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Federal Motor Carrier Safety Administration (FMCSA)

NATIONAL REGISTRY OF CERTIFIED MEDICAL EXAMINERS

Medical Examiner's Handbook

2022 Edition

U.S. Department of Transportation

Federal Motor Carrier Safety Administration

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INTRODUCTION

This handbook provides information about regulatory requirements and guidance to Medical Examiners (MEs) listed on the Federal Motor Carrier Safety Administration's (FMCSA's) National Registry of Certified Medical Examiners (National Registry) who perform physical qualification examinations of interstate commercial motor vehicle (CMV) drivers. Other healthcare professionals, such as treating providers and specialists, may provide additional medical information or consultation, but the ME ultimately decides whether the driver meets the physical qualification standards of FMCSA.

Established under the Agency's statutory authority, FMCSA's safety regulations concerning the physical qualifications of drivers are legally binding on those subject to their provisions. FMCSA has the authority to compel compliance with regulations.

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

Unlike regulations, however, the recommendations and other guidance in this handbook do not have the force and effect of law and are not meant to bind MEs, drivers, or the public in any way. Rather, such guidance itself is only advisory and not mandatory. Separately, the handbook also provides information 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.

All expert reports referenced in this handbook are disseminated under the sponsorship of FMCSA in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof. These expert reports reflect the views of the authors, who are responsible for the facts and accuracy of the data presented at the time the reports were originally released. The reports do not reflect the official policy of FMCSA, nor do they constitute regulatory standards. Rather, they provide the ME medical information to consider when making a physical qualification determination. For current regulatory standards, please refer to FMCSA's regulations.

FMCSA provides answers to frequently asked questions at https://www.fmcsa.dot.gov/faq.

The 2022 edition of the Medical Examiner's Handbook replaces all previous handbook editions. MEs should not rely on any previously published editions of the handbook, including any drafts available on FMCSA's Medical Review Board website, as a source of Agency guidance.

1 THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION

1.1 About FMCSA

The Motor Carrier Safety Improvement Act of 1999 transferred the Office of Motor Carriers from the Federal Highway Administration (FHWA) and established FMCSA, effective on January 1, 2000. FMCSA is one of nine administrations within the United States Department of Transportation (DOT) and is the Federal agency responsible for regulating safety of CMV drivers. FMCSA's mission is to reduce crashes, injuries, and fatalities involving large trucks and buses. FMCSA partners with industry, safety advocates, labor, and State and local governments to keep our nation's roadways safe and to improve CMV safety through regulation, education, enforcement, research, and technology.

1.2 The Medical Examiner

The Federal Motor Carrier Safety Regulations (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 to conduct physical qualification examinations 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 use and be proficient in the medical protocols necessary to adequately perform the required medical examination of a CMV operator (see 49 CFR 391.43(c)). Only MEs 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.

1.3 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, as defined in 49 CFR 390.5T, in interstate commerce that:

- Has a gross vehicle weight or weight rating, or a gross combination vehicle weight or weight rating, of 10,001 pounds 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;
- 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 (on and after March 22, 2023, qualification under this section is no longer available);
- 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 who does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard, or both, in §391.41(b)(10)(i) and who has obtained a Medical Examiner's Certificate, Form MCSA-5876, under the standards in §391.44, 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; and
- Beginning June 23, 2025, any person found by an ME not to be physically qualified to operate a CMV under §391.43(g)(3).

Section 391.45 provides the only circumstances in the FMCSRs that require an ME to medically certify a driver for less than the maximum 24 months.

1.4 Driver Examination Forms

This section describes the forms used in the driver examination process. More detailed information and guidance on completing some of the forms are provided in section 6 below. The following five forms are used as part of the physical qualification examination of CMV drivers:

1.4.1 Medical Examination Report Form, MCSA-5875

The Medical Examination Report Form, MCSA-5875, captures information regarding the driver's health history, physical qualification examinations details, and qualification determinations. 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, in accordance with 49 CFR 391.43(f). 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 relating to a physical qualification examination available to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after a request.

1.4.2 Medical Examiner's Certificate, Form MCSA-5876

The Medical Examiner's Certificate, Form MCSA-5876, provides the driver proof of certification. 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, 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 relating to a physical qualification examination 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. The expiration date has no grace period. The driver must be examined and certified to continue to legally drive a CMV in interstate commerce.

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

The electronic CMV Driver Medical Examination Results Form, MCSA-5850, notifies FMCSA of physical qualification results. MEs must 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.

1.4.4 Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870

The Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, is required as a part of the medical certification process under §391.46 for individuals diagnosed with insulin-treated diabetes mellitus. The treating clinician of the individual diagnosed with insulin-treated diabetes mellitus must complete the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, attesting that the individual has a stable insulin regimen and properly controlled diabetes. Individuals diagnosed with insulin-treated diabetes mellitus and seeking medical certification must provide the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, to the ME within 45 days of completion of the form by the treating clinician. If applicable to the physical qualification examination, the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, becomes part of the physical examination record and must be made available by MEs to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after a request.

1.4.5 Vision Evaluation Report, Form MCSA-5871

The Vision Evaluation Report, Form MCSA-5871, is required as part of the medical certification process under §391.44 for individuals who do not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard in §391.41(b)(10)(i), or both. An ophthalmologist or optometrist must complete the Vision Evaluation Report, Form MCSA-5871, prior to the individual's physical qualification examination. The examination conducted by the ME must begin not more than 45 days after an ophthalmologist or optometrist signs and dates the Vision Evaluation Report, Form MCSA-5871. If applicable to the physical qualification examination, the Vision Evaluation Report, Form MCSA-5871, becomes part of the physical examination record and must be made available by MEs to an authorized representative of FMCSA, or an authorized Federal, State, or local enforcement agency representative, within 48 hours after a request.

1.4.6 391.41 CMV Driver Medication Form, MCSA-5895 (Optional)

The 391.41 CMV Driver Medication Form, MCSA-5895, is an optional, voluntary tool that can be used to request additional information regarding medications prescribed by the treating provider. It can also be used as a tool by MEs to request additional information from the prescribing licensed medical practitioner to determine if a driver is physically qualified under 49 CFR 391.41(b)(12).

With the exception of the electronic CMV Driver Medical Examination Results Form, MCSA-5850, that is available to MEs through their National Registry account, 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.

1.5 Privacy and the Physical Qualification Examination

Like all medical providers, MEs are subject to applicable Federal and State medical privacy laws regarding 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 United States 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 which is available at https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html. MEs should consult the Privacy Rule and HHS summary on specific issues.

In general, the ME cannot provide protected health information to another person without the consent of the driver being examined. Any authorization to disclose protected health information must be HIPAA compliant. Subject to limited exceptions, the Privacy Rule gives the driver being examined the right to obtain a copy of the driver's protected health information maintained by or for the ME for as long as the information is maintained (45 CFR 164.524). This right is personal to the driver examined and is not dependent on who paid for or requested the physical qualification examination. For example, if the employing motor carrier paid for a driver's physical qualification examination, the driver still has the right to a copy of the Medical Examination Report Form, MCSA-5875, from the ME performing the examination.

The Privacy Rule summary outlines several situations when protected health information may be disclosed without the consent of the driver 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 that requests it (49 CFR 391.43(g)(2)(i)). Another regulation requires the ME to make any records and information maintained for drivers examined in connection with a physical qualification examination 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 driver examined.

An example of a circumstance when the Privacy Rule would allow protected health information to be disclosed without the consent of the driver examined would be if an ME determines, in good faith, that disclosure of a driver's protected health information is necessary to prevent or lessen a serious and imminent threat to the health or safety of a person or the public, and the disclosure otherwise satisfies the HIPAA Privacy Rules (45 CFR 164.512(j)). FMCSA has statutory authority to investigate 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 an

ME needs to disclose a driver'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 driver's consent.

1.6 Regulations Summary — Code of Federal Regulations

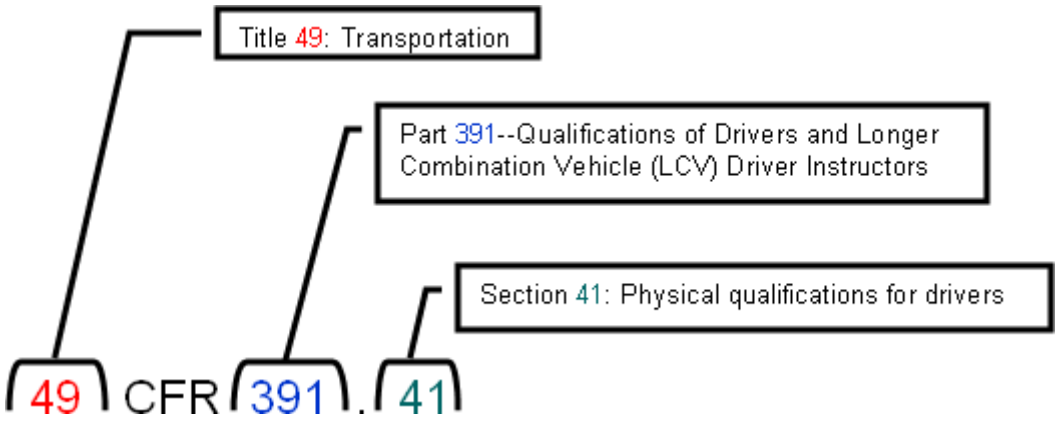
The Code of Federal Regulations (CFR) is the codification of the rules published in the Federal Register by the executive departments and agencies of the Federal government. Divided into 50 titles, it represents broad areas subject to Federal regulation. Title 49 pertains to Transportation. Title 49 is further divided into subtitles, with subtitle B being Other Regulations Relating to Transportation. Subtitle B is divided into chapters, which bear the names 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 CFR include the title, part, and section number (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 provisions that 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 through 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.



MEs should be aware of the regulations in the table below when conducting a physical qualification examination of an interstate CMV driver.

Regulations Summary Table

Regulation	Description
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, definitions, and the regulations governing the National Registry of Certified Medical Examiners.
49 CFR 391.41	Describes the physical qualification standards commercial motor vehicle drivers must meet to operate a commercial motor vehicle in interstate commerce.
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 391.44	Describes the physical qualification standards for an individual who does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard in 49 CFR 391.41(b)(10)(i), or both and the requirement for use of the Vision Evaluation Report, Form MCSA-5871.
49 CFR 391.45	Describes who must be medically examined and certified in accordance with 49 CFR 391.43 as physically qualified to operate a commercial motor vehicle.
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 commercial motor vehicle driver with loss or impairment of a limb(s) who cannot physically qualify to drive under 49 CFR 391.41(b)(1) or (b)(2). The driver must be otherwise qualified to drive a CMV and meet 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 program. Until March 22, 2023, these drivers may be certified as long as they continue to meet the provisions outlined in

Regulation	Description
	49 CFR 391.64 and continue to meet all other physical qualification standards.

To view the regulations listed in the Regulations Summary Table, visit: FMCSA Regulations.

1.7 Medical Exemptions

An exemption provides temporary regulatory relief for CMV drivers from one or more FMCSRs. FMCSA may grant an exemption from a regulation for up to 5 years and the exemption may be renewed. However, FMCSA grants medical exemptions involving the physical qualification standards in the FMCSRs for a maximum 24-month period to align with the maximum duration of a driver's medical certification. Previously, FMCSA had two established medical exemption programs, the Federal Diabetes Exemption Program and the Federal Vision Exemption Program, which were ended due to regulatory changes to the corresponding physical qualification standards. In 2013, FMCSA started issuing hearing and seizure/epilepsy exemptions and continues to do so on a case-by-case basis. In addition, FMCSA has the authority to consider requests for exemption from any physical qualification standard.

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

Medical exemptions are discussed in detail in the Medical Variances section at the end of this handbook.

1.8 Important Regulatory Definitions

MEs should familiarize themselves with frequently used terms in the context of the FMCSRs and the ME's role. The most commonly used terms are provided below.

1.8.1 Definitions from 49 CFR 390.5T

"Commercial motor vehicle" (CMV) 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 kilograms (10,001 pounds) or more, whichever is greater; or
(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 49 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—

(1) Between a place in a State and a place outside of such State (including a place outside of the United States);
(2) Between two places in a State through another State or a place outside of the United States; or
(3) 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.

Please see 49 CFR 390.5T for additional definitions.

1.8.2 Definitions from 49 CFR 383.5

"Commercial driver's license" (CDL) means a license issued to an individual by a State or other jurisdiction of domicile, in accordance with the standards contained in part 383, which authorizes the individual to operate a class of a commercial motor vehicle.

"CDL driver" means a person holding a CDL or a person required to hold a CDL.

"Commercial learner's permit" (CLP) means a permit issued to an individual by a State or other jurisdiction of domicile, in accordance with the standards contained in part 383, which, when carried with a valid driver's license issued by the same State or jurisdiction, authorizes the individual to operate a class of a commercial motor vehicle when accompanied by a holder of a valid CDL for purposes of behind-the-wheel training. When issued to a CDL holder, a CLP serves as authorization for accompanied behind-the-wheel training in a CMV for which the holder's current CDL is not valid.

2 THE REGULATION OF PHYSICAL QUALIFICATIONS FOR COMMERCIAL DRIVERS

2.1 FMCSA Regulations

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 of these commercial operations can endanger the safety and health of the public and the driver.

2.1.1 Drivers

Subject to limited exceptions, interstate CMV drivers must comply with FMCSA's physical qualification standards.

2.1.2 Truck and Bus Companies (Motor Carriers)

Motor carriers, both for-hire and private truck and bus companies, must comply with FMCSRs 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.

2.2 State Regulations

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 Federal physical qualification standards applicable to interstate CMV drivers for application to intrastate drivers. However, some States have additional, different, or more stringent

requirements that intrastate CMV drivers must follow. If a driver operates 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 operate. FMCSA cannot issue medical variances to intrastate drivers. However, some States do issue waivers to their intrastate drivers.

3 MEDICAL CERTIFICATION PROCESS

3.1 Driver Medical Certification

In part 391 (Qualifications of drivers and longer combination vehicle (LCV) driver instructors), the FMCSRs establish the minimum qualifications for individuals 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 those drivers who meet the Federal physical qualification standards are issued a Medical Examiner's Certificate, Form MCSA-5876. When an ME issues a Medical Examiner's Certificate, Form MCSA-5876, it is a certification that the driver is physically qualified. Generally, drivers may be medically certified for a maximum of 24 months. 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 (until March 22, 2023), are certified under the alternative vision standard pursuant to 49 CFR 391.44, or have diabetes mellitus treated with insulin for control and obtained certification pursuant to 49 CFR 391.46 must be certified for no more than the maximum of 12 months. Drivers who have received an exemption from the seizure standard may be certified only for a maximum of 12 months. Drivers may be certified for less than the maximum periods if deemed necessary by the ME.

3.2 The Physical Qualification Examination

The general purpose of the health history and medical examination is to detect the presence of physical, mental, or organic conditions of such character and extent as to render the driver's physical condition inadequate to enable the driver to operate a CMV safely. This examination is considered by FMCSA to be a physical qualification examination. During the physical qualification examination, the ME's fundamental task is to determine whether the driver meets FMCSA's physical qualification standards.

MEs must perform the examination as outlined on the Medical Examination Report Form, MCSA-5875. The examination should be conducted carefully and must, at a minimum, be as thorough as the examination of body systems outlined on 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 any additional evaluation is needed to determine if the driver meets the physical qualification standards outlined in the FMCSRs.

The ME ultimately decides whether the driver meets FMCSA's physical qualification standards. However, consistent with current clinical best practices for any medical condition, in applying the physical qualification standards, the ME may consult with the driver's medical provider for additional information concerning the driver's medical history and current condition(s), request appropriate referrals to other medical providers, or request medical records, all with appropriate consent of the driver examined.

3.3 CMV Driver Demands and Duties

Drivers have many job demands and duties, with the actual task of driving being the least physically demanding part. An ME must be familiar with, and consider, all driver tasks related to CMV operation when making a physical qualification determination. Some primary examples of the types of driver tasks include, but may not be limited to, the following.

3.3.1 Job Demands and Duties

3.3.1.1 Heavy Labor Tasks

- **Coupling and uncoupling trailer(s) from the tractor:** requires strength and full range of motion to climb, balance, turn, grip, and pull;
- **Loading and unloading trailer(s):** requires ability to lift a heavy load or unload as much as 50,000 pounds of freight after sitting for a long period of time without any stretching period;
- **Lifting, installing, and removing heavy tire chains:** requires pulling/lifting motions in the range of 35 to 90 pounds**;** and
- **Lifting tarpaulins to cover open top trailers**: requires pulling/lifting motions in the range of 50 to 100 pounds.

3.3.1.2 Other Job Tasks

- **Performing pre-trip and post-trip safety checks:** requires climbing, bending, kneeling, crawling, reaching, stretching, turning, and twisting;
- **Handling and inspecting cargo:** requires lifting, climbing up and down perpendicular ladders, and entering/leaving the cab or cargo body multiple times a day; and
- **Inspecting the vehicle:** (includes the driver evaluating the mechanical condition of the various vehicular systems, such as tires, brakes, suspensions, engines, and cargo) requires climbing, bending, kneeling, crawling, reaching, stretching, turning, and twisting.

3.3.1.3 Driving Maneuvers and Operations

- **Moving gear shift levers(s):** requires moderate strength, timely coordination, and complex manipulation skills of right upper and left lower extremity;
- **Controlling steering wheel:** requires strength, mobility, and power grasp and prehension of hands and fingers while maintaining stability of trunk;
- **Operating brakes and accelerator pedals:** requires moderate strength, mobility, and coordinated movement in lower extremities;
- **Operating light switches, windshield wipers, directional signals, emergency lights, horn, etc.:** requires moderate strength, mobility, and manipulative skills of upper extremities; and
- **Backing and parking:** requires adequate depth perception, strength, and coordinated manipulative skills.

3.4 Medical Examiner Responsibilities

MEs examine a driver to determine if the driver meets the physical qualification standards, not to diagnose or treat medical conditions. As with all medical providers, however, MEs should educate and suggest the driver seek further evaluation if they suspect an undiagnosed or worsening medical problem. In conducting driver physical qualification examinations, MEs should remember to do the following:

- Comply with FMCSA regulations.
- Consider FMCSA recommendations.
- Seek further testing/evaluation for those medical conditions of which the ME is unsure.
- Verbally suggest the driver visit the driver's personal treating 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 do not preclude certification, but if neglected could result in serious illness that could preclude future certification.

4 PHYSICAL QUALIFICATION STANDARDS AND GUIDANCE

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

4.1 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 employees and employers subject to their provisions. FMCSA has the authority to compel compliance with the FMCSRs. These regulations provide details on how the law is to be

followed and often include terms such as “must,” “shall,” or “required,” which indicate a regulatory requirement.

4.2 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 recommendations and other guidance in this handbook do not have the force and effect of law and are not meant to bind MEs, drivers, or the public in any way. Rather, such guidance itself is only advisory and not mandatory. Separately, the handbook also provides information 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. When the terms “may,” “should,” or “could” are used below, they are used in a recommendatory or permissive sense and relate to guidance.

4.3 About 49 CFR 391.41

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

For the most current information on regulations, please access the Electronic Code of Federal Regulations (eCFR) at https://www.ecfr.gov/current/title-49.

Section 391.41(b)(1) through (13) provides the physical qualification standards that must be met for a person to be physically qualified to drive a CMV. There are 13 standards and, as such, there is not a standard to address each and every condition listed in this handbook. In these situations, an ME may consider the underlying systems and organs affected or symptoms caused to see if the condition would fall within one of the standards. For example, non-insulin-treated diabetes mellitus is not discussed in one of the 13 standards but could be considered as part of §391.41(b)(8) if the condition is likely to cause of loss of consciousness.

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 that either must be followed or may be considered by the ME. The Medical Advisory Criteria are published at the end of 49 CFR part 391 in Appendix A. The guidance provided in the Medical Advisory Criteria and other information is intended to provide recommendations and information to assist MEs in applying the FMCSRs, basic information related to testing, and matters that may be considered when making a qualification determination. Medical Advisory Criteria that are outdated, obsolete, or no longer relevant have not been included in this handbook.

4.4 Vision Regulations — 49 CFR 391.41(b)(10) and 391.44

4.4.1 Regulation 49 CFR 391.41(b)(10)

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

* * * * *

(i) 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 standard red, green, and amber; or

(ii) Meets the requirements in §391.44, if the person does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard, or both, in paragraph (b)(10)(i) of this section."

