Medical Examiner's Certificate, Form MCSA-5876, to physically qualified drivers.

The ME should complete the physical qualification examination to determine if the driver has one or more conditions that will preclude physical qualification. Some conditions are reversible and the driver may take actions that will enable him/her to meet the physical qualification standards if treatment is successful.

The ME's certification decision is limited to the certification options printed on the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876. The maximum time for which and ME can certify a driver is 2 years. However, MEs can certify for a period of time less than 2 years at their discretion.

Certification Determinations:

- Does not meet standards.
- Meets standards in 49 CFR 391.41; qualifies for a 2-year certificate.
- Meets standards, but periodic monitoring is required.
- Determination Pending - Clarification of "**Determination pending**": This is used when the ME believes that the driver is able to operate a CMV but additional information is required to make a physical qualification determination. A driver who is placed in "Determination pending" may continue to operate a CMV if he/she has valid Medical Examiner's Certificate, Form MCSA-5876, that has not yet expired. Once prior certification expires, he/she cannot drive a CMV. A driver who does not have a valid Medical Examiner's Certificate, MCSA-5876, at the time of being placed in "Determination pending" is not permitted to drive a CMV until he/she receives a valid Medical Examiner's Certificate, MCSA-5876. A new examination is not required when the driver returns on or before the 45-day expiration date.
- Incomplete Examination.

When an ME determines that a driver meets the physical qualification standards to operate a CMV, the ME should issue a Medical Examiner's Certificate, Form MCSA-5876.

When an ME determines that a driver has a health history or condition that does not meet the physical qualification standards or the driver is placed in determination pending, or the examination is incomplete, the ME must NOT issue a Medical Examiner's Certificate, Form MCSA-5876.

Certify

MEs determine when a driver meets the physical qualification standards. MEs also determine when the driver must repeat the physical qualification examination for certification. Although MEs cannot exceed the maximum certification period of two years, they are never required to certify a driver for a certification interval longer than what they deem necessary to adequately monitor whether the driver meets the physical qualification standards.

Certify — Determine Certification Interval Overview

Regulation: Maximum certification 2 years (391.45(b)

When an ME determines that the driver meets all the physical qualification standards, the ME can certify the driver for the maximum 2 years.

- MEs should mark the "Meets standards in 49 CFR 391.41; qualifies for 2-year certificate" box.
- MEs should calculate the expiration date from the date that the Medical Examiner's Certificate, Form MCSA-5876, is signed and issued to the driver and enter it on the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876.

Certify — With Periodic Monitoring (less than 2 years)

The length of any driver certification is up to the discretion of the ME. MEs may certify a driver for less than 2 years when they determine they need to monitor the driver more frequently. However, MEs are never required to certify a driver for a certification interval longer than what they deem necessary. MEs may consider information provided from other specialists but the physical qualification determination is that of the ME. The certification period could be longer or shorter based on the ME's assessment and medical judgment.

- MEs should mark the "Meets standards, but periodic monitoring required due to__" box and specify the reason for periodic monitoring.
- MEs should indicate the length of certification by checking 3 or 6 months, 1 year, or other and enter the time frame (e.g., 1 month).
- MEs should calculate the expiration date from the date that the Medical Examiner's Certificate, Form MCSA-5876, is signed and issued to the driver and enter it on the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876

Certify - Require Driver to Have a Federal Medical Exemption

FMCSA generally issues three types of medical exemptions to drivers that meet the Federal exemption criteria:

- Vision Exemptions to individuals with monocular vision
- Seizure Exemptions
- Hearing Exemptions

The ME should complete the physical qualification examination of the driver and determine if the driver meets the other physical qualification standards. MEs make a determination that the driver is not qualified unless the driver applies for and obtains a Federal medical exemption. It is then up to the driver to apply for and obtain the exemption.

By selecting "Accompanied by a waiver/exemption" and specifying the type of Federal medical exemption, the ME certifies that the driver:

- Fails to meet either the standard for the medical exemption specified
- Meets all other physical qualification requirements cited in 49 CFR 391.41(b)
- Is required to obtain the Federal medical exemption for the Medical Examiner's Certificate, Form MCSA-5876, issued to be valid

To learn more about the Federal medical exemption programs, visit the Medical Variances section at the end of this handbook or visit https://www.fmcsa.dot.gov/medical/driver-medical-requirements/driver-exemption-programs.

Certify - Require Driver to Meet Alternate Physical Qualification Standards for the Loss or Impairment of Limbs - 49 CFR 391.49 (SPE Certificate)

Regulation: Maximum certification 2 years when driver must meet alternate standards and obtain an SPE Certificate.

