



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

December 8, 2017

Medical Factual Report

Mary Pat McKay, MD, MPH
Chief Medical Officer

A. ACCIDENT: HWY17MF007; Baltimore, MD

Location: Eastbound Frederick Avenue between South Monastery Avenue and South Morley Street, Baltimore, Baltimore County, Maryland

Vehicle #1: 2015 IC 64-passenger School Bus

Operator #1: AAAfordable Transportation, LLC

Vehicle #2: 2012 Ford Mustang

Operator #2: Private Operator

Vehicle #3: 2005 New Flyer Transit Bus

Operator #3: Maryland Transit Administration

Date: Tuesday, November 1, 2016

Time: Approximately 6:30 a.m. eastern standard time

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. RELEVANT REGULATION

1. Federal Regulation

According to Title 49 Code of Federal Regulations, Section 391.41a(3):

A person is physically qualified to drive a commercial motor vehicle if:

(i) That person meets the physical qualification standards in paragraph (b) of this section and has complied with the medical examination requirements in §391.43; or

(ii) That person obtained from FMCSA a medical variance from the physical qualification standards in paragraph (b) of this section and has complied with the medical examination requirement in §391.43.

(b) A person is physically qualified to drive a commercial motor vehicle if that person—

(1) 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;

(2) 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.

(3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;

(4) 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.

(5) 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;

(6) Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a commercial motor vehicle safely;

(7) 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;

(8) 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;

(9) 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;

(10) 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;

(11) 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.

(12)(i) Does not use any drug or substance identified in 21 CFR 1308.11 Schedule I, an amphetamine, a narcotic, or other habit-forming drug.

(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, 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.

(13) Has no current clinical diagnosis of alcoholism.

Drivers must undergo a medical examination including a medical history, review of medications, and physical examination to demonstrate they have met these requirements. Beginning in 2014, health care providers performing these examinations are required to have been certified by FMCSA to perform these examinations (per Title CFR 49 Part 390). (See Attachment A– Medical Exam Certification Form, FMCSA)

According to the regulations described above, drivers with epilepsy may not be medically certified for commercial driving. According to the 2014 FMCSA Medical

Examiner Handbook, the advisory criteria for certified health care providers performing medical examinations for commercial drivers specifically related to epilepsy (49 CFR 391.41(b)(8)) states:

"Epilepsy is a chronic functional disease characterized by seizures or episodes that occur without warning, resulting in loss of voluntary control which may lead to loss of consciousness and/or seizures. Therefore, the following drivers cannot be qualified: (1) a driver who has a medical history of epilepsy; (2) a driver who has a current clinical diagnosis of epilepsy; or (3) a driver who is taking antiseizure medication."¹

A seizure is the result of an abnormal surge of electrical activity in the brain. Manifestations often include staring, inability to move, jerking motions of limbs, and unconsciousness. Individuals with recurrent seizures are diagnosed with a "seizure disorder" or "epilepsy." These terms are synonymous. However, there is also an FMCSA process for granting waivers to drivers with seizures. Appendix A to Title 49 CFR 391, Medical Advisory Criteria, Section H. Epilepsy, states,

"5. Drivers with a history of epilepsy/seizures off antiseizure medication and seizure-free for 10 years may be qualified to drive a commercial motor vehicle in interstate commerce. Interstate drivers with a history of a single unprovoked seizure may be qualified to drive a commercial motor vehicle in interstate commerce if seizure-free and off antiseizure medication for a 5-year period or more."²

Drivers may apply for waivers, which requires supplying supporting medical information. If the FMCSA intends to grant the waiver, some of the details of these applications are published in the Federal Register for public comment.

2. Maryland Regulation of Bus Drivers

According to the Code of Maryland Regulations school bus drivers in Maryland must obtain medical certification in compliance with 49 CFR Sections 390-391 every 12 months. In addition, Maryland code states federal physical disqualification waiver provisions do not apply for school bus drivers.³ Other passenger bus drivers in Maryland may obtain medical certificates for as long as 24 months, and waiver provisions do apply.