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.

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

4.4.2 Medical Advisory Criteria for 49 CFR 391.41(b)(10) and 391.44

There are no medical advisory criteria for these standards.

4.4.3 Regulation 49 CFR 391.44

"(a) ***General.*** An individual who does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard, or both, in §391.41(b)(10)(i) is physically qualified to operate a commercial motor vehicle in interstate commerce provided:

(1) The individual meets the other physical qualification standards in §391.41 or has an exemption or skill performance evaluation certificate, if required; and

(2) The individual has the vision evaluation required by paragraph (b) of this section and the medical examination required by paragraph (c) of this section.

(b) ***Evaluation by an ophthalmologist or optometrist.*** Prior to the examination required by §391.45 or the expiration of a medical examiner's certificate, the individual must be evaluated by a licensed ophthalmologist or licensed optometrist.

(1) During the evaluation of the individual, the ophthalmologist or optometrist must complete the Vision Evaluation Report, Form MCSA-5871.

(2) Upon completion of the Vision Evaluation Report, Form MCSA-5871, the ophthalmologist or optometrist must sign and date the Report and provide the ophthalmologist or optometrist's full name, office address, and telephone number on the Report.

(c) ***Examination by a medical examiner.*** At least annually, an individual who does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard, or both, in §391.41(b)(10)(i) must be medically examined and certified by a medical examiner as physically qualified to operate a commercial motor vehicle in accordance with §391.43. The examination must begin not more than 45 days after an ophthalmologist or optometrist signs and dates the Vision Evaluation Report, Form MCSA-5871.

(1) The medical examiner must receive a completed Vision Evaluation Report, Form MCSA-5871, signed and dated by an ophthalmologist or optometrist for each required examination. This Report shall be treated and retained as part of the Medical Examination Report Form, MCSA-5875.

(2) The medical examiner must determine whether the individual meets the physical qualification standards in §391.41 to operate a commercial motor vehicle. In making that determination, the medical examiner must consider the information in the Vision Evaluation Report, Form MCSA-5871, signed by an ophthalmologist or optometrist and, utilizing independent medical judgment, apply the following standards in determining whether the individual may be certified as physically qualified to operate a commercial motor vehicle.

(i) The individual is not physically qualified to operate a commercial motor vehicle if, in the better eye, the distant visual acuity is not at least 20/40 (Snellen), with or without corrective lenses, and the field of vision is not at least 70° in the horizontal meridian.

(ii) The individual is not physically qualified to operate a commercial motor vehicle if the individual is not able to recognize the colors of traffic signals and devices showing standard red, green, and amber.

(iii) The individual is not physically qualified to operate a commercial motor vehicle if the individual's vision deficiency is not stable.

(iv) The individual is not physically qualified to operate a commercial motor vehicle if sufficient time has not passed since the vision deficiency became stable to allow the individual to adapt to and compensate for the change in vision."

* * * * *

Pursuant to 49 CFR 391.45(f), the maximum period of certification for an individual certified under the standards in §391.44 is 12 months.

The Vision Evaluation Report, Form MCSA-5871, can be obtained at https://www.fmcsa.dot.gov/regulations/medical/vision-evaluation-report-form-mcsa-5871.

4.4.4 Other Information

4.4.4.1 Vision Standard Final Rule

On January 21, 2022, FMCSA published the Qualifications of Drivers; Vision Standard final rule (87 FR 3390). The rule amended the vision standard to allow an individual who does not satisfy, with the worse eye, either the distant visual acuity standard with corrective lenses or the field of vision standard in §391.41(b)(10)(i), or both, to be physically qualified to operate a CMV in interstate commerce under specified conditions. Before an individual may be medically certified under the alternative vision standard, the individual must have a vision evaluation conducted by an ophthalmologist or optometrist. The ophthalmologist or optometrist records the findings of the vision evaluation and provides specific medical opinions on the Vision Evaluation Report, Form MCSA-5871. The ME must begin the physical qualification examination not more than 45 days after the ophthalmologist or optometrist signs and dates the Vision Evaluation Report, Form MCSA-5871. The ME must conduct a physical qualification examination, consider the information provided on the Vision Evaluation Report, Form MCSA-5871, and determine whether the individual meets the alternative vision standard, as well as FMCSA's other physical qualification standards. If the ME determines the individual meets the physical qualification standards, the ME may issue a Medical Examiner's Certificate, Form MCSA-5876, for a maximum of 12 months.

The final rule eliminated the need for the Federal Vision Exemption Program. The program allowed certain individuals with monocular vision, as defined by FMCSA, to obtain an exemption and operate in interstate commerce. 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 corrective lenses or field of vision of less than 70 degrees in the horizontal meridian, or both.

Vision exemption holders are required to be physical qualified under the alternative vision standard before March 22, 2023, the date on which all Medical Examiner's Certificates, Form MCSA-5876, issued with a vision exemption become void. Because vision exemptions are no longer available and not a part of the alternative vision standard, MEs must not indicate on the Medical Examination Report Form, MCSA-5875, or Medical Examiner's Certificate, Form MCSA-5876, that they must be accompanied by a vision exemption.

The final rule also eliminated the grandfather provision in §391.64(b) for certain drivers participating in a previous vision waiver study program. On March 22, 2023, physical qualification under §391.64 will be no longer available and all Medical Examiner's Certificates, Form MCSA-5876, issued under this provision become void.

For detailed information regarding §391.44 and the final rule, visit https://www.fmcsa.dot.gov/regulations/federal-register-documents/2022-01021.

Or watch FMCSA's webinar that outlines the final rule at https://www.fmcsa.dot.gov/regulations/medical/new-vision-standard-overview-webinar.

4.4.4.2 Health History

While the vision standard can be met by satisfying objective vision requirements, the ME should consider underlying medical conditions when determining the period of certification. 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 would render the driver's physical condition inadequate to enable the driver to operate a CMV safely. Some visual conditions could be considered under a different physical qualification standard. For example, a visual condition might be considered as a vascular disease under §391.41(b)(7).

4.4.4.3 Physical Examination

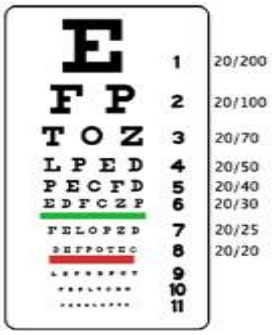
The driver does not meet the vision standard if the individual fails to meet any part of the vision testing requirements with one eye or both eyes, as applicable.

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.

4.4.4.4 Tests

4.4.4.4.1 Distant visual acuity

The Snellen chart or the Titmus Vision Tester measures static distant visual acuity. Under §391.41(b)(10)(i), the requirement for distant visual acuity is at least 20/40 in each eye and distant binocular visual acuity of at least 20/40, both with or without corrective lenses. Under the alternative vision standard in §391.44, the requirement for distant visual acuity is at least 20/40 in the better eye, with or without corrective lenses. Test results must be recorded in Snellen-comparable values.



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 a contact lens in one eye for distance visual acuity and another lens in the other eye for near vision is acceptable, as long as the driver still meets the standard. Use of telescopic lenses should not be permissible for the driving of CMV.

If a driver meets the vision standard by the use of glasses or contact lenses, the box for "wearing corrective lenses" must be marked on both the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876.

4.4.4.4.2 Peripheral Vision

Under §391.41(b)(10)(i), 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 the Titmus Vision Tester is often used to evaluate peripheral vision.

Confrontation visual field testing involves having the individual looking directly at the ME's eye or nose and testing along the horizontal field of view in the individual's visual field by having the individual count the number of fingers that the ME is showing. The ME should 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.

The Titmus Vision Tester is an instrument used to screen for visual acuity, depth perception, color perception, and binocular vision.

If an individual fails the screening examination, that individual has the option of seeing a specialist, and then can undergo a new physical qualification examination. The ME should instruct the individual to have the specialist complete the Vision Evaluation Report, Form MCSA-5871, if it appears likely that the individual will be physically qualified under the alternative vision standard in §391.44.

Under the alternative vision standard in §391.44, the requirement for peripheral vision is at least 70° in the horizontal meridian in the better eye. An ophthalmologist or optometrist must test field of vision, including central and peripheral fields, utilizing a testing modality that tests to at least 120° in the horizontal. Formal perimetry is required. The ophthalmologist or optometrist is to interpret the results of testing in degrees of field of vision, must record the findings on the Vision Evaluation Report, Form MCSA-5871, and attach a copy of the formal perimetry test.

4.4.4.4.3 Color Perception

The term "ability to recognize the colors of" is interpreted to mean, if the driver can recognize standard red, green, and amber, the driver meets the minimum standard, even though the driver may have some type of color perception deficiency. Color perception may be evaluated using a standard test (such as Ishihara, Pseudoisochromatic, Yarn, or Farnsworth) or a controlled test using standard red, green, and amber. Examples of controlled tests include the standard colors present on the Snellen chart or objects that correspond to the standard colors.

4.4.4.4.4 Vision Testing by a Specialist

The vision testing may be completed by an eye specialist (ophthalmologist or optometrist) but the ME is responsible for making the physical qualification determination. A specialist vision evaluation:

- Is required for qualifying drivers under the alternative vision standard in §391.44 and the specialist must record the findings and provide the medical opinions requested on the Vision Evaluation Report, Form MCSA-5871.
- Is required for qualifying drivers under the grandfather provision in §391.64 for certain drivers participating in a previous vision waiver study program until March 22, 2023, at which time physical qualification under this section is no longer available.
- May be necessary to obtain adequate evaluation of vision with specialized diagnostic equipment.

When the vision test is completed by an eye specialist, the specialist should provide the specialist's name, telephone number, email address, license number, and State issuing the license, and sign and date the specialist report or the Vision Evaluation Report, Form MCSA-5871. The ME must attach the applicable report to the Medical Examination Report Form, MCSA-5875, and either write "see the attached documentation" in the vision test results section or write the information on the Medical Examination Report Form, MCSA-5875, in the vision test results section.

4.5 Hearing Regulation — 49 CFR 391.41(b)(11)

4.5.1 Regulation 49 CFR 391.41(b)(11)

"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 requirement by the use of a hearing aid, the hearing aid 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.

4.5.2 Medical Advisory Criteria for 49 CFR 391.41(b)(11)

1. Since the prescribed standard under the Federal Motor Carrier Safety Regulations is from the American National Standards Institute (ANSI), formerly the American Standards Association, it may be necessary to convert the audiometric results from the International Organization for Standardization (ISO) standard to the ANSI standard. To convert audiometric test results from ISO to ANSI, subtract 14 decibels (dBs) from the ISO result for 500 Hertz (Hz), subtract 10 dBs for 1,000 Hz, and subtract 8.5 dBs for 2000 Hz. To average, add the readings for the 3 frequencies tested and divide by 3.

2. If a driver meets the requirements 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.

3. For the whispered voice test, the driver should be stationed at least 5 feet from the medical examiner with the ear being tested turned toward the medical examiner. The other ear is covered. Using the breath that remains after a normal expiration, the medical examiner whispers words or random numbers such as 66, 18, 3, etc. The medical examiner should then ask the driver to repeat the words or sequence. The medical examiner should not use only sibilants ("s" sounding materials). The opposite ear should be tested in the same manner. If the driver fails the whispered voice test in both ears, the audiometric test should be administered.

4. If a driver meets the requirements with the use of a hearing aid, the box for "wearing hearing aid" must be marked on both the Medical Examination Report Form, MCSA-5875, and Medical Examiner's Certificate, Form MCSA-5876.

5. If a driver does not meet the requirements with the use of a hearing aid and requires a Federal hearing exemption, the box for "wearing hearing aid" should NOT be marked on either the Medical Examination Report Form, MCSA-5875, or Medical Examiner's Certificate, Form MCSA-5876. Instead, only the box for accompanied by a hearing exemption should be marked on the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876.

6. To obtain an application for a hearing exemption, commercial motor vehicle drivers who do not meet the Federal hearing standard may call (202) 366-4001, email fmcsahearingexemptions@dot.gov, or go to https://www.fmcsa.dot.gov/medical/driver-medical-requirements/new-hearing-applicant-doc-email-version.

4.5.3 Other Information

4.5.3.1 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 Hz, 1,000 Hz, and 2,000 Hz) in one ear of less than or equal to 40 dBs with or without the use of a hearing aid.

If a driver fails the whisper test in both ears, including one who wears a hearing aid or who has a cochlear implant, the driver should be referred to an audiologist or hearing aid center to perform the test using appropriate audiometric equipment. A driver with a hearing aid or cochlear implant can be physically qualified as long as the driver can meet the hearing standard.

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 with or without the use of a hearing aid or cochlear implant.

Both ears must be tested using a **forced whisper** test or an **audiometric** test. Although FMCSA requires both ears to be tested, only the better ear has to meet the standard.

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

4.5.3.2 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 audiologist's name, telephone number, email address, license number, and State issuing the license, and date and sign the audiology report. The ME must attach the audiology report to the Medical Examination Report Form, MCSA-5875, and either write "see the attached documentation" in the hearing test result section or write the information on the Medical Examination Report Form, MCSA-5875, in the hearing test result section.

4.5.3.3 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 if the individual is able to meet the hearing standard with the use of hearing aids. This can be accomplished by either administrating the forced whisper test with the hearing aids in or the ME can require the individual to complete an audiometric test, performed by an audiologist, while wearing the hearing aids. If the individual does not meet the hearing standard with the use of hearing aids, an exemption is required. 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. MEs may physically qualify drivers who require a hearing exemption for the maximum 24-month certification period. Additional information about hearing exemptions and the application process is in the Medical Variance section at the end of this handbook.

When completing the driver examination forms, the ME should mark the "accompanied by" exemption checkbox and write "hearing" to identify the type of Federal exemption. Please note that 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 hearing waiver/exemption." 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.

4.6 High Blood Pressure Regulation — 49 CFR 391.41(b)(6)

4.6.1 Regulation 49 CFR 391.41(b)(6)

"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."

4.6.2 Medical Advisory Criteria for 49 CFR 391.41(b)(6)

1. An elevated blood pressure finding should be confirmed by at least two subsequent measurements on different days. This could be done using the "determination pending" status.

2. Annual certification is recommended if the medical examiner does not know the severity of hypertension prior to treatment.

3. Treatment includes non-pharmacologic and pharmacologic modalities as well as counseling to improve or eliminate the factors that contributed to the hypertension. Most antihypertensive medications also have side effects, such as somnolence or syncope. The importance of side effects must be evaluated on an individual basis and considering the underlying hypertension. Individuals should be alerted to the possibility that antihypertensive medications may interfere with the ability to operate a commercial motor vehicle safely.

4. Medical certification for secondary hypertension is based on the stages. Evaluation is warranted if an individual is persistently hypertensive on maximal or near-maximal doses of two to three pharmacologic agents. Some causes of secondary hypertension may be amenable to surgical intervention or specific pharmacologic treatment.

4.6.3 Other Information

4.6.3.1 The Physical Examination

The Medical Examination Report Form, MCSA-5875, set forth at 49 CFR 391.43(f), includes requirements to document blood pressure readings in the testing section of the form.

Blood Pressure

- Blood pressure readings taken during the driver's physical qualification examination should be used for certification decisions.

- Blood pressure greater than 139/89 should be confirmed with a second measurement taken later during the examination. These values apply to the total blood pressure reading as well as elevated systolic or diastolic readings independently.
- Record additional blood pressure measurements in the "Second reading" space or in the box to discuss abnormal answers in the Physical Examination section on the Medical Examination Report Form, MCSA-5875.

An ME's fundamental task is to establish whether a driver has high blood pressure 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 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. Complications of hypertension include end stage renal disease and chronic organ damage. If those conditions exist, they should be evaluated under an applicable physical qualification standard.

With respect to blood pressure, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. The table below is guidance and is one source MEs could consider when evaluating blood pressure. The table is from the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on page 24. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

Hypertension

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Essential Hypertension Evaluate for other clinical CVD including TOD† Presence of TOD, CVD or diabetes may affect therapy selected.	Asymptomatic This disorder is rarely disqualifying alone	Symptomatic	Biennial	[56]
Hypertension (<169/109mm Hg)[1]: Presents with BP measurement of 140-169/90-109 mmHg	*For 1 year, if the following are satisfied:* It is the first examination at which the driver has BP <169/109 and the driver:	Hypertension and BP <169/109 A history of stage 3 hypertension and BP <169/109	Maximum – 1 year if BP <169/109 Note: except drivers with history of stage 3 hypertension.	[56-64]

[1] Changed 160 to 169 as 160 was an error in the original report.

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Note: Low risk for hypertension-related acute incapacitation	Has no history of hypertension Does not use antihypertensive medication to control BP	BP ≥170/110, regardless of any other considerations		
Hypertension ≥170/110 Presents with BP measurement of 170/110mmHg. Note: This stage of hypertension carries a high risk for the development of acute hypertension-related symptoms that could impair judgment and driving ability.	*Yes, at recheck**, if:* BP <169/109 mmHg Tolerates treatment with no side effects that interfere with driving	BP ≥170/110, regardless of history or treatment, is immediately disqualifying **Note: Advise driver that failure to maintain BP at <169/109 will render the driver medically unqualified in subsequent examinations	Maximum – 6 months if BP <169/109	[56, 64, 65]
Secondary Hypertension Information should be obtained that assesses the underlying cause, the effectiveness of treatment, and any side effects that may interfere with driving.	3 months post-intervention correction for related medical condition BP is <169/109	The medical examiner believes the nature and severity of the medical condition of the driver endangers the health and safety of the driver and the public.	Maximum – 1 year if BP <169/109	[64, 65]

† Target organ damage

4.7 Cardiovascular Regulation — 49 CFR 391.41(b)(4)

4.7.1 Regulation 49 CFR 391.41(b)(4)

"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."

4.7.2 Medical Advisory Criteria for 49 CFR 391.41(b)(4)

1. The phrase "has no current clinical diagnosis of" is specifically designed to encompass a clinical diagnosis of a current cardiovascular condition, or a cardiovascular condition that has not fully stabilized. The phrase "known to be accompanied by" is designed to include a clinical diagnosis of a cardiovascular disease that is accompanied by symptoms of syncope, dyspnea, collapse, or congestive cardiac failure; and/or that is likely to cause syncope, dyspnea, collapse, or congestive cardiac failure.

2. Coronary artery bypass surgery and pacemaker implantation are remedial procedures and, thus, do not medically preclude qualification. Implantable cardioverter-defibrillators are installed to address an ongoing underlying cardiovascular condition and are likely to cause syncope or collapse when they discharge.

3. Anticoagulation therapy is a medical treatment, which can improve the health and safety of the driver and should not, by its use alone, preclude qualification of the commercial motor vehicle driver. The emphasis should be on the underlying medical condition(s), which requires treatment and the general health of the driver.

4.7.3 Other Information

An ME's fundamental task during the cardiovascular assessment is to establish whether a driver has a cardiovascular disease or disorder that is accompanied by or likely to cause syncope, dyspnea, or collapse, thus endangering driver and public safety and health. In addition, although a disease may not be likely to cause syncope, dyspnea, or collapse at the time of the examination, the ME should consider the nature and severity of the disease when determining the duration of medical certification. The examination is based on information provided by the driver (history), objective data (physical examination), and, if necessary, additional testing or consultation 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.

4.7.3.1 Anticoagulant Therapy

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

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

- Has treatment been shown to be adequate, effective, safe, and stable?
- Has the likelihood of syncope, dyspnea, or collapse due to the medical condition and the treatment been significantly reduced?

4.7.3.2 Aneurysms, Peripheral Vascular Disease, and Venous Disease and Treatments

Aneurysms, peripheral vascular disease, and venous disease can result in serious cardiovascular disease known to be accompanied by syncope, dyspnea, or collapse.

4.7.3.2.1 Abdominal Aortic Aneurysm

Rupture is the most serious complication of an abdominal aortic aneurysm (AAA) and is related to the size of the aneurysm. The majority of 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 the strongest risk factor, which plays a major role in whether to test for the presence of an AAA. Other risk factors include being Caucasian and family history. The majority of AAAs are asymptomatic. Clinical examination identifies approximately 90% of aneurysms greater than 6 centimeters (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. Many treating providers use ultrasound because it has almost 100% sensitivity and specificity for detecting an AAA and can monitor changes in size.

With respect to aneurysms, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with aneurysms, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on pages 7-8. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.2.2 Acute Deep Vein Thrombosis

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

4.7.3.2.3 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.

4.7.3.2.4 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.