By selecting the driver is qualified when accompanied by an SPE Certificate, the ME is certifying that the driver:

1. Fails to meet one or more of the limb requirements of 49 CFR 391.41(b)(1) or (2).
2. Meets all other physical requirements cited in 49 CFR 391.41(b).
3. Must have both a valid SPE Certificate and Medical Examiner's Certificate, Form MCSA-5876, to operate a CMV in interstate commerce.

MEs make a determination that the driver is not qualified unless accompanied by an SPE Certificate. It is then up to the driver to apply for and obtain an SPE Certificate. The SPE Certificate is issued for up to 2 years. A copy of the Medical Examination Report Form, MCSA-5875, is required with initial and renewal SPE applications. Individuals can download a copy of the SPE Certificate package from the FMCSA website at https://www.fmcsa.dot.gov/medical/driver-medical-requirements/skill-performance-evaluation-certificate-program. If additional information is needed, individuals should contact the SPE service center for their area. A listing of the service centers and contact information can also be found by going to the link above.

Certify – By Operation of 49 CFR 391.64 (Grandfathered)

Regulation: Maximum certification of 1 year

- Applies to a small number of individuals who participated in the Federal Vision Waiver Study Program conducted prior to the implementation of the current Federal Vision Exemption Program.

- By selecting the "By Operation of 49 CFR 391.64," option, the ME certifies that the driver:
    - Presented a letter from FMCSA explaining that the driver participated in the Federal Vision Waiver Study Program in the early 1990's and was allowed to continue to operate CMVs in interstate commerce (i.e., grandfathered), or presented a valid Medical Examiner's Certificate, Form MCSA-5876, showing the driver was certified by operation of 49 CFR 391.64.
    - Provided the ME with a copy of the results of an evaluation conducted by an ophthalmologist or optometrist as outlined in 49 CFR 391.64(b).
    - Continues to meet the requirements of 49 CFR 391.64.

Certify – Driving Within an Exempt Intracity Zone (49 CFR 391.62)

Regulation: Maximum certification of 1 year

- Intracity zones are geographical areas defined in the regulations.
- The provisions of §§391.11(b)(1) and 391.41(b)(1) through (b)(11) do not apply to a person who:
    - Was otherwise qualified to operate and operated a commercial motor vehicle in a municipality or exempt intracity zone thereof throughout the one-year period ending November 18, 1988;
    - Meets all the other requirements of §391.62;
    - Operates wholly within the exempt intracity zone (as defined in 49 CFR 390.5);
    - Does not operate a vehicle used in the transportation of hazardous materials in a quantity requiring placarding under regulations issued by the Secretary under 49 U.S.C. chapter 51.; and
    - Has a medical or physical condition which:
        - Would have prevented such person from operating a commercial motor vehicle under the Federal Motor Carrier Safety Regulations contained in Subchapter B;
        - Existed on July 1, 1988, or at the time of the first required physical examination after that date; and
        - The examining physician has determined this condition has not substantially worsened since July 1, 1988, or at the time of the first required physical examination after that date.

- By selecting the "Driving within an exempt intracity zone (See 49 CFR 391.62)" option, the ME certifies that the driver:
    - Operates wholly within the exempt intracity zone (as defined in 49 CFR 390.5).

Do Not Certify

MEs must not certify a driver who does not meet one or more of the physical qualification standards outlined in 49 CFR 391.41. MEs should complete the physical qualification examination of the driver and discuss with him/her the reason(s) for not certifying the driver and any steps that can be taken to meet the physical qualification standards.

Do Not Certify — Discuss and Document Decision

MEs must not certify the driver who:

- Fails to meet a physical qualification standards cited in the regulations
- Has provided information the ME believes is not true or correct (e.g. concealing a history of seizures)

Documenting Certification

- Select "Does not meet standards."
- Note the reason for not certifying the driver
- Document the discussion with the driver explaining the rationale for the decision not to certify which would be considered as part of best practices.
- Do NOT issue a Medical Examiner's Certificate, Form MCSA-5876.
- Upload the certification result to the National Registry by submitting a CMV Driver Medical Examination Results Form, MCSA-5850 through the MEs National Registry account.

Discussion Regarding Certification Decision

MEs should discuss the certification decision with the driver and ensure that the driver understands the certification decision.

When the ME:

Certifies — discussion may include:

- Reason for periodic monitoring and shortened examination interval
- Additional requirements associated with certification
- Medical Examiner's Certificate, Form MCSA-5876, expiration information:
  - Occurs at midnight on the expiration date.
  - Has no grace period.