¹ Federal Motor Carrier Safety Administration. 2014 FMCSA Medical Examiner Handbook. <https://www.fmcsa.dot.gov/regulations/medical/fmcsa-medical-examiner-handbook> Accessed 5/31/2014.

² US Government Publishing Office. Electronic Code of Federal Regulations. PART 391—Qualifications of Drivers and Longer Combination Vehicle (LCV) Driver Instructors. http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=5209e0e065bd368753bd488f304671d4&ty=HTML&h=L&mc=true&n=pt49.5.391&r=PART#ap49.5.391_171.a Accessed 2/3/2017.

³ Maryland.gov Division of State Documents. COMAR. Title 11 Subtitle 19. Chapter 5 Regulation 1. <http://www.dsd.state.md.us/comar/comarhtml/11/11.19.05.01.htm> Accessed 2/2/2017.

3. Employer Medical Protocols

Information regarding the medical protocols used by the school bus driver's employer, AAAfordable Transportation, LLC, to determine fitness for duty were requested by NTSB investigators. None were supplied.

4. Reporting Medically Unfit Drivers

According to the Maryland Motor Vehicle Administration (MVA), all drivers with the following medical problems are required to report the diagnosis or when applying for a driving license:

1. Diabetes that has caused a low blood sugar episode requiring assistance from another person in the last 6 months;
2. **Epilepsy;**
3. **Seizure;**
4. A heart condition that has caused a loss of consciousness in the past 6 months;
5. Stroke;
6. A condition that causes you to have dizzy spells, fainting, or blackouts;
7. Sleep apnea or narcolepsy;
8. A history of traumatic brain injury (TBI);
9. A condition that causes weakness, shaking, or numbness in the arms, hands, legs, or feet that may affect your ability to drive;
10. A hand, arm, foot, or leg that is absent, amputated, or has a loss of function that may affect your ability to drive;
11. An eye problem which prevents a corrected minimum visual acuity of 20/70 in at least one eye or binocular field of vision of at least 110 degrees;
12. Alcohol use problem;
13. Drug use problem;
14. A mental health condition that may affect your ability to drive;
15. Schizophrenia; or
16. Dementia.⁴

In addition, Maryland Vehicle Law §16-119 allows physicians to report drivers with 1) disorders characterized by lapses of consciousness; and 2) disorders that result in a corrected visual acuity that fails to comply with the vision requirements to the Maryland Motor Vehicle Administration. Physician reports are 1) confidential; 2) may be disclosed only on court order; and 3) may be used only to determine the qualifications of an individual to drive. A civil or criminal action may not be brought against a physician who makes a report under this section and who does not violate any confidential or

⁴ Maryland Department of Transportation, Motor Vehicle Administration. Medical Review Process. <http://www.mva.maryland.gov/safety/older/mva-medical-advisory-board.htm> Accessed 1/31/2017.

privileged relationship conferred by law. Of note, this law specifically addresses physicians and does not include other health care providers.

Physicians may report drivers using Maryland form DD-220 (See Medical Attachment B – Maryland Form DD-220; Physician Reporting Form) but are not required to do so. The reporting form for physicians asks the physician to recommend whether or not the medical condition should result in an immediate suspension of the driver’s license while further review is undertaken by the Medical Review Board.