4.7.3.2.5 Other Aneurysms

Aneurysms can develop in visceral and peripheral arteries and venous vessels. Rupture of any of these aneurysms is likely to cause syncope, dyspnea, or collapse. Much of the information on aortic aneurysms is applicable to aneurysms in other arteries.

4.7.3.2.5.1 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 5.0 cm and are asymptomatic are not likely to rupture.

4.7.3.2.5.2 Pulmonary Emboli

Pulmonary emboli are likely to cause syncope, dyspnea, or collapse and are associated with significant morbidity and mortality. Deep vein thrombosis can be one of the sources of pulmonary emboli. When making a physical qualification determination, the ME should consider whether the driver has appropriate long-term treatment with an anticoagulant.

4.7.3.2.6 Superficial Phlebitis

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

4.7.3.2.7 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 ulceration, or recurrent deep vein thrombosis that is likely to cause syncope, dyspnea, or collapse.

4.7.3.3 Cardiac Arrhythmias

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.

4.7.3.3.1 Implantable Cardioverter-Defibrillators

Implantable cardioverter-defibrillators (ICDs) are electronic devices that treat ventricular fibrillation and ventricular tachycardia through the delivery of rapid pacing stimuli or shock therapy. While ICDs are installed to address an underlying cardiovascular condition, they also are likely to cause syncope or collapse when they discharge.

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

ICDs terminate but do not prevent arrhythmias. Therefore, the driver remains likely to experience syncope or collapse as a result of the underlying cardiovascular condition, as well as from discharge of the ICD, and does not satisfy the cardiovascular standard. This is different from coronary artery bypass surgery and pacemaker implantation that are remedial procedures and, thus, do not preclude medical qualification. Combination ICD/pacemaker devices, however, are ineffective in preventing cardiac arrhythmia events that cause syncope or collapse and do preclude medical certification because the driver does not satisfy the cardiovascular standard.

Whether to medically certify a driver whose ICD has been disabled will depend on the status of the underlying cardiovascular condition. If the driver's underlying cardiovascular condition has not resolved, the driver does not satisfy the cardiovascular standard. The ME should decide, on a case-by-case basis, whether a driver's underlying condition has resolved based on recommendations from a cardiologist and the evidence that has been presented to the ME.

4.7.3.3.2 Pacemakers

A pacemaker is an implantable device designed to treat bradycardia. When assessing whether it is likely a driver with a pacemaker will experience syncope, dyspnea, or collapse, 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 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 should include, but may not be limited to, the following:

- Are there signs that the pacemaker is not working properly, such as syncope, a consistently slow heart rate, periods of bradycardia that alternate with periods of tachycardia or arrhythmia, or weakness and tiredness?

- Has treatment been shown to be adequate, effective, safe, and stable?

With respect to pacemakers, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with pacemakers, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A at page 22. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.3.3 Supraventricular Arrhythmias

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

4.7.3.3.4 Supraventricular Tachycardia

SVT is a common arrhythmia that is usually not likely to cause syncope or collapse. On occasion, SVT can cause syncope or compromise cerebral function. Treatment by catheter ablation is usually curative and allows drug therapy to be withdrawn.

4.7.3.3.5 Atrial Fibrillation

The major risk associated with atrial fibrillation is that it can cause an embolus, which may result in a stroke, syncope, or collapse. Anticoagulant therapy decreases the likelihood of peripheral embolization in individuals with risk factors for stroke.

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

- Is the driver anticoagulated adequately to decrease the likelihood of stroke?
- Is the driver asymptomatic with a controlled heart rate?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Whether the driver has been evaluated and treated by a cardiovascular specialist.

4.7.3.3.6 Ventricular Arrhythmias

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

Considerations for an ME when making a physical qualification determination should 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 qualified?
- Is the driver symptomatic or does the driver have sustained ventricular tachycardia?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Whether the driver has been evaluated and treated by a cardiovascular specialist.

With respect to cardiovascular conditions, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with cardiac arrhythmias, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.3.7 Autonomic Neuropathy

Autonomic neuropathy affects the nerves that regulate vital functions, including the heart muscle and smooth muscles. Cardiovascular autonomic neuropathy causes resting tachycardia and orthostatic blood pressure (i.e., postural orthostatic tachycardia syndrome (POTS)), which may result in syncope.

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

- Has the etiology been confirmed?
- Has treatment been shown to be adequate, effective, safe, and stable by the treating provider?
- Is cardiovascular autonomic neuropathy controlled or likely to be accompanied by syncope or collapse?

4.7.3.4 Cardiovascular Tests for Further Assessments

Detection of an undiagnosed heart or vascular finding during a physical qualification examination may indicate the need for further testing and examination by a specialist to adequately assess whether a driver meets the physical qualification standards. Diagnostic-specific testing may be required to evaluate the current functional status or severity of cardiovascular disease to determine if it is likely to cause syncope, dyspnea, or collapse.

Types of cardiovascular tests include:

- Exercise Tolerance Test (ETT) - The ETT is the most common test used to evaluate workload capacity and detect cardiac abnormalities. The most common reason is to detect a narrowing or blockage in one or more coronary arteries.

- Echocardiography - Left ventricular ejection fraction (LVEF) may be assessed by echocardiography. Imaging studies have superior sensitivity and specificity compared to the standard ETT and are indicated in the presence of an abnormal resting electrocardiogram or non-diagnostic standard ETT. An echocardiogram uses sound waves to create pictures of the heart's chambers, valves, and walls and of the blood vessels attached to the heart to detect abnormalities, such as leaking heart valves or excessive narrowing (stenosis).

These cardiovascular tests are interpreted by a cardiologist.

4.7.3.5 Coronary Heart Diseases and Treatments

The ME should determine whether the nature and severity of a driver's coronary heart disease (CHD) is likely to cause syncope, dyspnea, or collapse. The major clinical manifestations of CHD are acute myocardial infarction, angina pectoris (either stable or unstable), congestive heart failure, and sudden death.

4.7.3.5.1 Prognostic indicators for Coronary Heart Disease

The major independent predictor of CHD survival 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 should 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?
- 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.

4.7.3.5.2 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. Cardiologists

recommend that an ETT be performed 4 to 6 weeks after an MI and be repeated at least every 2 years.

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

- Status post MI, 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?

4.7.3.5.3 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.

4.7.3.5.3.1 Stable angina

May be precipitated by predictable circumstances, including:

- Exertion
- Emotion
- Extremes in weather
- Sexual activity

4.7.3.5.3.2 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 should include, but may not be limited to, the following:

- How long has the driver been free of unstable angina?
- How long has the driver had changes in the 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?

4.7.3.5.4 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 usually less likely to experience syncope, dyspnea, collapse, or congestive cardiac failure than those who are treated medically. Most drivers who undergo CABG surgery are able to return to work. Greatest risk for complications occurs in the first 3 months after surgery. A significant risk associated with CABG surgery is the high long-term re-occlusion rate of the bypass graft, which typically occurs after 5 years and may indicate the necessity of an ETT.

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

- Has the sternum healed completely?
- 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?
- Whether the driver has been evaluated and treated by a medical provider.

4.7.3.5.5 Heart Failure

Coronary artery disease is considered 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 LVEF expressed as a percentage of how much blood in the left ventricle is pumped out with each heartbeat. Ejection fractions of 55-70% are normal; 40-54% 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 should 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 have a stable LVEF?
- Does the driver demonstrate compliancy with the ongoing treatment plan?
- Whether the driver has been evaluated and treated by a medical provider.

4.7.3.5.6 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. The vascular site usually heals within a week.

Consideration for an ME when making a physical qualification determination should 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?

With respect to CHD, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. The table below is guidance and is one source MEs could consider when evaluating CHD. The table is from the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on page 14. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

Commercial Drivers with Known Coronary Heart Disease (CHD)

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Asymptomatic Coronary Heart Disease (CHD) and Stable Angina CHD risk-equivalent conditions* CHD Risk factors‡	No other exclusionary diagnoses LVEF >40%	Fails to meet the certification criteria LVEF ≤ 40% *NOTE: The decision not to medically certify a commercial driver should not depend solely on the detection of multiple risk factors.*	Maximum – 2 years	[29-31]
Unstable Angina	Has converted to stable angina Tolerance to medications LVEF >40%Clearance from a cardiovascular specialist	Develops unstable angina within 3 months of examination.	Annual	[29]

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Post-Percutaneous Coronary Intervention	Asymptomatic Minimum 3 weeks after elective procedure LVEF >40% Adherence to cardiovascular specialist-recommended appropriate medical therapy for a minimum of 1 year after receiving drug-eluting stent Clearance by cardiologist	Symptomatic Incomplete healing or complication at vascular access site	Maximum – 1 year	[30, 32, 33]
Post Myocardial Infarction (MI) Risk of recurrent major cardiac event highest within the first month post-MI Drivers in a rehabilitation program can receive comprehensive secondary prevention therapy	Minimum 2 months post-MI Minimum 3 months post-MI if CABG has been performed Tolerance and adherence to medications LVEF >40% Clearance by a cardiovascular specialist	Fails to meet certification criteria	Annual	[30, 31, 34, 35]
Post Coronary Artery Bypass Surgery (CABG) Delay in return to work to allow sternal incision healing	Minimum of 3 months after CABG Post-CABG LVEF >40% Sternum has healed Tolerance and adherence to medications Clearance by a cardiologist	Fails to meet certification criteria	Maximum – 1 year	[29, 31, 33]

*CHD risk-equivalent conditions: Diabetes; Peripheral vascular disease; Chronic kidney disease; Abdominal aortic aneurysm; Carotid artery disease; Framingham risk score predicting a 20% CHD event risk over the next 10 years; Being over 45 years of age with multiple risk factors for CHD.
‡CHD Risk factors: Smoking; Family history; Adverse lipid profile; Hypertension; Age (men > 45 years; women > 55 years); Obesity.

4.7.3.6 Congenital Heart Disease

Heart failure and sudden death are the major causes of death among individuals with congenital heart disease. Congenital heart disease consists of one or more defects with the heart's structure that has existed since birth. Congenital heart disease, also called congenital heart defect, can change the way blood flows through the heart. Some congenital heart defects might not cause any problems at all. Complex defects, however, can cause life-threatening complications.

Examples of congenital heart disease include, but are not limited to, patent ductus arteriosus (PDA), Ebstein anomaly, Tetralogy of Fallot, coarctation of the aorta, pulmonary valve stenosis, transposition of the great vessels, ventricular septal defect, atrial septal defect, aortic stenosis, and Marfan syndrome.

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

- What is the anatomic diagnosis?
- What is the severity of the congenital defect?
- Has treatment been shown to be adequate, effective, safe, and stable?
- How likely is syncope, dyspnea, collapse, or congestive cardiac failure?
- Does the driver have symptoms of dyspnea or syncope?
- Did the driver undergo successful repair of the congenital defect?
- Does the driver have cardiac enlargement? If so, what is the extent of the enlargement?
- Whether the driver has been evaluated and treated by a cardiologist knowledgeable in adult congenital heart disease.

With respect to congenital heart disease, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with congenital heart disease, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on pages 19-22. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.7 Heart Transplantation

Medical concerns for certification of a CMV driver who is a recipient of a heart transplant are transplant rejection and post-transplant atherosclerosis, along with medication side effects.

Considerations for an ME when making a physical qualification determination should 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?
- Whether the driver has been evaluated and treated by a cardiologist knowledgeable in heart transplantation.

With respect to heart transplantation, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or

specific diagnostic results. For additional guidance on certification of drivers with a heart transplant, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on page 23. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.8 Hypertension

See the Blood Pressure section of this handbook.

4.7.3.9 Cardiomyopathy

4.7.3.9.1 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. In some individuals, progression can be variable but benign. In others, sudden death is the first definitive manifestation of the disease. Signs and symptoms of hypertrophic cardiomyopathy may include one or more of the following: chest pain (especially during exercise); syncope (especially during or just after exercise or exertion); heart murmur; sensation of rapid, fluttering, or pounding palpitations; and shortness of breath (especially during exercise). The prognosis for hypertrophic cardiomyopathy is very specific to an individual and their particular anatomy. The majority of individuals with hypertrophic cardiomyopathy have no symptoms and most have a near-normal life expectancy. MEs should evaluate, on a case-by-case basis, whether the driver meets the physical qualification standards. An ME could consider obtaining an evaluation by a cardiologist.

4.7.3.9.2 Restrictive Cardiomyopathy

Restrictive cardiomyopathies (RCM) are the least common form of heart disease. Restrictive cardiomyopathy is a myocardial disorder that usually results from increased myocardial stiffness that leads to impaired ventricular filling. Biventricular chamber size and systolic function are usually normal or near normal until later stages of the disease. Affecting either or both ventricles, RCM may cause signs or symptoms of left or right heart failure that include fatigue, shortness of breath, pedal edema, and weakness. Arrhythmias and conduction disturbances are frequently encountered. MEs should evaluate, on a case-by-case basis, whether the driver meets the physical qualification standards. An ME could consider obtaining an evaluation by a cardiologist.

With respect to cardiomyopathies, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. The table below is guidance and is one source MEs could consider. The table is from the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A at page 13. It is available at

https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

Cardiomyopathies and Congestive Heart Failure

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Hypertrophic Cardiomyopathy	No history of cardiac arrest No spontaneous sustained VT No non-sustained VT No family history of premature sudden death No syncope Left ventricular septum thickness <30 mm Cleared by cardiologist	Provokable/resting peak gradient ≥ 50 Medical examiner believes the nature and severity of the medical condition may interfere with safe driving ability and is a risk to public safety	Maximum – 1 year Low-risk individuals must be followed closely for changes in risk status	[22, 23]
Idiopathic Dilated Cardiomyopathy	Asymptomatic No sustained ventricular arrhythmias LVEF >40%	Symptomatic Sustained ventricular arrhythmias LVEF ≤ 40% Individual has an implantable ventricular assist device	Annual Requires annual cardiology evaluation including echocardiography	[22, 24-26]
Restrictive Cardiomyopathy	No	Not applicable	Driver should not receive certification until a diagnosis of restrictive cardiomyopathy has been ruled out.	[27]
Arrhythmogenic Right Ventricular Cardiomyopathy with Dysplasia (ARVC/d)	No	Not applicable	Not applicable	[28]

4.7.3.10 Syncope

Syncope is a symptom, not a medical condition, that can present an immediate threat to public safety because it causes the driver of a CMV to lose control of the vehicle.

Considerations for an ME when making a physical qualification determination should 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 (e.g., due to 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?

With respect to syncope, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with syncope, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on page 30. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.11 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 that do not preclude certification and pathological murmurs that may preclude medical qualification.

4.7.3.11.1 Classification of Murmur Severity

All heart murmurs are analyzed for pitch, loudness, and duration. They are also graded according to their intensity (on a scale of I to VI with I being very faint and VI being very loud). Types of murmurs include:

- Systolic murmurs occur during a heart muscle contraction. Systolic murmurs are divided into ejection murmurs (due to blood flow through a narrowed vessel or irregular valve) and regurgitant murmurs.
- Diastolic murmurs occur during heart muscle relaxation between beats. Diastolic murmurs are due to a narrowing (stenosis) of the mitral or tricuspid valves, or regurgitation of the aortic or pulmonary valves.
- Continuous murmurs occur throughout the cardiac cycle.

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 characteristics of a pathological murmur that may be associated with cardiac disease include:

- Holosystolic murmur
- Harsh murmur
- Abnormal heart sound
- Early or mid-systolic click
- Grade III murmur or greater
- Murmur heard over the left sternal border

4.7.3.11.2 Aortic Regurgitation

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

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

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

4.7.3.11.3 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. The traditional treatment of aortic stenosis is balloon valvuloplasty or surgical commissurotomy.

MEs should evaluate on a case-by-case basis. Criteria MEs should 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 that are likely to cause syncope, dyspnea, or collapse. Mild cases may not need treatment but severe cases would need surgery to repair the valve.

With respect to aortic stenosis, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. The table below is guidance and is one source MEs could consider. The table is from the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A at page 11. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

Aortic Stenosis

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Mild Aortic Stenosis (AVA >1.5 cm^2)	Asymptomatic Cleared by cardiologist	Symptomatic Does not meet certification criteria	Maximum – 1 year Echocardiography and other diagnostics should be repeated as deemed appropriate by cardiologist *OR* a minimum of every 3 to5 years.	[20]
Moderate Aortic Stenosis (AVA ≥ 1.0 - 1.5 cm^2)	Asymptomatic Minimum 3 months after surgery/repair Cleared by cardiologist	Symptomatic (has one or more of the following): Angina; Heart failure; Syncope LVEF <50% *OR* Symptomatic Unrepaired/unreplaced despite recommendation by appropriate treating specialist.	Maximum – 1 year Echocardiography and other diagnostics should be repeated as deemed appropriate by cardiologist *OR* a minimum of every 1 to2 years.	[17-22]
Severe Aortic Stenosis (AVA < 1.0cm^2)	Asymptomatic Minimum of 3 months after surgery/repair Cleared by cardiologist Meets monitoring guidelines for anticoagulant therapy (if applicable)	Symptomatic Fails to meet the certification criteria	Maximum – 1 year Echocardiography and other diagnostics should be repeated as deemed appropriate by cardiologist *OR* a minimum of every 1 to2 years	[17-21]

4.7.3.11.4 Aortic Valve Repair

Aortic valve repair or aortic valve reconstruction is the reconstruction of both form and function of the dysfunctional aortic valve. Mechanical and biological heart valves are different options from which to choose. Mechanical values have no risk of rejection and do not wear out as quickly as ones harvested from a pig or a cow but require anticoagulation. Pig valves, for example, have a risk of rejection by the body and last 7 to 10 years, but usually do not require long-term anticoagulation therapy.

With respect to valve replacement, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. The table below is guidance and is one source MEs could consider. The table is from the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A at page 12. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

Valve Replacement

Disorder/Procedure	Certification Approved if:	Not Approved if:	Recertification	Citation
Prosthetic Valves (Mechanical and Biologic)	Asymptomatic Minimum 3 months post-op LVEF is ≥40% Compliant with anticoagulation therapy (if applicable) Cleared by cardiologist	Symptomatic Persistent symptoms exist LVEF <40%	Maximum – 1 year	[17-19]

4.7.3.11.5 Mitral Regurgitation

Criteria MEs should use to evaluate mitral regurgitation 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 and makes it more likely that mitral regurgitation could cause syncope, dyspnea, or collapse.

4.7.3.11.6 Mitral Stenosis

Criteria MEs should use to evaluate mitral stenosis include, but may not be limited to, valve area size and the presence of signs or symptoms. The development of symptoms (especially angina, syncope, fatigue, and dyspnea) is a marker of a poor prognosis and makes it more likely that mitral stenosis could cause syncope, dyspnea, or collapse. Treatment options for mitral stenosis include enlarging the mitral valve or cutting the band of mitral fibers.

4.7.3.11.7 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 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.

4.7.3.11.8 Pulmonary Valve Stenosis

Pulmonary valve stenosis is usually a well-tolerated deformity of the valve normally exhibiting a gradual progression. However, sudden death may occur if the pulmonary value stenosis is severe. MEs should assess the nature and severity of the medical condition to determine whether the driver meets the cardiovascular standard.

With respect to valvular disease, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with valvular disease, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled “Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety” in Appendix A on pages 10-12
and 26-28. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

4.7.3.12 Renal Dialysis

End stage renal disease is treated with renal dialysis. Section 391.41 does not include a physical qualification standard that specifically addresses end stage renal disease or renal dialysis. Accordingly, the effects of renal dialysis should only be evaluated as part of the underlying medical condition for which it is prescribed. For example, end stage renal disease often occurs as a result of cardiovascular conditions, such as hypertension and congestive heart failure. In such a situation, an ME could consider §391.41(b)(4) and whether the driver meets the cardiovascular standard.

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 an individual’s kidneys lose 85% to 90% of their function. Dialysis can be done in a hospital, in a dialysis clinic, or at home, depending on the individual’s medical condition. Fatigue occurs commonly during the period right after dialysis is performed.

There are two types of dialysis, hemodialysis and peritoneal dialysis.

- Hemodialysis uses a machine and is sometimes called an artificial kidney. The individual usually goes to a specialized clinic for treatments several times a week.
- Peritoneal dialysis uses the lining of the abdomen, called the peritoneal membrane, to filter the blood. It is usually done daily in the home or any other clean place. Peritoneal dialysis can be done intermittently while awake or continually via a machine at night.