Does not certify — discussion may include:

- Reason for not certifying
- Steps that can be taken to meet the physical qualification standards.

Medical Variances

In the Medical Examiner's Certification Integration final rule (80 FR 22790, April 23, 2015), FMCSA defined medical variances as exemptions, and grandfathered exemptions issued by FMCSA. The section below provides details regarding FMCSA's medical variances.

49 CFR 381.300 Exemptions

- An exemption is temporary regulatory relief from one or more FMCSR given to a person or class of persons subject to the regulations, or who intend to engage in an activity that would make them subject to the regulations.
- An exemption provides the person or class of persons with relief from the regulations for up to 5 years, and may be renewed.
- Exemptions may only be granted from one or more of the requirements contained in the specific parts and sections of the FMCSRs. Part 391 (Qualifications of Drivers) is one of them.
- Although the Agency may grant exemptions for up to 5 years, FMCSA policy is to grant medical exemptions involving the physical qualification standards in the FMCSRs for a 2-year period to align with the maximum duration of a driver's medical certification.

Federal Vision Exemption Program

The Federal vision exemption is issued to individuals with monocular vision that meet the established criteria based on an individual assessment of each application by FMCSA. FMCSA defines monocular vision as (1) in the better eye, distant visual acuity of at least 20/40 (with or without corrective lenses) and field of vision of at least 70 degrees in the horizontal meridian, and (2) in the worse eye, either distant visual acuity of less than 20/40 (with or without corrective lenses) or field of vision of less than 70 degrees in the horizontal meridian, or both. The ME should complete the physical qualification examination of the driver with monocular vision and determine if the driver meets the other physical qualification standards. The driver with monocular vision who meets the other physical qualification standards may apply for a Federal vision exemption. However, drivers with diagnosed with colorblindness are not eligible for an exemption under the program. The vision exemption is issued for a maximum of 2 years and is renewable.

The driver must be otherwise qualified under 49 CFR 391.41(b)(1)-(13) or hold another valid medical exemption to legally operate a CMV in interstate commerce. Provisions of the vision exemption include an annual medical examination and an eye examination by an ophthalmologist or an optometrist.

This means that at the annual physical qualification examination, the driver should provide the ME with a copy of the specialist eye examination report before the ME is able issue a Medical Examiner's Certificate, Form MCSA-5876, for the driver that meets the other physical qualification standards. The ME may certify the driver **for up to 1 year**. The ME should mark the "accompanied by" exemption checkbox and write "vision" to identify the type of Federal exemption. The driver may call (703) 448-3094 to obtain an application for a Federal vision exemption or go to https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/regulations/medical/driver-medical-requirements/10451/vision-exemption-package-0918.pdf.

The employing motor carrier is responsible for ensuring that the driver has the required documentation before driving a CMV. The driver is responsible for carrying both the Federal vision exemption and the Medical Examiner's Certificate, Form MCSA-5876, while driving and keeping both current.

Federal Hearing Exemption

The Federal hearing exemption is issued to individuals that do not meet the hearing standard in the FMCSRs. FMCSA conducts an individual assessment of each application submitted for consideration.

The driver must be otherwise qualified under 49 CFR 391.41(b)(1)-(13) or hold another valid medical exemption to legally operate a CMV in interstate commerce.

At the physical qualification examination, the ME may certify the driver for up to 2 years. The ME should mark the "accompanied by" exemption checkbox and write "hearing" to identify the type of Federal exemption. Please note that both the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876, should NOT reflect both "Qualified only when wearing a hearing aid" and "Accompanied by a waiver/exemption hearing." If the individual meets the hearing standard with the use of hearing aids, the individual is not required to obtain a Federal hearing exemption and the form should only indicate "Qualified only when wearing a hearing aid." This means that the individual must wear hearing aids while operating a CMV. The driver may call (202) 366-4001 to obtain an application for a Federal hearing exemption or go to https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/regulations/medical/driver-medical-requirements/57236/hearingapplication111219.pdf.

The employing motor carrier is responsible for ensuring that the driver has the required documentation before driving a CMV. The driver is responsible for carrying both the hearing exemption and the Medical Examiner's Certificate, Form MCSA-5876, while driving and keeping both current.

Federal Seizure Exemption

The Federal seizure exemption is issued to individuals with a diagnosis of seizures or epilepsy. FMCSA conducts an individual assessment of each application submitted for consideration.