Nearly all states allow any citizens (including health care providers) to report drivers with potentially impairing medical conditions to the state’s driver licensing board for review. A few states require physicians or health care providers to notify the state’s driver licensing system of patients with certain conditions. New Jersey law requires physicians to report patients to the Motor Vehicle Commission if they have “seizures, periods of unconsciousness or the impairment or loss of motor coordination, such as those associated with various forms of epilepsy.”⁵ Pennsylvania requires reporting drivers diagnosed with a condition that “could impair his or her ability to safely operate a motor vehicle” (if expected to last longer than 90 days).⁶ In California, “Physicians are required by law (Health & Safety Code Section 103900) to report disorders characterized by lapses of consciousness, as well as Alzheimer's disease and related disorders. Additionally, they may report any other condition if they believe it would affect the driver's ability to drive safely.”⁷ Oregon law requires health care providers to report “persons age 14 and older with functional and/or cognitive impairments that are severe and uncontrollable to DMV.”⁸ Title 24, Chapter 17, Subchapter V § 1763 of the Delaware code requires physicians licensed in the state to report “persons who are subject to losses of consciousness due to disease of the central nervous system to the Division of Motor Vehicles...unless such person's infirmity is under sufficient control to permit the person to operate a motor vehicle with safety to person and property.”⁹ Finally, in Nevada, physicians are required to report persons with epilepsy to the Department of Motor Vehicles and the State Board of Health.¹⁰

⁵ State of New Jersey Motor Vehicle Commission. Medical Review.

http://www.nj.gov/mvc/Violations/suspension_medical.htm Accessed 1/31/2017.

⁶ Pennsylvania Department of Transportation. Department of Motor Vehicles. Information Centers. Medical Reporting. Medically Impaired Driver Law. <http://www.dmv.pa.gov/Information-Centers/Medical-Reporting/Pages/Medically-Impaired-Driver-Law.aspx> Accessed 1/31/2017

⁷ State of California. Department of Motor Vehicles. Driver Safety Information Medical Conditions and Traffic Safety. <https://www.dmv.ca.gov/portal/dmv/detail/dl/driversafety/dsmedcontraffice#cond> Accessed 1/31/2017.

⁸ Oregon.gov. DMV. Mandatory Reporting FAQs.

https://www.oregon.gov/ODOT/DMV/pages/faqs/mandatory_reporting.aspx Accessed 1/31/2017.

⁹ State of Delaware. Delaware Code Online. <http://delcode.delaware.gov/title24/c017/sc05/index.shtml> Accessed 2/2/2017.

¹⁰ Justia Law. 2010 Nevada Revised Code. 2010 Nevada Code Title 40, Public Health And Safety, Chapter 439 Administration Of Public Health, NRS 439.270

<http://law.justia.com/codes/nevada/2010/title40/chapter439/nrs439-270.html> Accessed 2/2/2017.

Individual states vary significantly in the length of time an epileptic person must be seizure free before being allowed to drive a non-commercial vehicle.¹¹

D. DETAILS OF INVESTIGATION

1. Purpose

This investigation was performed to evaluate the drivers for any medical conditions, the use of any medications/illicit drugs, and the presence of any toxins.

2. Methods

The CDL long forms, toxicology results, autopsy reports, and the investigator's reports were reviewed for the bus drivers. Personal medical records were reviewed for the school bus driver.

MTA Bus Driver

CDL Medical Examination

According to the most recent CDL medical examination, dated May 17, 2016 (about seven (7) months before the accident), the 33 year old female MTA bus driver reported a history of migraines and having stayed in the hospital after having children to the Certified Medical Examiner. She reported no medications and the remainder of her examination was negative or normal. She was certified for 2 years with a requirement to drive using corrective lenses.

Autopsy

According to the autopsy performed by the Office of the Chief Medical Examiner, State of Maryland, the cause of death was multiple injuries and the manner of death was accident.

Toxicology

Toxicology testing performed by the Office of the Chief Medical Examiner, State of Maryland, did not identify any tested-for substances. Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory did not identify any tested for substances.¹²

¹¹ Krauss GL, Ampaw L, Krumholz A. Individual state driving restrictions for people with epilepsy in the US. *Neurology*. 2001;57(10):1780-5.

¹² Testing included more than 1300 illicit, prescription, and over the counter drugs and their metabolites, see <http://jag.cami.jccbi.gov/toxicology/default.asp?offset=0> for a complete listing.