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

- What is the cause of the end stage renal disease?
- Does the driver experience symptoms pre- or post-dialysis, such as excessive fatigue, muscle cramps, hypotension, or cognitive impairment?
- Is the driver compliant with the dialysis schedule?
- If an underlying cardiovascular condition exists, is the driver likely to experience syncope, dyspnea, collapse, or congestive cardiac failure?
- Has treatment been shown to be adequate, effective, safe, and stable?

MEs should evaluate end stage renal disease and renal dialysis, on a case-by-case basis, under the most applicable physical qualification standard.

4.8 Respiratory Regulation — 49 CFR 391.41(b)(5)

4.8.1 Regulation 49 CFR 391.41(b)(5)

"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."

4.8.2 Medical Advisory Criteria for 49 CFR 391.41(b)(5)

1. Many conditions interfere with oxygen exchange and may interfere with the ability to control and drive a commercial motor vehicle safely. These include, but are not limited to, emphysema, chronic asthma, carcinoma, tuberculosis, chronic bronchitis, and obstructive sleep apnea.

2. If the medical examiner detects an undiagnosed or inadequately treated respiratory dysfunction that is likely to interfere with the driver's ability to control and drive a

commercial motor vehicle safely, the medical examiner should confer with the treating provider or the driver should be referred to a specialist for further evaluation and therapy.

4.8.3 Other Information

Commercial drivers spend 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 be likely to interfere with the driver's ability to control and drive a CMV safely. They include but may not be 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 likelihood for excessive daytime sleepiness, or otherwise be likely to interfere with the driver's ability to control and drive a CMV safely.

4.8.3.1 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. Some of these antihistamines can affect an individual for 12 hours. 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 should include, but may not be limited to, the following:

- Whether the underlying respiratory condition and treatment with antihistamines is likely to interfere with the driver's ability to control and drive a CMV safely.

- Allergic rhinitis, which involves inflammation of the nasal portion of the upper respiratory tract, should rarely render the driver not physically 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 treatment that impairs function, such as severe conjunctivitis affecting vision, inability to keep eyes open, photophobia, uncontrolled sneezing, or sinusitis associated with severe headaches?

4.8.3.2 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. A preventive measure the ME could suggest would be for the driver to carry an epinephrine injection device in the CMV.
- Hereditary or acquired angioedema due to a 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 should include, but may not be limited to, the following:

- Has the driver 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?

4.8.3.3 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 side effects of therapy may interfere with safe driving.

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

- How frequent and severe are the asthma attacks?

- Are the asthma attacks and the prevention and treatment regimen likely to interfere with the driver's ability to control and drive a CMV safely?

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

4.8.3.4 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.

4.8.3.5 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 progressively more severe. In the majority of cases, cigarette smoking is a primary etiologic factor.

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

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

4.8.3.6 Obstructive Sleep Apnea

Obstructive sleep apnea (OSA) is a respiratory disorder characterized by a reduction or cessation of breathing during sleep. If left untreated, moderate-to-severe OSA may contribute to fatigue and unintended sleep episodes with resulting deficits in attention, concentration, situational awareness, and memory. These deficits may be likely to interfere with a driver's ability to control and drive a CMV safely. However, if treated, moderate-to-severe OSA does not preclude certification.

The FMCSRs do not include requirements for MEs to screen CMV drivers for OSA or provide requirements regarding whether to refer a driver for OSA testing. The FMCSRs also do not include preferred diagnostic testing methods, preferred treatment methods, or requirements by which to assess compliance for OSA treatment. When making a medical certification determination, the ME may consider the driver's responses to the questions about sleep disorders on the Medical Examination Report Form, MCSA-5875, and readily identifiable risk factors for OSA identified during the physical examination.

FMCSA finds the use of multiple risk factors to be a reasonable approach to identify those drivers at risk for moderate-to-severe OSA, rather than relying only on a single criterion. The multiple risk factors to consider include, but may not be limited to:

- History of a small airway
- Loud snoring
- Witnessed apneas
- Self-reported episodes of sleepiness during the major wake periods
- Obesity, high body mass index (BMI)
- Large neck size
- Hypertension
- Cardiovascular disease
- History of stroke, diabetes, or other co-morbid conditions

If an ME observes multiple risk factors for moderate-to-severe OSA, the ME may consider referring the driver for a sleep study if not evaluated previously. If a driver reports a prior sleep study was negative for, or revealed only mild OSA, another sleep study may not be warranted unless the driver reports significant changes in risk factors or symptoms since the prior sleep study. OSA is not a condition that requires testing on a regular schedule. Unless a driver reports symptoms have returned or a significant change in risk factors, typically, for drivers diagnosed with moderate-to-severe OSA treated with continuous positive airway pressure, retesting may occur between 3 and 5 years or as determined by the treating provider.

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

- Does the driver report or the ME identify multiple risk factors for or symptoms of OSA?
- Are symptoms reported likely to interfere with the driver's ability to control and drive a CMV safely?

- If a driver is diagnosed with moderate-to-severe OSA, has treatment been shown to be adequate, effective, safe, and stable?

With respect to OSA, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with moderate-to-severe OSA, one source MEs could consider is the November 21, 2016, OSA advisory recommendations. They are available at https://www.fmcsa.dot.gov/advisory-committees/mrb/final-mrb-task-16-01-letter-report-mcsac-and-mrb.

4.8.3.7 Infectious Respiratory Diseases

4.8.3.7.1 Acute Infectious Diseases

For illnesses, such as influenza or bronchitis, the driver should undergo proper treatment for the illness. Many acute infectious respiratory diseases are of short duration and should not preclude certification.

4.8.3.7.2 Pulmonary and Atypical Tuberculosis

Although modern 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. The Centers for Disease Control and Prevention noted outbreaks in 2018 of pulmonary TB caused by unpasteurized milk, primarily in Texas, California, New York, and Florida. The National incidence rate is low at 2.8 cases per 100,000. Advanced pulmonary TB may cause respiratory insufficiency; however, the likelihood of recurrence after adequate therapy is very low.

Atypical TB covers the same broad spectrum of symptoms and disability as pulmonary TB. Many individuals, however, are colonized, but not infected with atypical organisms, usually mycobacterium avium - intracellular. 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 atypical 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 may not be 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 for either pulmonary or atypical TB should include, but may not be limited to, the following:

- What is the nature and severity of the driver's disease and symptoms (if the disease is progressive, respiratory insufficiency may develop)?
- Is the etiology and treatment confirmed?
- Is the driver compliant with medications and treatment?
- Has treatment been fully effective in resolving the underlying infection?
- Are there symptoms present that are likely to interfere with the driver's ability to control and drive a CMV safely?

4.8.3.8 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.

4.8.3.8.1 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 should include, but may not be limited to, the following:

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

4.8.3.8.2 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, however, 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 should include, but may not be limited to, the following:

- What is the nature and severity of the driver's disease and symptoms?
- Is the driver able to obtain therapy while working if necessary?
- Is the nature and severity of CF likely to interfere with the driver's ability to control and drive a CMV safely?

4.8.3.8.3 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 should include, but may not be limited to, the following:

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

4.8.3.8.4 Pneumothorax

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

4.8.3.8.4.1 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 provider.

Considerations for an ME when making a physical qualification determination should 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?
- Has resolution of the pneumothorax been confirmed?

4.8.3.8.4.2 Spontaneous Pneumothorax

If spontaneous pneumothorax is the result of an existing lung disease (e.g., emphysema), then the underlying lung disease will determine the likelihood of a recurrent pneumothorax and the certification outcome. Chest X-rays performed by the treating provider (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 should 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 be likely to interfere with the driver's ability to control and drive a CMV safely?
- Has resolution of the spontaneous pneumothorax been confirmed?

4.8.3.9 Cor Pulmonale

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

Factors associated with cor pulmonale that may be likely to interfere with the driver's ability to control and drive a CMV safely are:

- Dizziness
- Hypotension
- Syncope
- Common side effects of vasodilators

Considerations for an ME when making a physical qualification determination should 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?

4.9 Rheumatic, Arthritic, Orthopedic, Muscular, Neuromuscular, or Vascular Disease — 49 CFR 391.41(b)(7)

4.9.1 Regulation 49 CFR 391.41(b)(7)

"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."

4.9.2 Medical Advisory Criteria for 49 CFR 391.41(b)(7)

1. Once the driver has been diagnosed as having a rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease, then the driver has an established history of that disease.

2. The medical examiner, when examining a driver, should consider the following: the nature and severity of the driver's condition (such as sensory loss or loss of strength); the degree of limitation present (such as range of motion); the rate or stage of progression (symptoms may not be present initially but may manifest over time); and whether symptoms are likely to interfere with the ability to control and operate a commercial motor vehicle safely.

3. If severe functional impairment exists, the driver does not physically qualify. In cases where more frequent monitoring is required, a medical certificate for a shorter period of time may be issued.

4.9.3 Other Information

Disorders of the musculoskeletal system can interfere with 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 drive safely and perform non-driving tasks. The ME should consider that certification is not limited to a single employer or type of work. For example, no lifting may be required for one employer while heavy lifting may be required for other employers. Certification also is not limited to a specific vehicle type or size. Thus, a driver who is medically certified under the FMSCRs is physically qualified to operate every vehicle type and to perform the activities typically associated with commercial driving. MEs cannot issue a Medical Examiner's Certificate, Form MCSA-5876, with restrictions other than those listed on the certificate. If physical restrictions are necessary, they are to be imposed at the employer's discretion as a condition of employment.

4.9.3.1 Job Demands

Drivers have many job demands and duties, with the actual task of driving being the least physically demanding part. An ME must be familiar with, and consider, all driver tasks related to CMV operation when making a physical qualification determination. Some primary examples of the types of driver tasks include, but may not be limited to, the following.

4.9.3.1.1 Heavy Labor Tasks

- **Coupling and uncoupling trailer(s) from the tractor:** requires strength and full range of motion to climb, balance, turn, grip, and pull;
- **Loading and unloading trailer(s):** requires ability to lift a heavy load or unload as much as 50,000 pounds of freight after sitting for a long period of time without any stretching period;
- **Lifting, installing, and removing heavy tire chains:** requires pulling/lifting motions in the range of 35 to 90 pounds; and
- **Lifting tarpaulins to cover open top trailers:** requires pulling/lifting motions in the range of 50 to 100 pounds.

4.9.3.1.2 Other Job Tasks

- **Performing pre-trip and post-trip safety checks:** requires climbing, bending, kneeling, crawling, reaching, stretching, turning, and twisting;
- **Handling and inspecting cargo:** requires lifting, climbing up and down perpendicular ladders, and entering/leaving the cab or cargo body multiple times a day; and
- **Inspecting the vehicle:** (includes the driver evaluating the mechanical condition of the various vehicular systems, such as tires, brakes, suspensions, engines, and cargo) requires climbing, bending, kneeling, crawling, reaching, stretching, turning, and twisting.

4.9.3.1.3 Driving Maneuvers and Operations

- **Moving gear shift lever(s):** requires moderate strength, timely coordination, and complex manipulation skills of right upper and left lower extremity;
- **Controlling steering wheel:** requires strength, mobility, and power grasp and prehension of hands and fingers while maintaining stability of trunk;
- **Operating brakes and accelerator pedals:** requires moderate strength, mobility, and coordinated movement in lower extremities;
- **Operating light switches, windshield wipers, directional signals, emergency lights, horn, etc.:** requires moderate strength, mobility, and manipulative skills of upper extremities; and
- **Backing and parking:** requires adequate depth perception, strength, and coordinated manipulative skills.

4.9.3.2 Tests

4.9.3.2.1 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.

4.9.3.2.2 Musculoskeletal Tests

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

When requesting additional evaluation, the specialist should understand the role and function of a driver. Therefore, it is helpful if the ME includes a description of the role of the driver as outlined in section 4.9.3.1 (Job Demands) above and a copy of the applicable medical standard(s) with the request.

4.9.3.3 Neuromuscular Diseases Generally

Certain rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular 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 that may interfere with the ability to control and operate a CMV safely. With each recurring episode, these symptoms may become more pronounced and remain for longer periods of time.

Other neuromuscular diseases are usually insidious in onset and are slowly progressive. The rate of progression will vary and is generally measured in months to years. These neuromuscular diseases generally do not interfere with the ability to control a CMV until the diseases have progressed to later stages. Common signs and symptoms of progressive neuromuscular diseases include, but may not be limited to, muscular weakness, rigidity and stiffness, loss of muscular control, numbness, tingling, twitching spasms, muscle pain, cramping, and joint deformities.

Some neuromuscular diseases are characterized by abnormal muscle excitability caused by abnormalities either in the nerve or in the muscle membrane. Certain diseases, such as myotonia, Isaac’s syndrome, and stiff-person syndrome, may interfere with the driver’s ability to control and operate a CMV safely due to abnormal muscle excitability.

There is no cure for most neuromuscular diseases. However, some neuromuscular diseases can be managed effectively by drug therapy.

4.9.3.4 Multiple Sclerosis

Multiple sclerosis is a potentially disabling disease of the central nervous system (the brain, optic nerve, and spinal cord). In multiple sclerosis, 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 individual-to-individual 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's 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

Most individuals with multiple sclerosis 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 difficulties with mobility and gait. The rate of disease progression varies greatly among individuals with secondary-progressive multiple sclerosis. MEs should address the diagnosis of multiple sclerosis, on a case-by-case basis, to determine if the driver meets the physical qualification standard.

4.9.3.5 Parkinson's Disease

Parkinson's disease is a progressive nervous system disorder that affects movement. Symptoms start gradually, sometimes starting with a barely noticeable tremor in just one hand that can progress to increasing stiffness and/or slowing of movement.

Parkinson's disease signs and symptoms can be very different for individuals. Early signs may be mild and go unnoticed. Symptoms often begin on one side of the body and usually remain worse on that side, even after symptoms begin to affect both sides. Symptoms include, but may not be limited to:

- Tremor
- Slowed movement (bradykinesia)
- Rigid muscles
- Posture and balance impairment
- Loss of automatic movements, such as blinking or smiling
- Speech changes

Advanced stages of Parkinson's disease may include orthostatic hypotension, depression and emotional changes, sleep disorders, fatigue, and decreased cognitive function.

The worsening of symptoms usually includes difficulties with movement and balance. The rate of disease progression varies greatly among individuals. MEs should address the diagnosis of Parkinson's disease, on a case-by-case basis, to determine if the driver meets the physical qualification standards.

4.9.3.6 Examples of Other Neuromuscular Diseases

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

4.9.3.7 General Considerations for §391.41(b)(7)

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

- Does the driver exhibit physical limitations, such as weakness, decreased range of motion, decreased strength, or lack of stability of muscles or joints?
- Do any physical limitations interfere with the driver's ability to control and operate a CMV safely?
- Has treatment been shown to be adequate, effective, safe, and stable?

4.10 Loss or Impairment of Limbs Regulations — 49 CFR 391.41 (b)(1) and (b)(2)

4.10.1 Regulation 49 CFR 391.41(b)(1)

"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."

4.10.2 Medical Advisory Criteria for 49 CFR 391.41(b)(1)

1. Only drivers with loss of all five fingers are considered to have the loss of a hand under §391.41(b)(1).

2. Unless a driver possesses a skill performance evaluation certificate, loss of a foot, a leg, a hand, or an arm precludes physical qualification. Even if a driver has a prosthesis that replaces the foot, leg, hand, or arm, as applicable, certification is precluded without a skill performance evaluation certificate.

4.10.3 General Considerations for §391.41(b)(1)

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

- Have the extremities all been visualized during the examination to determine if the driver has lost a foot, leg, hand, or arm?
- Only drivers with loss of all five fingers are considered to have the loss of a hand.

4.10.4 49 CFR 391.49 — Determination of Need for a Skill Performance Evaluation Certificate under §391.41(b)(1)

A driver who does not meet §391.41(b)(1), and who is otherwise physically qualified to operate a CMV, may operate a CMV in interstate commerce if FMCSA grants the driver a skill performance evaluation (SPE) certificate pursuant to §391.49. Under §391.49(g), FMCSA may require a driver applying for an SPE certificate to demonstrate, to an agent of FMCSA, the driver's ability to safely operate the CMV the driver intends to operate. The demonstration is accomplished by conducting an SPE that includes three portions: non-driving and pre-trip inspection, off-highway driving, and on-highway driving. FMCSA's SPE Certificate Program allows drivers who have lost a limb to demonstrate on an individual basis the ability to operate a CMV safely. Restrictions may be included by FMCSA on the SPE certificate relating to the use

of prosthetic or orthotic devices or equipment modifications, when FMCSA determines they are necessary for the driver to be able to operate the CMV safely.

For §391.41(b)(1), MEs should describe in the box to discuss abnormal answers in the Physical Examination section on the Medical Examination Report Form, MCSA-5875, the location and extent of the loss of a foot, a leg, a hand, or an arm; how and when the loss occurred; and the type of prosthesis generally, if any. This information must be provided even if the driver has a current SPE certificate. Only drivers with loss of all five fingers are considered to have the loss of a hand. Drivers with loss of fewer than all fingers are evaluated under §391.41(b)(2) to determine whether there is an impairment, defect, or limitation of a limb (see Medical Advisory Criteria in section 4.10.6 below). Drivers with the loss of a foot, a leg, a hand, or an arm must obtain an SPE certificate from FMCSA to be physically qualified.

If a driver does not meet the standard in §391.41(b)(1), or the ME is unsure and plans to refer the driver to FMCSA for evaluation under the SPE Certificate Program, MEs are responsible for determining whether the driver meets the other physical qualification standards. If the driver meets all the other physical qualification standards (or holds a valid Federal medical exemption), the driver may be eligible for an SPE certificate under §391.49. A driver may operate a CMV in interstate commerce if the requirements in §391.49 are met and FMCSA grants an SPE certificate to the driver.

An SPE certificate is available only for loss, impairment, defect, or limitation of a limb that is fixed (i.e., likely to remain medically stable over the lifetime of the driver). Decisions regarding whether the loss, impairment, defect, or limitation is fixed will be made during a medical evaluation by a board qualified or board-certified physiatrist (doctor of physical medicine) or orthopedic surgeon, and be reviewed by FMCSA, as part of the SPE application process. An SPE certificate is not available for impairment of the spine or torso that does not result in loss, impairment, defect, or limitation of a limb.

To be eligible for an SPE certificate, a driver with loss of a hand or arm must have a prosthesis that allows the driver to demonstrate precision prehension (e.g., the ability to manipulate knobs and switches) or power grasp prehension (e.g., the ability to hold and maneuver the steering wheel) to be considered for an SPE Certificate.

4.10.5 Regulation 49 CFR 391.41(b)(2)

“A person is physically qualified to drive a commercial motor vehicle if that person -

* * * * *

Has no impairment of:

(i) A hand or finger which interferes with prehension or power grasping; or
(ii) 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."

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

1. Drivers with loss of fewer than all five fingers or any number of toes should be evaluated under §391.41(b)(2) to determine if there is an impairment, defect, or limitation of a limb that interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle.

2. A skill performance evaluation certificate is only available for loss, impairment, defect, or limitation of an extremity. A skill performance evaluation certificate is not available for impairment of the spine or torso that does not result in loss, impairment, defect, or limitation of a limb.

4.10.7 General Considerations for §391.41(b)(2)

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

- Does the driver exhibit physical limitations, such as weakness, decreased range of motion, decreased strength, or lack of stability of muscles or joints?
- Does the driver have sufficient power grasp and prehension of hands and fingers to maintain steering wheel grip and control and manipulate knobs and switches?
- Does the driver have sufficient strength and mobility in the lower limbs to operate pedals properly?
- Do any physical limitations interfere with the driver's ability to perform normal tasks associated with operating a CMV?

4.10.8 49 CFR 391.49 — Determination of the Need for a Skill Performance Evaluation Certificate under §391.41(b)(2)

A driver who does not meet §391.41(b)(2), and who is otherwise physically qualified to operate a CMV, may operate a CMV in interstate commerce if FMCSA grants the driver an SPE certificate pursuant to §391.49. Under §391.49(g), FMCSA may require a driver applying for an SPE certificate to demonstrate, to an agent of FMCSA, the driver's ability to safely operate the CMV the driver intends to operate. The demonstration is accomplished by conducting an SPE that includes three portions: non-driving and pre-trip inspection, off-highway driving, and on-highway driving. FMCSA's SPE Certificate Program allows drivers who have an impairment, defect, or limitation of a limb to demonstrate on an individual basis the ability to operate a CMV safely. Restrictions may be included by FMCSA on the SPE certificate relating to the use of prosthetic or orthotic devices or equipment modifications, when FMCSA determines they are necessary for the driver to be able to operate the CMV safely.