The driver must be otherwise qualified under 49 CFR 391.41(b)(1)-(13) or hold another valid medical exemption to legally operate a CMV in interstate commerce. Provisions of the Federal seizure exemption include criteria that should be met. The driver should meet the following criteria to be considered:

Seizure disorder/Epilepsy diagnosis: The driver should be seizure-free for 8 years, on or off medication. If the driver is taking anti-seizure medication(s), the plan for medication should be stable for a period of 2 years. Stable means no changes in medication, dosage, or frequency of medication administration. Recertification for drivers with an epilepsy diagnosis should be performed every year.

Single unprovoked seizure: If there is a single unprovoked seizure (i.e., there is no known trigger for the seizure), the driver should be seizure-free for 4 years, on or off medication. If the driver is taking anti-seizure medication (s), the plan for medication should be stable for 2 years. Recertification for drivers with a single unprovoked seizure should be performed every 2 years.

Single provoked seizure: If there is a single provoked seizure (i.e., there is a known reason for the seizure), the Agency will consider specific criteria that fall into the following two categories; low risk factors for recurrence and moderate-to-high risk factors for recurrence

Examples of low-risk factors for recurrence include:

- Seizures caused by medications
- A non-penetrating head injury with loss of consciousness less than< or equal= to 30 minutes
- A brief loss of consciousness not likely to recur while driving
- Metabolic derangement not likely to recur
- Seizures caused by alcohol or illicit drug withdrawal

Examples of high-risk factors for recurrence include:

- A non-penetrating head injury with loss of consciousness or amnesia greater than 30 minutes, or a penetrating head injury
- Intracerebral hemorrhage associated with a stroke or trauma
- Infections
- Intracranial hemorrhage
- Post-op complications from brain surgery with significant brain hemorrhage
- Brain tumor
- Stroke

At the physical qualification examination, the ME may certify the driver for up to 2 years.

The ME should mark the "accompanied by" exemption checkbox and write "seizure" to identify the type of Federal exemption. The driver may call (202) 366-4001 to obtain an application for a Federal seizure exemption or go to https://www.fmcsa.dot.gov/medical/driver-medical-requirements/new-seizure-applicant-doc-email-version.

The employing motor carrier is responsible for ensuring that the driver has the required documentation before driving a CMV. The driver is responsible for carrying both the seizure exemption and the Medical Examiner's Certificate, Form MCSA-5876, while driving and keeping both current**.**

Skill Performance Evaluation (SPE) Certificate

Alternative physical qualification standards for the loss or impairment of limbs — 49 CFR 391.49

Skill Performance Evaluation (SPE) Certificates are for individuals with loss of (hand, foot, leg, or arm) or a

fixed impairment to an extremity that may interfere with their ability to operate a CMV.

The driver must be otherwise qualified under 49 CFR 391.41(b)(1)-(13) or hold another valid medical exemption to legally operate a CMV in interstate commerce.

MEs are responsible for determining if the driver meets the physical qualification standards. A driver may be allowed to drive if the qualification requirements for an SPE Certificate under 49 CFR 391.49 are met and the driver is granted an SPE Certificate by FMCSA.

At the physical qualification examination, the ME may certify the driver for up to 2 years. The ME should mark the "accompanied by" an SPE Certificate. The driver may contact the FMCSA Service Center in the driver's area for more information. A list of the Service Centers and application can be found on the FMCSA website at https://www.fmcsa.dot.gov/medical/driver-medical-requirements/skill-performance-evaluation-certificate-program.

The employing motor carrier is responsible for ensuring that the driver has the required documentation before driving a CMV. The driver is responsible for carrying both the SPE Certificate and the Medical Examiner's Certificate, Form MCSA-5876, while driving and keeping both current.

Qualified by Operation of 49 CFR 391.64: "Grandfathered"

Grandfathered exemptions are for drivers who participated in FMCSA's Vision Waiver Study Program that ran from 1992 to 1996. At the conclusion of the waiver program, 2,656 drivers received a letter confirming participation in the program and granting a continued exemption from the monocular vision requirement, as long as the driver continues to meet the other physical qualification standards and can meet the vision qualification requirements with one eye. The driver who was grandfathered must have an annual medical examination and an eye examination by an ophthalmologist or optometrist.

At the annual medical examination, the driver should present to the medical examiner the letter from FMCSA identifying the driver as a participant in the vision waiver program and a copy of the specialist eye examination report. MEs should certify the qualified driver for **1 year** and issue an Medical Examiner's Certificate, Form MCSA-5876, with the "Qualified by operation of 49 CFR 391.64" checkbox marked.