Baltimore County School Bus Driver

CDL Medical Examination

Copies of the long forms for the school bus driver's medical examinations were obtained from Concentra, the medical care organization that performed them, as well as from the bus driver's employer. The earliest of these exams is dated February 3, 2014. At that time, the school bus driver reported a history of a broken collar bone and a broken leg. He reported no medications. Specifically, he answered "no" to the history questions about "seizures, epilepsy" and "diabetes, high blood sugar." During the physical exam, the driver's blood pressure was noted to be 142/92; no other abnormalities were noted. He initially received a certificate valid for 3 months while additional information was sought from his "usual physician," using a standard Concentra form. (See Attachment C – Concentra's Hypertension Form.) Of note, the FMCSA allows and encourages certified medical examiners (CMEs) to obtain additional information from drivers' treating physicians in order to make informed decisions about medical certification. However, FMCSA has no guidelines or suggested best practices about how a CME goes about obtaining such information. Concentra has gone above the FMCSA requirements by developing and using a standardized system to collect the relevant information.

The form was filled out by a nurse practitioner not associated with the physician identified as the driver's primary care doctor. The only comment from the nurse practitioner was a notation that the blood pressure was 132/89. Of note, the form does not ask the treating provider to report the driver's medical conditions or medications; it asks only about the identified condition. In addition, it asks the treating provider to state whether *the identified condition* is likely to cause sudden impairment and comment on the likelihood of the condition to interfere with the driver's ability to operate a commercial vehicle safely. The box indicating that the condition should not cause sudden impairment or interfere with the driver's ability to safely operate the vehicle was checked. The driver's certificate was then upgraded to be valid for one year from the initial exam.

On February 2, 2015, the school bus driver returned to Concentra to renew his medical certificate. This time, he reported no medical history and no medications. He again answered "no" to the history questions about "seizures, epilepsy" and "diabetes, high blood sugar." The certified medical examiner (CME) reviewed his history and noted the previous orthopedic injuries and surgeries. The blood pressure was 132/86 and the remainder of the physical examination was normal. However, the required urine dip test identified 500 mg/dl of glucose in the driver's urine. He again received a 3 month certificate (valid only until May 3, 2015) while

additional information was sought from his treating provider regarding the possibility of diabetes.¹³ A similar form was given to the driver requesting information about the condition from his treating provider, which noted the random blood glucose (fingerstick) performed at Concentra was 226 mg/dl. (See Attachment D – Concentra Diabetes Form.)

The school bus driver returned to Concentra on August 31, 2015 with the form filled out by his primary care physician (see below under primary care physician records). He underwent a full renewal exam and again answered “no” to the history questions about “seizures, epilepsy” and “diabetes, high blood sugar.” In addition, he answered “no” to the question about high blood pressure and reported no medications. The health care provider noted a history of hypertension and type 2 diabetes, on oral medication, with a recent hemoglobin A1C of 7.7% and commented, “Patient under false assumption he has no hypertension or diabetes because they are treated with medication.” The physical exam and testing were unremarkable and the driver received a medical certificate valid for 1 year.

According to the records from the school bus driver’s most recent CDL medical examination, dated June 20, 2016 (about 4.5 months before the accident), the driver reported having been admitted to a hospital, having had surgery for a broken leg and collarbone, and having at some time used tobacco products. However, he checked the “no” box for “seizures/epilepsy,” “high blood pressure,” and “diabetes or blood sugar problems.” He did not report any medications. He was documented as being 5’11” tall and weighing 195 pounds. His blood pressure was 155/86 on a single measurement but no other physical examination findings or test results were abnormal. He received a medical certificate valid for 1 year.