For §391.41(b)(2)(i), the ME is to determine whether the driver has an impairment of a hand or finger that interferes with prehension (e.g., the ability to manipulate knobs and switches) or

power grasping (e.g., the ability to hold and maneuver the steering wheel). For a driver who has lost one or more fingers, the number of remaining fingers and their placement will be important in determining whether the loss interferes with prehension and power grasping. For example, the loss of only the little finger is unlikely to interfere with prehension or power grasping. MEs must describe in the box to discuss abnormal answers in the Physical Examination section on the Medical Examination Report Form, MCSA-5875, the location and extent of the impairment of a hand or finger or loss of fingers; how and when the loss occurred, if applicable; the type of prosthesis or orthotic device used, if any; and whether the impairment or loss interferes with prehension and power grasping. The ME must provide this information even if the driver has a current SPE certificate.

For §391.41(b)(2)(ii), the ME is to determine whether the driver has an impairment of an arm, foot, or leg or any other significant limb defect or limitation that interferes with the ability to perform normal tasks associated with operating a CMV. When evaluating the driver, the ME should consult the discussion in section 4.9.3 (Other Information) and the role and functions of the driver as outlined in section 4.9.3.1 (Job Demands) above. MEs must describe in the box to discuss abnormal answers in the Physical Examination section on the Medical Examination Report Form, MCSA-5875, the location and extent of any impairments, defects, or limitations; the cause of the impairments, defects, or limitations and when they occurred; the type of prosthesis or orthotic device used, if any; and whether the impairments, defects, or limitations interfere with the ability to perform normal tasks associated with operating a CMV.

A driver does not meet §391.41(b)(2) if the ME determines (i) the driver has an impairment of a hand or finger that interferes with prehension or power grasping, or (ii) the driver has impairments, defects, or limitations of an arm, foot, or leg that interfere with the ability to perform normal tasks associated with operating a CMV. A driver who does not meet §391.41(b)(2) must obtain an SPE certificate from FMCSA to be physically qualified. If an ME is unsure about whether a driver meets §391.41(b)(2), the ME may refer the driver to FMCSA for evaluation under the SPE Certificate Program.

If a driver does not meet the standards in §391.49(b)(2), or the ME is unsure and plans to refer the driver to FMCSA for evaluation under the SPE Certificate Program, MEs are responsible for determining whether the driver meets the other physical qualification standards. If the driver meets all the other physical qualification standards (or holds a valid Federal medical exemption), the driver may be eligible for an SPE certificate under §391.49. A driver may operate a CMV in interstate commerce if the requirements in §391.49 are met and FMCSA grants an SPE certificate to the driver.

An SPE certificate is only available for extremity impairments, defects, or limitations that are fixed (i.e., likely to remain medically stable over the lifetime of the driver). Decisions regarding whether the impairments, defects, or limitations are fixed will be made during a medical evaluation by a board qualified or board-certified physiatrist (doctor of physical medicine) or orthopedic surgeon, and be reviewed by FMCSA, as part of the SPE application process.

Additionally, an SPE certificate is only available for loss, impairment, defect, or limitation of an extremity. An SPE certificate is not available for impairment of the spine or torso that does not result in loss, impairment, defect, or limitation of a limb.

A driver with an impairment, defect, or limitation of a hand or arm may be required to have a prosthesis or orthotic device, if it is necessary for the driver to demonstrate precision prehension or power grasp prehension.

More information is available about SPE Certificates in the Medical Variances section at the end of this handbook.

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

4.11.1 Regulation 49 CFR 391.41(b)(8)

"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 to control a commercial motor vehicle."

4.11.2 Medical Advisory Criteria for 49 CFR 391.41(b)(8)

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

    - A driver who has a medical history of epilepsy or a seizure disorder, unless the driver satisfies the criteria described in paragraph 5 of the Medical Advisory Criteria for §391.41(b)(8);
    - A driver who has a current clinical diagnosis of epilepsy or a seizure disorder; or
    - A driver who is taking antiseizure medication to prevent seizures.

2. When a driver has had a single unprovoked episode of loss of consciousness (i.e., the cause is unknown or there is no clear provoking trigger) that is determined not to have been a seizure, the medical examiner may certify the driver if the medical examiner determines recurrence of loss of consciousness or loss of ability to control a commercial motor vehicle is unlikely and the driver is not taking antiseizure medication. The determination should be made on an individual basis by the medical examiner in consultation with the treating provider. Before certification is considered, it is recommended that a 6-month waiting period elapse from the time of the episode.

3. When a driver has had a single unprovoked nonepileptic seizure (i.e., the cause is unknown or there is no clear provoking trigger) that was treated with antiseizure medication or left untreated, the medical examiner may certify the driver if the driver is both off antiseizure medication and seizure free for 5 years of more.

4. When a driver has had a single provoked nonepileptic seizure or episode of loss of consciousness (i.e., there is a known medical condition or a clear provoking trigger that is reversible or avoidable, such as a drug reaction, alcohol and illicit drug withdrawal, high temperature, acute infectious disease, dehydration, or acute metabolic disturbance), the medical examiner may certify the driver if the driver has fully recovered, has no existing residual complications, and is not taking antiseizure medication and seizure recurrence and exposure to the provoking trigger in the future is unlikely.

5. When a driver has a medical history of epilepsy or a seizure disorder, the medical examiner may certify the driver if the driver is both off antiseizure medication and seizure free for 10 years or more.

6. If a medical examiner is unsure about whether to qualify a driver with a history of epilepsy or a seizure disorder, or a single nonepileptic seizure, the medical examiner may refer the driver to the Federal Motor Carrier Safety Administration for evaluation under the criteria for a Federal seizure exemption.

4.11.3 Other Information

Medical conditions in this section are discussed because they may be associated with seizures or loss of consciousness. If the medical condition discussed does not present with, or has a low likelihood of seizures or loss of consciousness in a particular driver, it may be more appropriate to evaluate the medical condition under a different physical qualification standard.

4.11.3.1 Single Unprovoked Seizure

An unprovoked seizure is a seizure for which the cause is unknown or there is no clear provoking trigger. Individuals who experience a single unprovoked seizure do not have a diagnosis of epilepsy. Individuals who experience a second unprovoked seizure are most likely to do so in the first 5 years following the initial seizure. Risk factors for seizure recurrence include a history of remote neurological insult (i.e., stroke), abnormalities on an electroencephalogram (EEG), focal structural lesion on neuroimaging, and a family history of epilepsy. A second unprovoked seizure, regardless of the elapsed time between seizures, may constitute a medical history or diagnosis of epilepsy.

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

- Has the driver been both seizure free and off antiseizure medication for at least 5 years or more?
- Has a medical history or diagnosis of epilepsy been ruled out?

4.11.3.2 Single Provoked Seizure

Seizures in the acute stage of an adverse event are the normal reaction of a properly functioning nervous system. Single provoked seizures (i.e., there is a known medical condition or a clear provoking trigger that is reversible or avoidable) 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 likelihood for recurrence of seizures is related to the likelihood of recurrence of the inciting condition. Medical conditions and provoking triggers that can incite a seizure in the acute stage of the condition include, but may not be limited, to a drug reaction, high temperature, acute infectious disease, dehydration, alcohol and illicit drug withdrawal, and acute metabolic disturbances such as hypernatremia or hyponatremia, hypocalcemia, hypoglycemia, hypomagnesemia, hypokalemia, and hyperkalemia.

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

- Has the underlying inciting medical condition resolved or the provoking trigger been eliminated and has the driver fully recovered?
- Are there any existing residual complications?
- Is the driver taking antiseizure medication?
- What is the likelihood of recurrence of the inciting medical condition or exposure to the provoking trigger in the future?

4.11.3.3 Childhood Febrile Seizures

Febrile seizures typically occur in children 6 months to 5 years old. They are a provoked seizure caused by a fever often stemming from an infection. Febrile seizures occur in young, healthy children who have normal development and no history of previous neurological symptoms. Childhood febrile seizures are unlikely to cause seizures or residual side effects in adulthood.

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

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

4.11.3.4 Antiseizure Medication Not Used for Seizures

Antiseizure medication is frequently used to treat diagnoses other than epilepsy and seizures. For any driver who discloses the use of antiseizure medication, the ME should ask if the medication is being used to treat epilepsy or seizures. If antiseizure medication is being used to treat a diagnosis other than epilepsy or seizures, the ME should evaluate such other diagnosis under the appropriate physical qualification standard and appropriately document the medication use on the Medical Examination Report Form, MCSA-5875. For example, if it is disclosed a driver is taking gabapentin, the ME should ask why it has been prescribed and document the condition for which it was prescribed ("gabapentin for seizures," "gabapentin for migraine prevention," "gabapentin for nerve pain," etc.).

4.11.3.5 Federal Seizure Exemption

If a driver does not meet the standard in §391.41(b)(8) due to a single or multiple seizures, or an ME is not sure whether the driver meets the standard, the ME may refer the driver to FMCSA for evaluation under the criteria for a Federal seizure exemption. In this situation, the ME should complete the physical qualification examination of the driver and determine if the driver meets the other physical qualification standards. MEs may only physically qualify drivers who require a seizure exemption for a maximum of 12 months. A driver who meets the other physical qualification standards should consult the criteria for an exemption on FMCSA's website at https://www.fmcsa.dot.gov/regulations/medical/seizure-exemption-application. Additional information about seizure exemptions and the application process is in the Medical Variance section at the end of this handbook.

4.11.3.6 Headaches, Vertigo, Dizziness, and Meniere's Disease

4.11.3.6.1 Headaches

Headache and its chronic "nagging" pain may be present to such a degree that it is likely to cause loss of consciousness or the ability to control a CMV. The medication used to treat headaches may also cause loss of a driver's ability to control a CMV. Complaints of severe headaches should be thoroughly examined when determining whether a driver is physically qualified. Headaches that are likely to cause loss of consciousness or any loss of ability to control a CMV, even if periodic, 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 are types of headaches:

- Migraines
- Tension-type headaches
- Cluster headaches
- Post-traumatic head injury syndrome
- Headaches associated with toxic substances such as carbon monoxide poisoning or nitroglycerine
- Cranial neuralgias
- Headaches associated with atypical facial pain

However, only headaches that are likely to cause loss of consciousness or any loss of ability to control a CMV preclude medical certification.

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

- What is the frequency, severity, and duration of the headaches?
- What are the symptoms associated with the headaches?
- Are the symptoms associated with the headaches, such as visual disturbances and light or noise sensitivity, likely to cause loss of consciousness or any loss of ability to control a CMV?
- Has treatment been shown to be adequate, effective, safe, and stable?

4.11.3.6.2 Vertigo and Dizziness

The 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 is likely to cause loss of ability to control a CMV.

The most common medications used to treat vertigo and dizziness may have sedative side effects. Therefore, special consideration should be given to the use of these medications. The ME should determine if the medications the driver has been prescribed will produce sedation in the driver that is likely to cause loss of consciousness or any loss of ability to control a CMV.

The effects associated with vertigo and dizziness should be considered by the ME. Multiple conditions may affect equilibrium or balance and cause 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 should include, but may not be limited to, the following:

- What is the frequency, severity, and duration of the vertigo and dizziness episodes?
- Are the vertigo and dizziness episodes likely to cause loss of consciousness or any loss of ability to control a CMV?
- Has treatment been shown to be adequate, effective, safe, and stable?

4.11.3.6.3 Meniere's Disease

Meniere's disease is a disorder of the inner ear that can lead to dizzy spells or vertigo along with hearing loss. In most cases, Meniere's disease only affects one ear. Meniere's disease can occur at any age, but it usually starts between young and middle-aged adulthood. It is considered a chronic condition, but there are various treatments available that can help relieve symptoms. Signs and symptoms of Meniere's disease include recurring episodes of vertigo that can occur without warning, usually lasting 20 minutes to several hours. Individuals may have hearing loss that comes and goes; however, Meniere's disease could result in permanent hearing loss. Individuals may have tinnitus (ringing in the ear), which is perceived as a ringing, buzzing, roaring, whistling, or hissing sound. Individuals often feel pressure in an affected ear. After an episode, signs and symptoms improve and may disappear entirely for a while. Over time, the frequency of episodes may lessen.

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

- What is the frequency, severity, and duration of the vertigo episodes?
- Are the vertigo episodes likely to cause loss of consciousness or any loss of ability to control a CMV?
- Has treatment been shown to be adequate, effective, safe, and stable?

4.11.3.7 Infections of the Central Nervous System

Most CNS infections can cause seizures in the acute stage. Some CNS infections also increase the likelihood of later seizures and epilepsy. A driver with a current clinical diagnosis of a CNS infection or signs and symptoms of a CNS infection should have the etiology confirmed. Some CNS infections can be mild and resolve without any special treatment, while others can be very severe with long-term effects.

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

- Was the infection accompanied by seizure? If so, how many seizures occurred, when did they occur, how frequently did they occur, is the driver taking antiseizure medication, and what is the likelihood of seizure recurrence?
- Has the underlying infection resolved and is the driver fully recovered from the infection?
- Are there any existing residual complications from the infection?
- Was treatment shown to be adequate, effective, safe, and stable?

4.11.3.8 Central Nervous System Tumors

The CNS is the seat of our intelligence and emotions. A disorder 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 and changes in vision, hearing, speech, and swallowing. For some benign tumors, certification may be possible after successful surgical treatment**.**

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

- Has the etiology been confirmed?
- Is the nature and severity of the medical condition likely to cause loss of consciousness or any loss of ability to control a CMV?
- Has treatment been shown to be adequate, effective, safe, and stable?

MEs should evaluate, on a case-by-case basis, to determine if the driver meets the physical qualification standard.

4.11.3.9 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 may be likely to cause loss of consciousness or loss of ability to control 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 also have a high rate for occurrence of acute cardiac events, including myocardial infarction or sudden cardiac death. Recurrent cerebrovascular symptoms or cardiac events can occur with sufficient frequency to be likely to cause loss of consciousness or loss of ability to control 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

Any weakness should be evaluated to determine whether the deficit is likely to cause any loss of ability to control a CMV.

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

- Has the etiology been confirmed?
- Is the nature and severity of the medical condition likely to cause loss of consciousness or any loss of ability to control a CMV?

- Are seizures present? If so, how many seizures occurred, when did they occur, how frequently did they occur, is the driver taking antiseizure medication, and what is the likelihood of seizure recurrence?
- Whether the driver has been evaluated and treated by a medical provider.
- Has treatment been shown to be adequate, effective, safe, and stable?

MEs should evaluate, on a case-by-case basis, to determine if the driver meets the physical qualification standard.

4.11.3.10 Embolic Strokes, Thrombotic Strokes, and Transient Ischemic Attacks

A cerebral infarction or stroke is a major cause of long-term disability. Embolic and thrombotic cerebral infarctions are the most common forms of cardiovascular disease. The likelihood of complicating seizures is associated with the location of the lesions.

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

Individuals with embolic or thrombotic cerebral infarctions may have residual intellectual or physical impairments. Fatigue, prolonged work hours, 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. Even one seizure after a stroke may constitute a medical history or diagnosis of epilepsy.

Transient ischemic attack is a temporary period of symptoms similar to those of a stroke. Often called a ministroke, the transient ischemic attack may be a warning. About 1 in 3 individuals who have a transient ischemic attack will eventually have a stroke, with about half occurring within a year after the transient ischemic attack.

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 should include, but may not be limited to, the following:

- Has the etiology been confirmed?
- Are there any neurological residuals?
- Are seizures present? Has a diagnosis of epilepsy been made?
- Is the nature and severity of the medical condition likely to cause loss of consciousness or any loss of ability to control a CMV?
- Whether the driver has been evaluated and treated by a medical provider or neurologist.
- Has treatment been shown to be adequate, effective, safe, and stable?

MEs should address each diagnosis, on a case-by-case basis, to determine if the driver meets the physical qualification standard. A consult with the driver's neurologist may be necessary for the ME to make that determination.

4.11.3.11 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 likelihood 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 likelihood for seizures.
- Cortical and subcortical hemorrhages are associated with an increased likelihood for seizures.
- Appropriate evaluation by a medical provider or neurologist may be necessary to confirm the area of involvement.

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

- Has the etiology been confirmed?
- Are there any neurological residuals?
- Are seizures present? Has a diagnosis of epilepsy been made?
- Is the nature and severity of the medical condition likely to cause loss of consciousness or any loss of ability to control a CMV?
- Whether the driver has been evaluated and treated by a medical provider or neurologist.

- Has treatment been shown to be adequate, effective, safe, and stable?

MEs should address each diagnosis, on a case-by-case basis, to determine if the driver meets the physical qualification standard.

4.11.3.12 Narcolepsy and Idiopathic Hypersomnia

Narcolepsy is a sleep disorder as is OSA, but narcolepsy is of neurological origin. It is characterized by excessive sleepiness and manifestations of rapid eye movement (REM) sleep physiology during wakefulness (e.g., cataplexy, sleep paralysis, and hypnagogic hallucinations). Excessive daytime sleepiness is typically the first, primary, and most disabling manifestation of narcolepsy. Excessive sleepiness is chronic and may manifest as pervasive drowsiness and sub wakefulness, frequent napping, and unexpected and overpowering sleep attacks occurring almost daily. Individuals with narcolepsy may describe waxing and waning periods of alertness. Brief naps lasting 10 to 20 minutes and seldom over an hour, occur repeatedly from 1 to 8 times throughout the day. There is no cure for narcolepsy. While medications and lifestyle modifications can help one manage the symptoms, a driver remains likely to lose consciousness or the ability to control a CMV because of the underlying narcolepsy and does not satisfy the standard in 49 CFR 391.41(b)(8).

Idiopathic hypersomnia results in sleepiness after sufficient or even increased amounts of nighttime sleep without any identifiable cause. Excessive sleepiness is generally severe and present almost daily. Unintended naps are longer than those of narcolepsy or OSA and, unlike narcolepsy, they are typically unrefreshing. Affected individuals often report difficulty awakening from sleep. Disorientation and confusion on awakening (i.e., sleep drunkenness), automatic behavior, headaches, syncope, and orthostatic hypotension may be present as well. Because the cause of idiopathic hypersomnia is not known, the treatment is aimed at easing symptoms. There is no cure for idiopathic hypersomnia. While medications and lifestyle modifications can help ease some symptoms, the driver remains likely to lose consciousness or the ability to control a CMV because of the underlying idiopathic hypersomnia and does not satisfy the standard in 49 CFR 391.41(b)(8).

4.11.3.13 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 difficulties, and exhibit emotional and behavioral changes.

With respect to TBI, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with TBI, one source MEs could consider is the October 30, 2009, Opinions of Expert Panel - Traumatic Brain Injury and

Commercial Motor Vehicle Driver Safety. It is available at https://www.fmcsa.dot.gov/regulations/medical/opinions-expert-panel-traumatic-brain-injury-and-commercial-motor-vehicle-driver.

4.11.3.14 Syncope

Syncope is a symptom, not a medical condition, that can present an immediate threat to public safety because it causes the driver of a CMV to lose control of the vehicle.

Considerations for an ME when making a physical qualification determination should 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, e.g., due to 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?

With respect to syncope, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with syncope, one source MEs could consider is the July 5, 2013, Expert Panel Recommendations titled "Medical Examiner Physical Qualification Standards and Clinical Guidelines for Cardiovascular Disease and Commercial Motor Vehicle Driver Safety" in Appendix A on page 30. It is available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/FMCSA%20CVD%20MEP%20Recommendations%2005062013.pdf.

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

4.12.1 Regulation 49 CFR 391.41(b)(3)

"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."

4.12.2 Medical Advisory Criteria for 49 CFR 391.41(b)(3) and 391.46

There are no medical advisory criteria for these standards.

4.12.3 Regulation 49 CFR 391.46

"(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:

(1) The individual otherwise meets the physical qualification standards in §391.41 or has an exemption or skill performance evaluation certificate, if required; and

(2) The individual has the evaluation required by paragraph (b) and the medical examination required by paragraph (c) of this section.

(b) ***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." For purposes of this section, "treating clinician" means 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.

(1) During the evaluation of the individual, the treating clinician must complete the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870.

(2) 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.

(c) ***Medical examiner's 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 medical examiner 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 commercial motor vehicle safely.

(1) The medical examiner 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. This Form shall be treated and retained as part of the Medical Examination Report Form, MCSA-5875.

(2) The medical examiner must determine whether the individual meets the physical qualification standards in §391.41 to operate a commercial motor vehicle. In making that determination, the medical examiner 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 commercial motor vehicle.

(i) The individual is not physically qualified to operate a commercial motor vehicle if he or she is not maintaining a stable insulin regimen and not properly controlling his or her diabetes mellitus.

(ii) The individual is not physically qualified on a permanent basis to operate a commercial motor vehicle if he or she has either severe non-proliferative diabetic retinopathy or proliferative diabetic retinopathy.

(iii) The individual is not physically qualified to operate a commercial motor vehicle 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 that are generated in accordance with paragraph (d) of this section.

(iv) 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 that are generated in accordance with paragraph (d) of this section is not physically qualified to operate a commercial motor vehicle 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 medical examiner may issue a medical examiner's certificate that is valid for up to the maximum 12-month period allowed by §391.45(e) and paragraph (c)(2)(iii) of this section.

(d) ***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.

(e) **S*evere hypoglycemic episodes.***

(1) 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 commercial motor vehicle is prohibited from operating a commercial motor vehicle, 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 commercial motor vehicle continues until a treating clinician:

(i) Has determined that the cause of the severe hypoglycemic episode has been addressed;

(ii) Has determined that the individual is maintaining a stable insulin regimen and proper control of his or her diabetes mellitus; and

(iii) Completes a new Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870.

(2) 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 12 months.

The Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, can be obtained at https://www.fmcsa.dot.gov/regulations/medical/insulin-treated-diabetes-mellitus-assessment-form-mcsa-5870.

4.12.4 Other Information

4.12.4.1 Diabetes Standard Final Rule

On September 19, 2018, FMCSA published the Qualifications of Drivers; Diabetes Standard final rule (83 FR 47486). As a result, FMCSA revised its regulations to permit individuals with a stable insulin regimen and properly controlled insulin-treated diabetes mellitus to be qualified to operate CMVs in interstate commerce. Under §391.46, the treating clinician, the healthcare professional who manages, and prescribes insulin for, the treatment of the individual's diabetes, evaluates the individual and provides information on the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, regarding diabetes history, management, and complications. The treating clinician attests on the form that the individual maintains a stable insulin regimen and proper control of the individual's diabetes. The ME must receive the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, no later than 45 days after the treating clinician has completed and signed it for each medical examination. Upon receipt of a valid form, the ME performs an examination, considers the information provided by the treating clinician, and determines whether the individual meets FMCSA's physical qualification standards to operate a CMV safely. If the individual meets the requirements of §391.46 and the other physical qualification standards, the ME may issue a Medical Examiner's Certificate, MCSA-5876, for up to a maximum of 12 months.

For detailed information regarding §391.46 and the final rule, visit https://www.regulations.gov/document/FMCSA-2005-23151-1487.

Or watch FMCSA's webinar that outlines the final rule at https://www.fmcsa.dot.gov/regulations/medical/new-diabetes-standard-overview-webinar.

As a result of the final rule, FMCSA eliminated the Federal Diabetes Exemption Program.

4.12.4.2 Diabetic Retinopathy

Diabetic retinopathy is caused by microaneurysms and intraretinal hemorrhages in the blood vessels of the retina. Pursuant to §391.46, an individual with insulin-treated diabetes mellitus is not physically qualified on a permanent basis to operate a CMV if the individual has either severe non-proliferative diabetic retinopathy or proliferative diabetic retinopathy. Individuals with insulin-treated diabetes mellitus whose diabetic retinopathy has reached the advanced stages of severe non-proliferative or proliferative diabetic retinopathy are at risk of sudden loss of vision from a detached retina or bleeding. Treatment for advanced diabetic retinopathy impacts night and peripheral vision adversely, which are important for operating a CMV; accordingly, individuals with insulin-treated diabetes mellitus and severe non-proliferative or proliferative diabetic retinopathy must be permanently disqualified from being medically certified, despite treatment.

With respect to the disqualification determination process, the Insulin-Treated Diabetes Mellitus Assessment Form, MCSA-5870, asks the treating clinician whether the individual with insulin-treated diabetes mellitus has been diagnosed with severe non-proliferative diabetic retinopathy or proliferative diabetic retinopathy. If it is noted on the form that the individual with insulin-treated diabetes mellitus has been diagnosed as such, the ME may rely on that representation and disqualify the individual permanently from medical certification. Alternatively, the ME may exercise the ME's independent medical judgment and refer the individual for further evaluation prior to making a certification determination.

4.12.5 Non-Insulin-Treated Diabetes Mellitus

Section 391.41(b) provides the 13 physical qualification standards that must be met for a person to be physically qualified to operate a CMV. There is not a standard to address each and every medical condition that a driver may have. Non-insulin-treated diabetes mellitus is an example of a condition without a specific standard. The regulatory requirements discussed above for insulin-treated diabetes mellitus do not apply to non-insulin-treated diabetes mellitus. Therefore, an ME may certify a driver with non-insulin-treated diabetes mellitus up to 24 months.

MEs should evaluate drivers with non-insulin-treated diabetes mellitus on a case-by-case basis. An ME may consider the underlying systems and organs affected or symptoms caused to see if the condition would fall within one of the standards. For example, if a driver's poorly controlled blood sugar levels frequently result in hypoglycemic episodes, the ME could consider §391.41(b)(8) and whether the condition is likely to cause of loss of consciousness. Complications of diabetes mellitus such as amputations and peripheral neuropathies could be considered under §391.41(b)(1), (b)(2), and (b)(7). Cardiac complications, and nephropathy with cardiac complications, could be considered under §391.41(b)(4). Diabetic retinopathy could be considered a vascular disease and evaluated under §391.41(b)(7). Hypertension associated with diabetes mellitus should be evaluated under §391.41(b)(6). There may be other applicable standards as well.

If there is an excessive amount of sugar, blood, or protein in the urine, the ME should ask about diabetes mellitus or possible kidney disease. MEs may need to consult the driver's treating provider to gather additional information.

4.13 Psychological Disorders Regulation — 49 CFR 391.41(b)(9)

4.13.1 Regulation 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 his/her ability to drive a commercial motor vehicle safely."

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

1. Emotional or adjustment disorders contribute directly to an individual's level of memory, reasoning, attention, and judgment, and are often caused by physical disorders. A variety of functional disorders can cause drowsiness, dizziness, confusion, weakness, or paralysis that may lead to incoordination, inattention, or loss of functional control that may be likely to interfere with the ability to drive a commercial motor vehicle safely. Physical fatigue, headache, impaired coordination, recurring physical ailments, and chronic "nagging" pain may be present to such a degree that they may be likely to interfere with the ability to drive a commercial motor vehicle safely. Somatic and psychosomatic complaints should be thoroughly evaluated when examining a driver.

2. The degree to which a driver is able to appreciate, evaluate, and adequately respond to environmental strain and emotional stress is critical when assessing a driver's mental alertness and flexibility to cope with the stresses of commercial motor vehicle driving.

3. It is unlikely that drivers who are highly susceptible to frequent states of emotional instability (e.g., due to schizophrenia, affective psychoses, paranoia, severe anxiety, or depressive neuroses) would satisfy the physical qualification standard.

4. Careful consideration should be given to the side effects and interactions of medications in the overall qualification determination. Medications used to treat mental, nervous, organic, or functional disease or psychiatric disorder may be likely to interfere with the ability to drive a commercial motor vehicle safely.

4.13.3 Other Information

4.13.3.1 Conditions Associated with Psychological Disorders

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

Conditions associated with psychological disorders can interfere with the ability to drive a CMV safely 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
- The 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

For example, the driver with**:**

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

4.13.3.2 The Psychological Assessment

An ME's fundamental task during the psychological assessment is to establish whether a driver has a psychological disease or disorder accompanied by cognitive, behavioral, and/or functional impairment that is likely to interfere with the ability to drive a CMV safely.

The examination is based on information provided by the driver (history), objective data (physical examination), and additional testing if requested by the ME. An 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 on the whole person. It is the degree of inappropriateness and the cumulative effect of the driver's presentation and interaction that provide a cue that a driver may require more in-depth mental health evaluation.

There are three areas associated with psychological disorders that may interfere with the ability to drive a CMV safely:

- The **mental disorder**, including symptoms and/or disturbances in performance that are an integral part of the disorder.
- **Residual symptoms** occurring after time-limited reversible episodes or initial presentation of the full syndrome.
- **Pharmacological** effects of medications used to treat the underlying condition.

The mere diagnosis of a particular psychological disorder does not automatically preclude medical certification. Typically, however, the more serious the diagnosis, the more likely it is that the driver may not be physically qualified. Careful consideration should also be given to the side effects and interactions of medications used to treat the underlying mental disorder in the overall qualification determination and whether any side effects will interfere with the ability to drive a CMV safely.

4.13.3.3 Psychological Disorder Therapies

Many of the therapies used to treat psychological disorders have effects and/or side effects that may be likely to interfere with the ability to drive a CMV safely.

4.13.3.3.1 Antidepressant Therapy

MEs should do a case-by-case assessment of drivers treated with antidepressant medication. Evidence indicates that some antidepressant drugs may 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 can cause side effects that may be likely to interfere with the ability to drive a CMV safely. First generation antidepressants include tricyclics.

Second generation antidepressants have fewer side effects; however, these medications may still be likely to interfere with the ability to drive a CMV safely 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 should include, but may not be limited to, the following:

- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying psychological disorder likely to interfere with the ability to drive a CMV safely?

The 391.41 CMV Driver Medication Form, MCSA-5895, is an optional, voluntary tool to request additional information regarding medications prescribed by the treating provider. It can also be used as a tool by MEs to request additional information from the prescribing licensed medical practitioner to determine if a driver is physically qualified under 49 CFR 391.41(b)(12). The form can be found on FMCSA's website at https://www.fmcsa.dot.gov/regulations/medical/39141-cmv-driver-medication-form-mcsa-5895-optional.

4.13.3.3.2 Antipsychotic Therapy

Antipsychotic drugs include typical and atypical neuroleptics. These agents are used to treat schizophrenia, psychotic mood disorders, and some personality disorders. 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. Some cases of nausea and chronic pain are also treated with antipsychotic agents.

Neuroleptics can cause a variety of side effects that may be likely to interfere with the ability to drive a CMV safely. Examples include 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 should include, but may not be limited to, the following:

- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

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

4.13.3.3.3 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, may impair skills performance in pharmacologically active dosages. The effects of benzodiazepines on skills performance generally also apply to virtually all non-benzodiazepines (e.g., zolpidem) sedative hypnotics, although the impairment is typically less profound.

Barbiturates and other sedative hypnotics related to barbiturates may cause greater impairment in performance than benzodiazepines. The ME should evaluate the use and effect of these medications on a case-by-case basis.

Benzodiazepines and barbiturates are controlled substances under the Controlled Substance Act. Because they fall within Schedules II through V in 21 CFR 1308.12 through 1308.15, their use must satisfy the prescription exception requirements of 49 CFR 391.41(b)(12)(ii). The prescription exception allows a CMV driver to be medically qualified when using a drug listed on Schedules II through V if it is prescribed by a licensed medical practitioner who: (1) is licensed under applicable law to prescribe controlled substances and other drugs; (2) is familiar with the driver's medical history; and (3) has advised the driver that the substance will not adversely affect the driver's ability to safely operate a CMV.

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

- Is the hypnotic short-acting (half-life of less than 5 hours)?
- Is the anxiolytic non-sedating?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying psychological disorder likely to interfere with the ability to drive a CMV safely?

The 391.41 CMV Driver Medication Form, MCSA-5895, is an optional, voluntary tool that can be used by MEs to request information regarding scheduled drugs prescribed by a licensed medical practitioner to assist in determining if a driver is physically qualified under 49 CFR 391.41(b)(12). The form can be found on FMCSA's website at https://www.fmcsa.dot.gov/regulations/medical/39141-cmv-driver-medication-form-mcsa-5895-optional.

4.13.3.3.4 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 are controlled substances; therefore, their use must satisfy the prescription exception in 49 CFR 391.41(b)(12)(ii). CNS stimulants may also be used as adjuncts to antidepressants.

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)

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

- What is the medication dosage?

- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying psychological disorder likely to interfere with the ability to drive a CMV safely?

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

4.13.3.3.5 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 should include, but may not be limited to, the following:

- Is the driver symptom free following a course of ECT?
- Is the driver undergoing maintenance ECT?
- Has the driver been evaluated by a behavioral health specialist such as a psychologist or psychiatrist? If so, what are the specialist's recommendations?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.3.6 Lithium Therapy

Lithium is an older drug that is still being used for the treatment of bipolar and depressive disorders. Studies suggest there is little evidence of lithium interfering with driver skill performance.

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

- Does the driver have lithium levels that are maintained in the therapeutic range?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.4 Psychological Disorders

4.13.3.4.1 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.

Adult ADHD or ADD may 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 CNS stimulant medication.

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

- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.4.2 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 likelihood 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. Instead, the actual ability to drive a CMV safely should be determined by an evaluation focused on function and relevant history.

Considerations for an ME when making a physical qualification determination should 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?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.4.3 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. There is also an increased likelihood for suicide. Most individuals with major depression will recover; however, some will relapse within 5 years.

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. ECT is also used to treat some cases of severe depression.

The certification determination is not based on diagnosis alone. Instead, the actual ability to drive a CMV safely should be determined by an evaluation focused on function and relevant history.

Considerations for an ME when making a physical qualification determination should 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 or a suicide attempt?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?

- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.4.4 Post-Traumatic Stress Disorder

Post-traumatic stress disorder (PTSD) 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. The two primary types of treatment for PTSD consist 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 and 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 will not 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 they can exacerbate PTSD. Other treatment for PTSD includes antipsychotic medications and mood stabilizers. Benzodiazepines and any other controlled substances used to treat PTSD must satisfy the prescription exception in 49 CFR 391.41(b)(12)(ii).

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

- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?
- Has the driver been evaluated by a behavioral health specialist such as a psychologist or psychiatrist? If so, what are the specialist's recommendations?

4.13.3.4.5 Antisocial Personality Disorders

Any personality disorder characterized by excessive, aggressive, or impulsive behaviors warrants further assessment. The ME should consider whether the disorder is severe enough to have repeatedly been manifested by overt acts that are likely to interfere with the ability to drive a CMV safely.

The certification determination is not based on diagnosis alone. Instead, the actual ability to drive a CMV safely should be determined by an evaluation focused on function and relevant history.

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

- Does the driver have prominent negative symptoms, including substantially compromised judgment, attentional difficulties, or suicidal behavior or ideation, or a personality disorder that is repeatedly manifested by overt, inappropriate acts?
- What is the medication dosage?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

4.13.3.4.6 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 likelihood for suicide.

Related conditions include:

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

Clinical experience shows that an individual who is actively psychotic may behave unpredictably in a variety of ways. For example, an individual 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.

The certification determination may not be based on diagnosis alone. Instead, the actual ability to drive a CMV safely should be determined by an evaluation focused on function and relevant history. MEs should look to see if the etiology is confirmed and treatment has been shown to be adequate, effective, and safe. However, it is unlikely that individuals who are highly susceptible to frequent states of emotional instability (e.g., due to schizophrenia, affective psychoses, paranoia, severe anxiety, or depressive neuroses) would satisfy the physical qualification standard.

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

- How long has the driver been symptom free if the driver has a brief reactive psychosis or schizophreniform disorder?
- How long has the driver been symptom free if the driver has any other psychotic disorder?
- Does the driver have a diagnosis of schizophrenia or active psychosis?
- What is the dosage and duration of drug therapy?
- Are there medication side effects for this driver? If so, how do they effect this driver?
- Has treatment been shown to be adequate, effective, safe, and stable?
- Is the nature and severity of the underlying mental disorder likely to interfere with the ability to drive a CMV safely?

With respect to mental disorders, the FMCSRs do not include any specific requirements for waiting periods, maximum certification periods, specific diagnostic procedures or treatment, or specific diagnostic results. For additional guidance on certification of drivers with mental disorders, two sources MEs could consider are the August 29, 2008 Evidence Report titled "Psychiatric Disorders and Commercial Motor Vehicle Driver Safety" (available at https://rosap.ntl.bts.gov/view/dot/16528) and the August 13, 2009 Opinions of Expert Panel titled "Psychiatric Disorders and Commercial Motor Vehicle Driver Safety" on pages 2-3 (available at https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/Medical-Expert-Panel-Psychiatric-Psychiatric-MEP-Panel-Opin.pdf). The Medical Expert Panel provides the following on pages 2 and 3:

> It is the opinion of the [Medical Expert Panel] that all individuals with a history of the following psychiatric disorders should undergo additional medical and psychiatric evaluation to further assess functional ability before being considered qualified to drive a CMV:
>
> - Psychotic Disorders
> - Bipolar Disorders
> - Major Depressive Disorder with a history of psychosis, suicidal ideation, homicidal ideation or a suicide attempt
> - Obsessive Compulsive Disorder
> - Antisocial Personality Disorder
>
> Such individuals must demonstrate that they are likely to be able to perform their normal duties by undergoing a thorough evaluation of physical and mental function by a qualified psychiatrist.

4.13.3.4.7 Dementia

Dementia refers to a group of symptoms that together affect the memory, normal thinking, communicating, and the reasoning ability of a person. These symptoms make it difficult to perform even daily simple tasks such as bathing and eating. Alzheimer's disease is the main cause of the majority cases of dementia. Most types of dementia cannot be cured. Treatments aim at reducing symptoms and progression of the condition.

The symptoms include:

- Cognitive and sensory changes:
  - Memory loss, generally noticed by the near and dear ones
  - Difficulty in communication, especially finding the right words to communicate
  - Reduced ability to organize, plan, reason, or solve problems
  - Difficulty handling complex tasks
  - Confusion and disorientation
  - Difficulty with coordination and motor functions
  - Loss of or reduced visual perception
  - Metallic taste in mouth
  - Decreased sense of smell
  - Agnosia (i.e., unable to identify objects or persons)

- Psychological changes:
  - Changes in personality and behavior
  - Depression
  - Anxiety
  - Hallucinations
  - Mood swings
  - Agitation
  - Apathy (i.e., lack of interest or emotions)

Driving a CMV requires memory, alertness, concentration, communication, organizational skills, attentiveness, performing simple and complicated tasks, and having awareness of one's surroundings. Therefore, a driver with dementia may not have the ability to drive a CMV safely due to cognitive deficits.

4.14 Scheduled Drug Use and Alcoholism Regulations — 49 CFR 391.41(b)(12) and (b)(13)

4.14.1 Regulation 49 CFR 391.41(b)(12)

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

* * * * *

(i) 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; or

(ii) 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 of this chapter, 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."

4.14.2 Medical Advisory Criteria for 49 CFR 391.41(b)(12)

1. Federal law prohibits Schedule I drugs or substances listed on 21 CFR 1308.11 from being prescribed for any purpose. Therefore, a medical examiner cannot physically qualify a driver who uses Schedule I drugs or substances.

2. A medical examiner may physically qualify a driver who uses an amphetamine, a narcotic, or other prescribed drug or substance listed on Schedules II through V in 21 CFR 1308.12 through 1308.15 if the prescription exception is met. To meet the prescription exception, the drug or substance must be prescribed by a licensed medical practitioner who is licensed under applicable Federal, State, local, or foreign laws to prescribe controlled drugs and substances, is familiar with the driver's medical history, and has advised the driver that the drug or substance will not adversely affect the driver's ability to safely operate a commercial motor vehicle.

3. The medical examiner should be satisfied that information is available that meets the prescription exception requirements. One of the ways for the medical examiner to obtain that information is to request a written communication from the prescribing licensed medical practitioner who satisfies the regulation's requirements. A voluntary form available on the Federal Motor Carrier Safety Administration's website (391.41 CMV Driver Medication Form, MCSA-5895) may be used as an optional tool to obtain the required information.

4. The medical examiner may request a non-Department of Transportation drug test to aid in the physical qualification determination, including when signs exist indicating the driver may not have disclosed use of a scheduled drug or substance. Use of a certified substance abuse professional, as defined in 49 CFR part 40, is not required as part of a non-Department of Transportation drug test. As with any condition, the medical examiner has the option to medically certify a driver for a period of less than 24 months if the medical examiner determines more frequent monitoring is required.

4.14.3 Regulation 49 CFR 391.41(b)(13)

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

* * * * *

Has no current clinical diagnosis of alcoholism."