Hospital Records including Emergency Department Visits and Admissions
Records for medical care provided to the school bus driver at a local hospital between 2005 and 2012 were obtained. The school bus driver had multiple visits to the emergency department as well as hospital admissions in 2005-2007. All but one of these visits were related to complications from a complex leg fracture that had occurred in 2001, apparently as a result of a tractor trailer rollover accident (according to information he reported to his health care providers and they documented in his records).¹⁴ Each time he visited the hospital, he reported his history of epilepsy to the treating health care providers. On May 17, 2005, a consulting physician noted his occupation as “bus driver” but also

¹³ Normal random blood glucose levels are below 140 mg/dl. Levels above that suggest diabetes. When the blood glucose is higher than about 180-200 mg/dl, the kidney responds by allowing glucose to spill into the urine. Thus, glucose in the urine indicates likely diabetes.

¹⁴ The remaining visit was to the emergency department to have a foreign object in the eye removed.

commented that he was on disability. A hospital admission summary from September 14, 2007, noted the school bus driver had a history of a seizure disorder and had been a truck driver but had retired following his 2001 accident.

The records contain information from emergency department visits following acute seizures on November 7, 2008, April 5, 2009, and August 9, 2010. There is no documentation of the school bus driver's occupation or driving status in any of the records from these visits and the included discharge instructions do not make any recommendations regarding driving. On the August 9, 2010 visit, the bus driver's glucose was noted to be 320 mg/dl.¹⁵ There is no mention of diabetes in the records provided. The school bus driver's last visit to the local hospital was an emergency department visit on January 23, 2012 during which his only request was for a refill of his carbamazepine; he did not complain of a seizure at the time. The records from that visit lack any mention of his occupation or discussion of his driving status. He was provided with a month's prescription for carbamazepine.

Personal Medical Records

Records were obtained from the school bus driver's primary care physician beginning with an initial visit on November 22, 2010. At that visit, the physician documented the driver's past medical history as "seizures since childhood" and his medications at "carbamazepine 200 mg three times a day." The physician note goes on to document that the driver had not seen a primary care doctor in the preceding 2 years and notes that his wife remarked, "He does not see doctors." The vital signs and physical examination were unremarkable. The physician ordered a number of lab tests. The physician's assessment was "history of seizures and non-compliance."

Carbamazepine is an antiseizure medication often marketed with the name Tegretol. Because of symptoms of drowsiness and dizziness, it carries a warning about operating machinery or driving while taking the drug.¹⁶ Levels of carbamazepine need to be maintained in a narrow window or the medication will be ineffective and the patient will suffer seizures (4-11 ug/ml).¹⁷ This requires routine dosing at regular intervals without missing doses. Non-compliant patients fail to regularly take their medication or follow other medical instructions.

¹⁵ Random blood tests results above 140 mg/dl indicate diabetes.

¹⁶National Institutes of Health. US National Library of Medicine. DailyMed. Carbamazepine extended release. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=de6b0fd5-11fe-4f19-90e6-54339be5c9fc> Accessed 2/1/2017.

¹⁷ Federal Aviation Administration. CAMI toxicology Drug Information. Carbamazepine. <http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=25> Accessed 2/2/2017.

On December 17, 2010, the physician called the school bus driver to discuss the results of the lab tests, including a diagnosis of diabetes and elevated liver function tests. The driver's Hemoglobin A1C was 11.4% with a fasting glucose of 364 mg/dl and 3+glucose in his urine.^{18, 19, 20} In addition, his liver function tests were mildly elevated. Apparently, on the phone the driver denied he had diabetes and the physician ended up having a conversation with his wife to discuss the findings and encourage a diabetic diet and the use of diabetic medication.

On December 28, 2010, the driver and his wife returned to the physician's office. His vital signs and physical examination were unremarkable. Based on the laboratory results, the physician diagnosed him with new onset diabetes, elevated liver enzymes, high cholesterol, folic acid deficiency, and vitamin D deficiency. Because the physician was concerned the elevated liver enzymes were a side effect of the carbamazepine, she recommended the driver see a neurologist to begin a different anti-seizure medication. In addition, she prescribed metformin for the driver's diabetes, replacement vitamins for his deficiencies, and requested he return for follow up in two months. Metformin is an oral medication for type 2 diabetes, often sold with the name Glucophage.²¹