4.14.4 Medical Advisory Criteria for 49 CFR 391.41(b)(13)

1. The phrase "current clinical diagnosis of" alcoholism is specifically designed to encompass a current alcoholic illness or those instances where the driver's physical condition has not fully stabilized.

2. When in remission, the medical examiner may certify a driver who has a prior clinical diagnosis of alcoholism.

3. The medical examiner may request a non-Department of Transportation alcohol test to aid in the physical qualification determination, including when the driver discloses excessive use of alcohol or the medical examiner observes signs of alcoholism. The use of a certified substance abuse professional is not required. The medical examiner may require drivers to provide documentation from a professional qualified to render a substance abuse evaluation that includes an opinion concerning whether a current clinical diagnosis of alcoholism is present or the driver is in remission prior to making a medical certification determination. As with any condition, the medical examiner has the option to medically certify a driver for a period of less than 24 months if the medical examiner determines more frequent monitoring is required.

4.14.5 Other Information

4.14.5.1 Use of Scheduled Drugs or Substances

Federal law prohibits Schedule I drugs or substances from being prescribed for any purpose. Paragraph (b)(12)(i) of §391.41 makes clear that CMV drivers are not permitted to be physically qualified when using Schedule I drugs under any circumstances. Federal law lists marijuana, including marijuana extracts containing greater than 0.3% delta-9-tetrahydrocannabinol (THC), as Schedule I drugs and substances. A driver who uses marijuana cannot be physically qualified even if marijuana is legal in the State where the driver resides for recreational, medicinal, or religious use.

The United States Food and Drug Administration (FDA) does not currently determine or certify the levels of THC in products that contain cannabidiol (CBD), so there is no Federal oversight to ensure that the labels on CBD products that claim to contain less than 0.3% by dry weight of THC are accurate. Therefore, drivers who use these products are doing so at their own risk. Under the current 21 CFR 1308.11, CBD products containing less than 0.3% by dry weight of THC are not considered a Schedule I substance; therefore, their use by a CMV driver is not grounds to automatically preclude physical qualification of the driver under §391.41(b)(12)(i). However, each driver should be evaluated on a case-by-case basis. The Agency encourages MEs to take a comprehensive approach to medical certification and to consider any additional relevant health information or evaluations that may objectively support the medical certification decision.

MEs may request that drivers obtain and provide the results of a non-DOT drug test during the medical certification process.

Non-DOT drug tests may be a helpful tool for MEs to determine whether a driver is using a prohibited substance, such as a CBD product that contains more than 0.3% THC by dry weight. For more information, see the guidance from the DOT Office of Drug and Alcohol Policy and Compliance on CBD at https://www.transportation.gov/odapc/cbd-notice. Additional information from the FDA cited in the DOT CBD notice can be found at https://www.fda.gov/consumers/consumer-updates/what-you-need-know-and-what-were-working-find-out-about-products-containing-cannabis-or-cannabis.

Section 391.41(b)(12)(ii) provides that drivers taking scheduled amphetamines, narcotics, or other drugs or substances listed on Schedules II through V in 21 CFR 1308.12 through 1308.15 may be medically certified if their use satisfies the prescription exception in the paragraph. Drugs and substances listed on Schedules II through V are available only by prescription. The prescription exception allows a CMV driver to be physically qualified when using a drug listed on Schedules II through V if it is prescribed by a licensed medical practitioner who:

- Is licensed under applicable Federal, State, local, or foreign laws to prescribe controlled substances and other drugs;
- 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 CMV.

When making physical qualification determinations under §391.41(b)(12), MEs first must determine whether drug use disclosed by a driver falls within any of the schedules for controlled substances in 21 CFR part 1308. The schedules are established by the 1970 Comprehensive Drug Abuse Prevention and Control Act in 21 U.S.C. section 812, which provides the framework for the current United States Drug Enforcement Administration (DEA) drug schedules.

Controlled substances are divided into Schedules I, II, III, IV, and V. The drug schedules are based on addiction potential and medical use but not on side effects. Therefore, a drug can have little risk for addiction and abuse but may have side effects that could adversely affect the driver's ability to safely operate a CMV. The lists are updated annually.

4.14.5.1.1 Schedule I (21 CFR 1308.11)

These drugs have no currently accepted medical use in the United States under Federal law, have a high abuse potential, and are not considered safe at the Federal level, 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 provisions of 49 CFR 41(b)(12)(ii) do not apply to any Schedule I substance.

4.14.5.1.2 Schedule II (21 CFR 1308.12)

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., oxycodone). FMCSA notes that treatment with methadone (a Schedule II drug) is not identified in the FMCSRs, and has been removed from the Medical Advisory Criteria, as precluding medical certification for operating a CMV. FMCSA relies on the ME to evaluate and determine whether a driver treated with methadone singularly or in combination with other medications should be issued a medical certificate. The ME should obtain the opinion of the prescribing licensed medical practitioner who is familiar with the driver's health history as to whether treatment with methadone will or will not adversely affect the driver's ability to safely operate a CMV. The final medical certification determination, however, rests with the ME who is familiar with the duties, responsibilities, and physical and mental demands of CMV driving and non-driving tasks.

4.14.5.1.3 Schedules III through V (21 CFR 1308.13–1308.15)

These drugs have a lower potential for abuse than drugs on the 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.

In response to a large number of inquiries received by FMCSA related to Suboxone (a Schedule III drug), FMCSA notes that treatment with Suboxone and other drugs that contain buprenorphine and naloxone are not identified in the FMCSRs as precluding medical certification for operating a CMV. FMCSA relies on the ME to evaluate and determine whether a driver treated with Suboxone singularly or in combination with other medications should be issued a medical certificate. The ME should obtain the opinion of the prescribing licensed medical practitioner who is familiar with the driver's health history as to whether treatment with Suboxone will or will not adversely affect the driver's ability to safely operate a CMV. The final medical certification determination, however, rests with the ME who is familiar with the duties, responsibilities, and physical and mental demands of CMV driving and non-driving tasks.

The effects and/or side effects of scheduled drugs may adversely affect the driver's ability to operate a CMV safely. The driver may experience an altered state of alertness, attention, or even temporary confusion. Scheduled drugs may cause symptoms such as hypotension, sedation, slow reaction time, panic attacks, or mood swings. Drivers should be made aware of potential effects on driving ability and of potential effects on driving ability resulting from the interactions of scheduled drugs with other prescription and nonprescription drugs and alcohol.

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.

FMCSA does not have a physical qualification standard for non-scheduled drugs. The effects of drugs that are not scheduled substances but are available only by prescription and drugs that are available over the counter without a prescription should be evaluated in connection with the underlying medical condition for which they are used.

FMCSA relies on the certifying ME to determine whether a driver's use of a drug listed on Schedules II through V will impair the driver's ability to safely operate a CMV. To make that determination, the ME should be satisfied that information is available that meets the requirements of paragraph (b)(12)(ii). One of the ways for the ME to obtain that information is to request a written communication from the prescribing licensed medical practitioner who satisfies the regulation's requirements. A voluntary form available on FMCSA's website (391.41 CMV Driver Medication Form, MCSA-5895) may be used as an optional tool to obtain the required information. The final medical qualification determination, however, rests with the certifying ME.

The medical certification determination is based on information provided by the driver (history), objective data (physical examination), and any additional testing if deemed necessary by the ME. The ME may request a non-DOT drug test to aid in the physical qualification determination, including when the ME observes signs indicating the driver may not have disclosed use of a scheduled drug or substance. The non-DOT drug testing process does not require the use of a certified substance abuse professional (SAP), as is required under 49 CFR part 40 or part 382. The ME may consider asking drivers to provide documentation from a professional qualified to render a substance abuse evaluation that includes an opinion concerning either improper use or successful treatment prior to making a medical certification determination. DOT-regulated drug and alcohol testing is only applicable to drivers who hold a CDL. It is not routinely part of the physical qualification examination.

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 ME's assessment should reflect physical, psychological, and environmental factors.

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

- Is information available from the prescribing licensed medical practitioner who is familiar with the driver's medical history regarding whether any scheduled substances will adversely affect the driver's ability to safely operate a CMV?
- What is the underlying condition for which the medication is being prescribed? Medications are commonly used off-label to treat a myriad of psyche disorders.
- Are side effects, including but not limited to dizziness, hypotension, sedation, depressed mood, cognitive deficits, decreased reflex responses, or unsteadiness, present that will adversely affect the driver's ability to safely operate a CMV?

- Does the driver have signs of drug abuse, such as tremors, needle track marks, or multiple skin eruptions?
- Has treatment with a scheduled substance been shown to be adequate, effective, safe, and stable?

4.14.5.2 Alcoholism

FMCSA relies on the certifying ME to determine whether a driver has a current clinical diagnosis of alcoholism. The determination is based on information provided by the driver (history), objective data (physical examination), and any additional testing if deemed necessary by the ME. MEs should use whatever tools or additional assessments they feel are necessary to determine whether a driver has a current clinical diagnosis of alcoholism. The ME may request a non-DOT drug test to aid in the physical qualification determination, including when the driver discloses excessive use of alcohol or the ME observes signs of alcoholism. The non-DOT alcohol testing process does not require the use of a certified SAP, as is required under 49 CFR part 40 or part 382. However, the ME may require drivers to provide documentation from a professional qualified to render a substance abuse evaluation that includes an opinion concerning whether a current clinical diagnosis of alcoholism is present or the driver is in remission prior to making a medical certification determination.

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 ME's assessment should reflect physical, psychological, and environmental factors.

When in remission, the ME may certify a driver who has a prior clinical diagnosis of alcoholism. If transient or permanent neurological changes have occurred due to the alcoholism, those conditions must be evaluated under the appropriate physical qualification standard.

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

- Did the driver mark use of alcohol in the Driver Health History section of the Medical Examination Report Form, MCSA-5875? If so, what is the frequency and volume of alcohol use? Does alcohol use appear to be excessive and frequent?
- Does the driver have a current clinical diagnosis of alcoholism?
- Does the driver show signs of alcoholism at the physical qualification examination?
- Does the driver have residual physical impairment due to past alcohol use that would preclude physical qualification under the applicable standard?
- If the driver has a history of alcoholism, is there evidence the driver is in remission?

5 ABOUT 49 CFR PART 382 — ALCOHOL AND DRUG USE AND TESTING RULES FOR CDL HOLDERS

The DOT Office of Drug and Alcohol Policy and Compliance (ODAPC) oversees intermodal drug and alcohol testing programs in accordance with the Omnibus Transportation Employee Testing Act of 1991. DOT-regulated drug and alcohol testing is applicable only to drivers who

hold a CDL. It is not routinely part of the physical qualification examination. To obtain more information related to ODAPC areas of responsibility, the ME may call (202) 366-3784 or email ODAPCWebMail@dot.gov.

FMCSA's regulations pertaining to alcohol and drug use and testing for CDL holders are found in part 382. The purpose of part 382 is to help prevent crashes and injuries resulting from the misuse and abuse of alcohol or some scheduled substances by drivers of CMVs holding CDLs. 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 holding a CDL.

6 RECORDING THE DRIVER PHYSICAL QUALIFICATION EXAMINATION

The purpose of this overview is to familiarize the ME with the sections and data elements on the Medical Examination Report Form, MCSA-5875, including:

- Organization of the form
- Minimum documentation
- Proper use of the certification determinations available
- Required signatures

6.1 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, in accordance with 49 CFR 391.43(f).

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

The Medical Examination Report Form, MCSA-5875, can be found on the FMCSA website at https://www.fmcsa.dot.gov/medical/driver-medical-requirements/medical-applications-and-forms.

6.1.1 Organization of the Form

The Medical Examination Report Form, MCSA-5875, has two sections that require input from both the driver and the ME. In addition, the form has a third section titled, "Instructions for Completing the Medical Examination Report Form (MCSA-5875)." This section provides step-by-step instructions to the driver and ME regarding how to properly fill out each section of the form. MEs should become familiar with these instructions because they are responsible for ensuring that each required driver examination form, including the Medical Examination Report Form, MCSA-5875, is filled out correctly and in its entirety. Failure to do so may be grounds for removal from the National Registry.

6.1.1.1 Section 1 — Driver Information

This section is filled out by the driver and consists of Personal Information, Driver 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.

6.1.1.1.1 Form Instructions for Completing this Section

The step-by-step instructions provided to the driver, as part of the Medical Examination Report Form, MCSA-5875, regarding how to properly fill out this section are provided below:

Personal Information:

Please complete this section using your name as written on your driver's license, your current address and phone number, your date of birth, age, driver's license number and issuing state.

- **CLP/CDL Applicant/Holder:** Check "yes" if you are a commercial learner's permit (**CLP**) or commercial driver's license (**CDL**) holder or are applying for a CLP or CDL. CDL means a license issued by a State or the District of Columbia which authorizes the individual to operate a class of a commercial motor vehicle (**CMV**). A CMV that requires a CDL is one that: (1) has a gross combination weight rating or gross combination weight of 26,001 pounds or more inclusive of a towed unit with a gross vehicle weight rating (**GVWR**) or gross vehicle weight (**GVW**) of more than 10,000 pounds; or (2) has a GVWR or GVW of 26,001 pounds or more; or (3) is designed to transport 16 or more passengers, including the driver; or (4) is used to transport either hazardous materials requiring hazardous materials placards on the vehicle or any quantity of a select agent or toxin.

- **Driver ID Verified By:** The Medical Examiner/staff completes this item and notes the type of photo ID used to verify the driver's identity such as, commercial driver's license, driver's license, or passport, etc.

- **Has your USDOT/FMCSA medical certificate ever been denied or issued for less than two years?** Please check the correct box "yes" or "no" and if you aren't sure check the "not sure" box.

Driver Health History:

- **Have you ever had surgery:** Please check "yes" if you have ever had surgery and provide a written explanation of the details (type of surgery, date of surgery, etc.)

- **Are you currently taking medications (prescription, over the counter, herbal remedies, diet supplements):** Please check "yes" if you are taking any diet supplements, herbal remedies, or prescription or over the counter medications. In the box below the question, indicate the name of the medication and the dosage.

- **#1-32:** Please complete this section by checking the "yes" box to indicate that you have, or have ever had, the health condition listed or the "No" box if you have not. Check the "not sure" box if you are unsure.

- **Other Health Conditions not described above:** If you have, or have had, any other health conditions not listed in the section above, check "Yes" and in the box provided and list those condition(s).

- **Any yes answers to questions #1-32 above:** If you have answered "yes" to any of the questions in the Driver Health History section above, please explain your answers further in the box below the question. For example, if you answered "yes" to question #5 regarding heart disease, heart attack, bypass, or other heart problem, indicate which type of heart condition. If you checked "yes" to question #23 regarding cancer, indicate the type of cancer. Please add any information that will be helpful to the Medical Examiner.

CMV Driver Signature and Date:

Please read the certification statement, sign and date it, indicating that the information you provided in Section 1 is accurate and complete.

6.1.1.1.1.1 Additional Section 1 Information

- A physical qualification examination can be conducted for individuals younger than 21. Subject to limited exceptions, the FMCSRs require a CMV driver to be 21 years old to operate in interstate commerce. However, some States allow individuals to operate CMVs in intrastate commerce at the age of 18. The National Registry system will allow physical qualification examinations to be submitted for individuals who are 16 years old or older.

- MEs can conduct a physical qualification examination for an individual who does not have a driver's license. The driver's license number on all forms, if required, should be recorded as "NONE."

- MEs can conduct a physical qualification examination for and issue a Medical Examiner's Certificate, Form MCSA-5876, to drivers with a license issued by a jurisdiction outside the United States (i.e., the 50 States and the District of Columbia).

However, examinations and certificates for nearly all drivers with a license issued by a Canadian province or territory, or all drivers with a license issued by the Mexican federal government, are not necessary due to reciprocity agreements currently in place between Canada, Mexico, and the United States. If an examination is conducted on a foreign driver, it is not required to be uploaded into the National Registry system, but if the driver is qualified, a Medical Examiner's Certificate, Form MCSA-5876, should be provided to the driver.

6.2 Section 2 — Examination Report

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

6.2.1 Form Instructions for Completing this Section

The step-by-step instructions provided to the ME, as part of the Medical Examination Report Form, MCSA-5875, regarding how to properly fill out this section are provided below:

Driver Health History Review:

Review answers provided by the driver in the driver health history section and discuss any "yes" and "not sure" responses. In addition, be sure to compare the medication list to the health history responses ensuring that the medication list matches the medical conditions noted. Explore with the driver any answers that seem unclear. Record any information that the driver omitted. As the Medical Examiner conducting the driver's physical examination you are required to complete the entire medical examination even if you detect a medical condition that you consider disqualifying, such as deafness. Medical Examiners are expected to determine the driver's physical qualification for operating a commercial vehicle safely. Thus, if you find a disqualifying condition for which a driver may receive a Federal Motor Carrier Safety Administration medical exemption, please record that 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:** record these as indicated on the form.
- **Blood Pressure:** 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:** 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, use 20 feet as normal. 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. Record the test results in the corresponding section for the test used.

Physical Examination: Check the body systems for abnormalities and indicate normal or abnormal for each body system listed. Discuss any abnormal answers in detail in the space provided and indicate whether it would affect the driver's ability to safely operate a commercial motor vehicle.

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

Medical Examiner Determination (Federal):

Use this section for examinations performed in accordance with the FMCSRs (49 CFR 391.41-391.49). Complete the medical examiner 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 2-year Medical Examiner's Certificate.

- **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 for, 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 as many as 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 examining medical examiner and the driver in writing that the examination is no longer valid and that the driver is required to be re-examined.

- **MER amended:** A Medical Examination Report Form (MER), 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 has been in determination pending status for more than 45 days or after a final qualification determination has been made. The driver is required to obtain a new physical examination and a new Medical Examination Report Form, MCSA-5875, should be completed.

- **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):

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). Complete the medical examiner determination section completely.

- **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.

- **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 2-year Medical Examiner's Certificate.

- **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 for, 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, signature and date.

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

If updating an existing exam, you 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.

To obtain additional information regarding this form go to the Medical Program's page on the Federal Motor Carrier Safety Administration's website at https://www.fmcsa.dot.gov/regulations/medical.

6.2.1.1 Additional Section 2 Information

6.2.1.1.1 Driver Health History Review

- If MEs have concerns about whether a driver is fully and accurately disclosing all prescribed medications, the 391.41 CMV Driver Medication Form, MCSA-5895, can be used as part of the physical qualification examination to request additional information regarding medications prescribed by the treating provider. It can also be used as a tool by MEs to request additional information from the prescribing licensed medical practitioner to determine if a driver is physically qualified under 49 CFR 391.41(b)(12). This is an optional/voluntary tool.

  The 391.41 CMV Driver Medication Form, MCSA-5895, can be found on the FMCSA website at https://www.fmcsa.dot.gov/medical/driver-medical-requirements/medical-applications-and-forms.

- Medication is frequently prescribed for diagnoses other than those for which it was originally intended to treat (i.e., off-label use). The ME should ask about the diagnosis for which the medication was prescribed. The ME should evaluate all such diagnoses under the appropriate medical qualification standard and appropriately document the medication use on the Medical Examination Report Form, MCSA-5875. For example, if it is disclosed a driver is taking gabapentin, the ME should ask why it has been prescribed and document the condition for which it was prescribed ("gabapentin for seizures," "gabapentin for migraine prevention," "gabapentin for nerve pain," etc.).

- Questions 31 and 32 related to illegal drug use are included to better assist MEs in determining whether individuals meet the physical qualification standards in 49 CFR 391.41(b)(12)(i) and (ii). These two questions are not intended to involve the application and administration of the drug and alcohol testing requirements and the provisions under 49 CFR parts 40 and 382. MEs should assess and evaluate all "Yes" responses from drivers and may request additional information from the treating provider(s) about a driver's medical history with the driver's consent.

  The FMCSRs do not include a mandatory waiting time prior to medical certification of CMV drivers after known or disclosed illegal drug use. If an ME has concerns about a driver's substance abuse, the ME may decline to issue a Medical Examiner's Certificate, Form MCSA-5876, until the ME's concerns are satisfied through documentation from an appropriate treatment program, drug testing, and/or counseling. MEs are not prohibited from performing non-DOT drug testing on individuals who disclose recent or past illegal drug use during the physical qualification examination process.