The driver returned for follow up on October 17, 2011. The physician record notes, "He says he ran out of his carbamazepine 3 days ago. He refused to take any meds - except carbamazepine. He has not seen a neurologist." It goes on to state, "He says he had some seizures while out of carbamazepine." On this visit, the driver was hypertensive with a blood pressure of 150/95. The remainder of his physical exam was unremarkable. The physician diagnosed the following:

- 1) History of seizures
- 2) Hypertension
- 3) History of DM (diabetes mellitus)
- 4) History of non-compliance
- 5) History of elevated liver function tests
- 6) History of hyperlipidemia

¹⁸ Hemoglobin A1C is a measure of the percentage of hemoglobin molecules that have a glucose molecule attached to them (what percentage have been glycosylated). It is used as a measure of average blood glucose over the preceding several weeks. Non-diabetic levels are below 5.4%. Between 5.5 and 6.4% is considered "pre-diabetes" and above 6.5% indicates diabetes. For diabetic individuals, levels below 7.0% are considered "good control."

¹⁹ Normal fasting blood glucose levels are between 70 and 100 mg/dl. Values above that indicate impaired glucose metabolism. Generally, fasting levels above 126 mg/dl indicates diabetes.

²⁰ When the blood glucose is higher than about 180-200 mg/dl, the kidney responds by allowing glucose to spill into the urine.

²¹ National Institutes of Health. US National Library of Medicine. DailyMed. Metformin Hydrochloride. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=542ccc22-eeae-4704-9bb6-4176640e5ea8> Accessed 2/1/2017.

- 7) History of folate deficiency
- 8) History of Vitamin D deficiency

At the end of the visit, the physician ordered additional lab tests, referred the driver to a neurologist, refilled the prescriptions for his diabetes medications and vitamins, and recommended he follow up with her in 4-6 weeks.

Laboratory results from this visit demonstrated a hemoglobin A1C of 8.7%; a fasting glucose of 187 mg/dl; 1+ protein, trace glucose, and 2+ ketones in urine; normal liver enzymes but a positive test for Hepatitis C; and elevated lipids. His white blood cells were also mildly low.

The driver and his wife returned to the physician's office on November 11, 2011 and the results of the laboratory testing were discussed. The blood pressure was 110/80 and the result showed a normal level of folate. The physician assessed the same diagnoses with the addition of Hepatitis C infection and low white cells and the removal of the hypertension and folate deficiency diagnoses. She recommended the driver visit a gastroenterologist for the hepatitis, a neurologist for the seizures, and prescribed metformin and Vitamin D. She recommended he return for a follow up visit with her in 2 months.

The driver returned to the physician on August 5, 2015 (almost 4 years later). At that time, he mentioned he had had glucose in his urine dip test during his commercial driver license medical exam and the certified medical examiner (CME) at Concentra had required further information. The physician's office had gone to an electronic charting system at this point that documented the driver's past medical history as "Type 2 Diabetes Mellitus, Hypertension, Seizure Disorder" and included those diagnoses as well as "non-compliance" as "active problems. The driver's blood pressure was recorded as 191/118 but the remainder of his physical exam was unremarkable.

The physician ordered more laboratory testing and prescribed metformin, lisinopril (a blood pressure medicine also sold with the names Zestril and Prinivil), and carbamazepine as well as a glucose testing kit and associated test items. She requested he return in one week.

The laboratory results demonstrated a hemoglobin A1C of 7.7%, a fasting glucose of 139, mildly elevated liver function tests, elevated lipids, a low level of carbamazepine, and a low Vitamin D level. The urine was positive for protein and ketones.