- MEs are not required to certify the extent to which a driver understands English. However, MEs should only conduct examinations when they are confident that they can communicate with drivers to the level that allows for a thorough examination to be conducted. As the signature authority on the Medical Examiner's Certificate, Form MCSA-5876, MEs can turn the driver away if the level of English is not proficient enough to conduct the examination. Therefore, if the certifying ME cannot obtain a complete medical history to appropriately proceed with conducting a physical qualification examination with or without an interpreter, the ME should not conduct the examination.

6.2.1.1.2 Testing

- **Urinalysis:**

  - Protein, blood, or sugar in the urine may be an indication for further testing to rule out any underlying medical problem such as diabetes mellitus, uncontrolled hypertension, and renal disease. If there is an excessive amount of sugar, blood, or protein in the urine, the ME should ask about diabetes mellitus or possible kidney disease. MEs may need to consult the driver's treating provider(s) to gather additional information with the driver's consent.

- **Vision:**

  - When the vision test is completed by an eye specialist, the specialist should provide the specialist's name, telephone number, email address, 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 either 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.

- The phrase "ability to recognize the colors of" in the vision standard is interpreted to mean, if the driver can recognize standard red, green, and amber colors, the driver meets the minimum standard, even though the driver may have some type of color perception deficiency. Color perception may be evaluated using a standard test (such as Ishihara, Pseudoisochromatic, Yarn, or Farnsworth) or a controlled test using standard red, green, and amber colors. Examples of controlled tests include the standard colors present on the Snellen chart or objects that correspond to the standard colors.

- **Hearing:**

  - For the whispered voice test, the driver 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 that remains after a normal expiration, the ME whispers words or random numbers such as 66, 18, 3, etc. The ME should then ask the driver to repeat the words or sequence. The ME should not use only sibilants ("s" sounding materials). The opposite ear should be tested in the same manner. If the driver fails the whispered voice test in both ears, the audiometric test should be administered.

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

  - When audiometric results are averaged (500Hz, 1000Hz, and 2000Hz), the results should not be rounded when determining if the individual's level of hearing meets the hearing standard.

  - 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 driver meets the hearing standard with the use of hearing aids, the driver 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.

6.2.1.1.3 Medical Examiner Determination (Federal)

The "Federal" radio circle should be selected when an ME conducts the physical qualification examination and determined the driver is qualified to operate a CMV based on the Federal physical qualification standards found in 49 CFR 391.41 through 391.49. All interstate drivers with limited exceptions, and most intrastate drivers, require certification under the Federal standards. Often employers require certification under the Federal standards, even if it is not required by Federal law. Accordingly, most of the time the "Federal" radio circle should be selected. MEs should never select both the "Federal" and "State" radio circle.

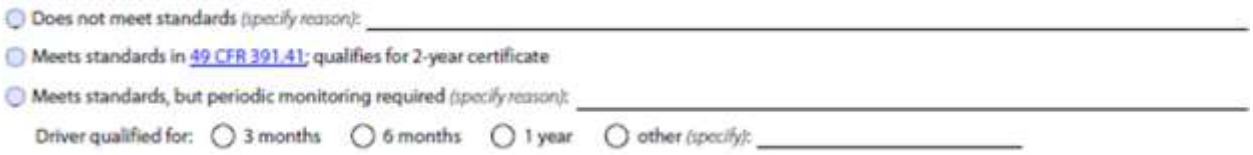
Determining Certification Status — ME's Responsibility

- FMCSA relies on the ME to assess and determine whether the CMV driver meets the physical qualification standards outlined in 49 CFR 391.41. MEs may wish to consider obtaining a report and recommendations from the treating provider and/or specialists with the driver's consent to supplement the physical qualification examination and ensure adequate medical assessment. However, it is the ME's responsibility to make a physical qualification determination and issue a Medical Examiner's Certificate, Form MCSA-5876, to physically qualified drivers.

- If an ME works for a motor carrier, the ME is responsible for making the physical qualification determination and the motor carrier should have no influence on this decision. The motor carrier also should not request that the ME place restrictions on the driver as a condition of the qualification.

- The ME should complete the entire physical qualification examination to determine whether 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 the driver to meet the physical qualification standards if treatment is successful.

Certification Options



- **Does not meet standards:** MEs must not certify a driver who does not meet one or more of the physical qualification standards outlined in 49 CFR 391.41, unless the ME determines the driver may qualify for a Federal medical exemption or an SPE certificate. MEs should complete the physical qualification examination of the driver and discuss with the driver the reason(s) for not certifying the driver and any steps that can be taken to meet the physical qualification standards.

  MEs must not certify a driver who has provided information the ME believes is not true or correct (e.g., concealing a history of seizures).

When an ME determines a driver has a health history or condition that does not meet the physical qualification standards, the ME must NOT issue a Medical Examiner's Certificate, Form MCSA-5876, but the ME is required to 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.

- **Meets standard in 49 CFR 391.41; qualifies for 2-year certificate:** Maximum certification may not exceed 24 months under the standard in 49 CFR 391.45(b).

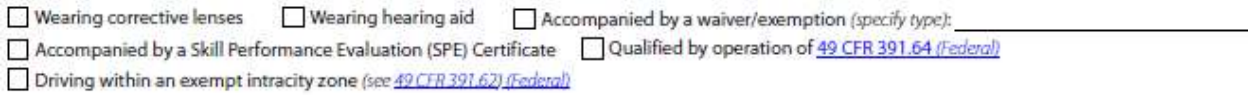
- **Meets standard, but periodic monitoring is required:** There are specific situations in which the FMCSRs and medical exemption conditions prohibit qualification to exceed 12 months. Those situations are:
    - Any driver who has diabetes mellitus treated with insulin for control and who has obtained a Medical Examiner's Certificate, Form MCSA-5876, under the standards in 49 CFR 391.46;
    - Any driver who has obtained a Medical Examiner's Certificate, Form MCSA-5876, and been issued a Federal seizure exemption;
    - Any driver authorized to operate a CMV only within an exempt intra-city zone pursuant to 49 CFR 391.62;
    - Until March 22, 2023, any driver authorized to operate a CMV only by operation of the exemption for vision in 49 CFR 391.64 (grandfathered); and
    - Any driver who has obtained a Medical Examiner's Certificate, Form MCSA-5876, under the alternative vision standards in 49 CFR 391.44.

Although MEs cannot exceed the maximum certification period of 24 months (and in some cases not more than 12 months), MEs may certify a driver for less than 24 months when they determine they need to monitor the driver more frequently. The certification period could be longer or shorter based on the ME's assessment and medical judgment. MEs 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.

It is always best to wait until the examination has been completed to provide the driver with the qualification determination. However, if a driver does not agree with the outcome of the examination and an ME feels threatened, the following steps can be taken.

1. File a report with the police or other law enforcement agency
2. Notify FMCSA Security Officer Alex Keenan
    a. Alex.keenan@dot.gov or (202) 997-5404
    b. Provide driver's name, State, license number, date the driver was not qualified and other key dates, threatening statements, and ME contact information

Certification Categories That Apply to the Driver's Certification



- **Corrective Lenses:** Only select this option if the driver meets the vision standard with correction.

- **Hearing Aid/Aids:** Only select this option if the driver meets the hearing standard wearing hearing aids. If the driver has hearing aids but does not meet the hearing standard wearing them and requires a Federal hearing exemption, this box SHOULD NOT be selected.

- **Federal Exemptions:** FMCSA generally issues two types of medical exemptions to drivers who meet the Federal exemption criteria:

    - Seizure exemptions - The maximum certification period for drivers issued a Federal seizure exemption is 12 months.
    - Hearing exemptions - The maximum certification period for drivers issued a Federal hearing exemption is 24 months.

  By selecting "Accompanied by a waiver/exemption" and specifying the type of Federal medical exemption, the ME certifies the driver: (1) Fails to meet the standard for the medical exemption specified; (2) Meets all other physical qualification requirements cited in 49 CFR 391.41(b); and (3) Is required to obtain the Federal medical exemption for the Medical Examiner's Certificate, Form MCSA-5876, issued to be valid.

  Drivers are not prohibited from applying for more than one medical exemption and an SPE certificate. However, they must meet all physical qualification standards other than the ones listed in this section. More than one exemption can be specified on the line provided.

- **Skills Performance Evaluation (SPE) Certificate:** By selecting the driver is qualified when "Accompanied by a Skill Performance Evaluation (SPE) Certificate" on the Medical Examination Report Form, MCSA-5875, 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 (b)(2); (2) Meets all other physical requirements cited in 49 CFR 391.41(b); and (3) Must have (obtain) both a valid SPE certificate and Medical Examiner's Certificate, Form MCSA-5876, to operate a CMV in interstate commerce. The ME should not ask the driver for a copy of their SPE certificate before issuing a Medical Examiner's Certificate, Form MCSA-5876. The SPE application process requires the driver to first obtain a valid Medical Examiner's Certificate, Form MCSA-5876.

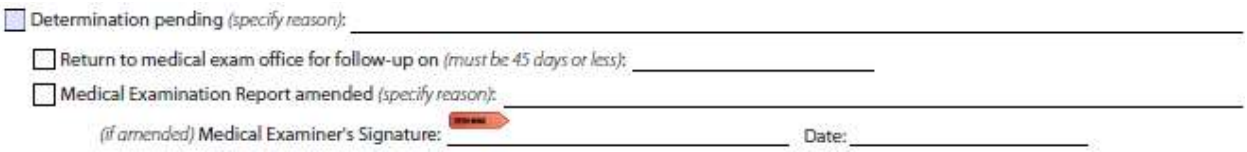
- **Qualified by operation of 49 CFR 391.64 (Grandfathered):** Until March 22, 2023, this category applies to a small number of drivers who participated in the Federal Vision Waiver Study Program conducted prior to the implementation of the Federal Vision

Exemption Program. The maximum certification period is 12 months. On and after March 22, 2023, drivers can no longer be physically qualified under 49 CFR 391.64

By selecting the "By Operation of 49 CFR 391.64" option on the Medical Examination Report Form, MCSA-5875, the ME certifies that the driver: (1) 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) by operation of 49 CFR 391.64; (2) 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); and (3) Continues to meet the requirements of 49 CFR 391.64.

- **Driving Within an Exempt Intracity Zone (49 CFR 391.62):** The maximum certification period is 12 months. Intracity zones are geographical areas defined in the regulations. Sections 391.11(b)(1) and 391.41(b)(1) through (b)(11) do not apply to a driver who:
    - Was otherwise qualified to operate and operated a CMV in a municipality or exempt intracity zone thereof throughout the 1-year period ending November 18, 1988;
    - Meets all the other requirements of 49 CFR 391.62;
    - Operates wholly within the exempt intracity zone (as defined in 49 CFR 390.5T);
    - 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 driver from operating a CMV under the FMCSRs;
        - 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.

Determination Pending



- Determination pending is used when the ME requires additional testing, information, or recommendations from the treating provider and/or specialists to supplement the physical qualification examination and ensure adequate medical assessment.

- If this category is selected, MEs should be aware that CMV drivers are eligible to continue operating if they have time left on their current Medical Examiner's Certificate,

Form MCSA-5876. Therefore, this should be factored into the decision to place a driver in a determination pending status. If the ME examines the driver and the condition is something that the ME determines precludes qualification, the ME should not use the determination pending category. Instead, the ME should not qualify the driver.

- MEs can determine a date less than 45 days to require the driver to return with the required information. However, if the driver does not return with the information on or before 45 days, the examination is invalid and a new physical qualification examination must be administered.

- There is only one situation in which FMCSA permits another ME to finish the examination and make a physical qualification determination after a driver is placed in pending determination category. That situation is when the second ME works within the same practice as the initiating ME. The ME who makes the physical qualification determination is required to submit a new CMV Driver Medical Examination Results Form, MCSA-5850, through the ME's National Registry account to record the results of the examination.

- If the ME determines the driver is safe to operate a CMV based on the initial examination and the driver's Medical Examiner's Certificate, Form MCSA-5876, will expire shortly after the initial examination, the ME may issue a short-term Medical Examiner's Certificate, Form MCSA-5876, rather than using the determination pending category.

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

Incomplete Examination

☐ Incomplete examination *(specify reason)*: _____

- Even if the examination has been completed, the physical qualification examination is considered incomplete if the driver refuses to sign the Medical Examiner's Certificate, Form MCSA-5876.

Signature and Expiration


I have performed this evaluation for certification. I have personally reviewed all available records and recorded information pertaining to this evaluation, and attest that to the best of my knowledge, I believe it to be true and correct.

Medical Examiner's Signature:

Medical Examiner's Name *(please print or type)*:

Medical Examiner's Address: City: State: Zip Code:

Medical Examiner's Telephone Number: Date Certificate Signed:

Medical Examiner's State License, Certificate, or Registration Number: Issuing State:

☐ MD ☐ DO ☐ Physician Assistant ☐ Chiropractor ☐ Advanced Practice Nurse

☐ Other Practitioner *(specify)*:

National Registry Number: Medical Examiner's Certificate Expiration Date:

Medical Examiner information, signature and date

- The Medical Examination Report Form, MCSA-5875, must be completed and signed, either electronically or by hand.

Medical Examiner's Certificate Expiration Date

- The Medical Examiner's Certificate Expiration Date is intended to capture the expiration date of the Medical Examiner's Certificate, Form MCSA-5876, that is being issued to the driver.

- The ME should use the date of issuance of the Medical Examiner's Certificate, Form MCSA-5876, to calculate the Medical Examiner's Certificate expiration date. The date the Medical Examiner's Certificate, Form MCSA-5876, is issued should be provided in the space for the "Date Certificate Signed" on the Medical Examination Report Form, MCSA-5875.

- If a physical qualification examination is performed on February 29th of a leap year, the Medical Examiner's Certificate Expiration Date should be February 28th of the applicable year for a 12- or 24-month certificate.

6.2.1.1.4 Medical Examiner Determination (State)

The second "State" radio circle should be selected when an ME conducted the physical qualification examination and determined the driver is qualified based on State physical qualification standards. These alternative State standards would be found within a set of State regulations or rules. Few states have separate physical qualification standards for a driver examination; therefore, it is unlikely that this option should be selected. MEs should never select both the "Federal" and "State" radio circle.

7 MEDICAL VARIANCES

In 49 CFR 390.5T, "medical variance" is defined as an exemption, a grandfathered exemption under 49 CFR 391.64, and an SPE certificate issued by FMCSA. The section below provides details regarding FMCSA's medical variances.

Drivers applying for a Federal medical exemption or SPE certificate, MUST operate in interstate commerce or intend on operating in interstate commerce. Drivers that operate in intrastate commerce are not eligible to apply and are subject to the requirements of their State.

Drivers are not prohibited from applying for more than one medical exemption and an SPE certificate. However, they must meet all other physical qualification standards.

If an ME determines the driver is not qualified unless the driver applies for and obtains a Federal medical exemption or SPE certificate, then it is then up to the driver to apply for and obtain the exemption or SPE certificate.

7.1 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.

- Exemptions may only be granted from one or more of the requirements contained in specific parts and sections of the FMCSRs. Part 391 (Qualifications of Drivers) is one of them.

- An exemption provides the person or class of persons with relief from the regulations for up to 5 years and may be renewed.

- 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 24-month period to align with the maximum duration of a driver's medical certification.

7.1.1 Federal Hearing Exemption

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

At the physical qualification examination, the ME may certify the driver for up to 24 months. The ME should indicate that the Federal hearing exemption is required on the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876. However, 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 driver meets the hearing standard with the use of hearing aids, the driver 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 driver must wear hearing aids while operating a CMV.

The driver must be otherwise qualified under 49 CFR 391.41(b)(1) through (b)(13) or eligible to hold or hold another valid medical exemption or SPE certificate to legally operate a CMV in interstate commerce. Drivers who operate in intrastate commerce are not eligible to apply.

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.

To obtain application information for a Federal hearing exemption, the driver may call (202) 366-4001, email FMCSAhearingexemptions@dot.gov, or go to https://www.fmcsa.dot.gov/medical/driver-medical-requirements/new-hearing-applicant-doc-email-version.

7.1.2 Federal Seizure Exemption

The Federal seizure exemption is issued to drivers with a diagnosis of epilepsy, a seizure disorder, or a single seizure. FMCSA conducts an individual assessment of each application submitted for consideration. Drivers who operate in intrastate commerce are not eligible to apply.

At the physical qualification examination, the driver must be otherwise qualified under 49 CFR 391.41(b)(1) through (b)(13) or eligible to hold or hold another valid medical exemption or SPE certificate to legally operate a CMV in interstate commerce. The ME may certify a driver who requires a seizure exemption only for up to 12 months. The ME should indicate that the Federal seizure exemption is required on the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876**.**

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.

The following criteria are considered by FMCSA for a Federal seizure exemption:

- **Epilepsy/seizure disorder diagnosis**. If there is an epilepsy/seizure disorder diagnosis, the applicant should be seizure-free for **8 years, on or off medication**. If an applicant stops taking anti-seizure medication, he or she must be seizure free for 8 years from the date the medication was discontinued. If the individual is taking anti-seizure

medication(s), the plan for medication should be stable for **2 years**. Stable means no changes in medication, dosage, or frequency of medication administration.

- **Single unprovoked seizure**. If there is a single unprovoked seizure (i.e., there is no known trigger for the seizure), the individual should be seizure-free for **4 years, on or off medication.** If the individual is taking anti-seizure medication(s), the plan for medication should be stable for **2 years**.

- **Single provoked seizure**. If there is a single provoked seizure (i.e., there is a known reason for the seizure), the Agency considers 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 that were caused by a medication; by non-penetrating head injury with loss of consciousness less than or equal to 30 minutes; by a brief loss of consciousness not likely to recur while driving; by metabolic derangement not likely to recur; and by alcohol or illicit drug withdrawal.

    - Examples of moderate-to-high-risk factors for recurrence include seizures caused by non-penetrating head injury with loss of consciousness or amnesia greater than 30 minutes; penetrating head injury; intracerebral hemorrhage associated with a stroke or trauma; infections; intracranial hemorrhage; post-operative complications from brain surgery with significant brain hemorrhage; brain tumor; or stroke. Drivers who have moderate-to-high risk factors for recurrence should be seizure-free for **8 years, on or off medication**.

To obtain application information for a Federal seizure exemption, the driver may call (202) 366-4001, email FMCSAseizureexemptions@dot.gov, or go to https://www.fmcsa.dot.gov/medical/driver-medical-requirements/new-seizure-applicant-doc-email-version.

7.2 Skill Performance Evaluation Certificate — 49 CFR 391.49

SPE certificates are for drivers with the loss of a hand, foot, leg, or arm and with a fixed impairment to a hand, finger, arm, foot, or leg, or any other significant limb defect or limitation, that may interfere with the ability to perform normal tasks associated with operating a CMV. A driver may be allowed to operate a CMV 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. Drivers who operate in intrastate commerce are not eligible to apply.

A driver who has the loss of a hand or arm must have a prosthesis that allows the driver to demonstrate precision prehension (e.g., the ability to manipulate knobs and switches) and power grasp prehension (e.g., the ability to hold and maneuver the steering wheel) to be considered for an SPE certificate.

At the physical qualification examination, the ME may certify the driver for up to 24 months. The driver must be otherwise qualified under 49 CFR 391.41(b)(1) through (b)(13) or hold another valid medical exemption to legally operate a CMV in interstate commerce. The ME must indicate that an SPE certificate is required on the Medical Examination Report Form, MCSA-5875, and the Medical Examiner's Certificate, Form MCSA-5876**.** Additional information about completing the Medical Examination Report Form, MCSA-5875, when an SPE certificate is required can be found in sections 4.10.4 and 4.10.8 above.

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**.**

To obtain application information for a Federal SPE certificate, the driver may contact the applicable FMCSA Service Center for the driver's State. A list of the Service Centers (to include phone numbers) and the application information can be found on the FMCSA website at https://www.fmcsa.dot.gov/medical/driver-medical-requirements/skill-performance-evaluation-certificate-program.

7.3 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, approximately 1,900 drivers received a letter confirming participation in the program and granting a continued exemption from the vision standard, 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 also must have an annual physical qualification examination and an annual eye examination by an ophthalmologist or optometrist.

However, on January 21, 2022, FMCSA published the Qualifications of Drivers; Vision Standard final rule that adopted an alternative vision standard in 49 CFR 391.44 and eliminated the grandfather provision in §391.64(b). On March 22, 2023, physical qualification under §391.64 will be no longer available and any Medical Examiner's Certificates, Form MCSA-5876, issued under this provision become void.

To obtain a copy of the letter from FMCSA identifying the driver as a participant in the vision waiver program, the driver may call (202) 366-4001 or email fmcsamedical@dot.gov.