The driver returned to the primary care physician on August 25, 2015. At that visit, she filled out a form sent to her from the DOT medical examiner

at Concentra which clearly identified the school bus driver as a commercial driver. This form requested only information regarding the condition identified during his DOT exam: glucosuria (glucose in the urine) and a fingerstick of 226 mg/dl (finger prick blood glucose test). The form did not request and the primary physician did not include any description of the driver's other chronic medical conditions or other medications. Specifically, the form asked the treating provider to state whether or not "the driver's identified condition" would cause sudden impairment or interfere with his ability to safely operate a commercial vehicle. (See Attachment D.) She answered that the identified condition (elevated glucose) should not impair the driver. This was the form returned to Concentra for commercial driver's medical examination on August 31, 2015 (see above, CDL examinations).

In addition, the physician requested the driver continue his medications, with the addition of Vitamin D supplements, and return for follow up in 3 months. He did not return prior to the date of the accident.

Second Primary Care Physician

Records from a single visit to a second primary care physician on May 30, 2013 were obtained. The chief complaint at this visit was that the school bus driver's blood pressure had been high at Concentra. There was a note that he "drives a bus." The driver did not report any known medical conditions or any medications. The blood pressure was measured at 145/90; the remainder of the physical exam was unremarkable. Blood work identified a glucose of 190 gm/dl and the hemoglobin A1c was 7.5%. The records indicate the physician told driver he had hypertension and was diabetic, placed him on a diabetic diet, and prescribed a glucometer. No record of any further visits to this provider were identified.

Emergency Medical Care Records

Records from three episodes where the school bus driver was evaluated by emergency medical services (EMS) were obtained and reviewed. The first is from October 14, 2011. According to this record, the EMS providers met the school bus driver on the scene of a motor vehicle accident where he had been driving a school bus. A passenger who had been on the bus provided information that the driver "passed out behind wheel and while passenger tried to gain control of bus it struck a parked vehicle." The report from the passenger was that the school bus driver had been unconscious for 5-10 minutes. During the evaluation, the paramedic noted the school bus driver was up walking around but confused and unaware of what had happened. His Glasgow Coma Score was 14/15 for being

confused.²² His blood glucose was measured at 322 mg/dl. He was considered to be confused enough that the paramedic administered Narcan, the antidote to opioid overdose, which had no direct effect. He was then transported to the closest hospital.

Two other records of EMS evaluations of the school bus driver for seizure or unconsciousness were obtained. On both of those occasions, the school bus driver refused care and was not transported to a hospital. The most recent of these occurred on October 24, 2016 (8 days before the accident), where the report states the school bus driver's coworkers called 911 because they "believed the patient was having a seizure." The report states the school bus driver denied having seizures but was "reluctant to answer and questions and purposefully avoids eye contact." He "would not allow a full assessment and only allowed us to take his pulse." A similar event occurred on October 2, 2013, where the incident occurred on a street.

Workman's Compensation claim; October 2011

According to information supplied by the workman's compensation group associated with the school bus driver's employer at the time of the school bus accident on October 14, 2011, they did not receive any medical information from the driver regarding the event. Someone from the company spoke with the driver on October 20, 2011. At that time, records indicated the school bus driver reported "just blacking out" for no apparent reason at the time of the accident and that he had been referred to a neurologist by the hospital for further evaluation. He denied having an injury associated with the event. The workmen's compensation company requested further medical documentation, which was not provided to them by the driver, who in later conversation repeated that he had not been injured. As a result, the claim was denied.

Records from Second Hospital

The NTSB subpoenaed records from the hospital the school bus driver was taken to by ambulance following his October 2011 accident. The request was for records from January 2011 through the accident date. The records received by NTSB covered only a visit to the hospital's Emergency Department on June 20, 2016. The records contain the EMS report which states, "the pt (patient) was speaking with his supervisor when he fell to the ground and exhibited major seizure like activity in all 4 extremities." The school bus driver was confused and transported to the hospital.

The triage nurse's note states, "as per EMS, patient is a school bus driver, was checking the bus the next time his supervisor saw him he was on the

²² The Glasgow Coma Score (GCS) is a way of scoring the degree of consciousness of a person. A normally functioning person scores 15; someone who is alive but totally unresponsive scores 3. The full score is the sum of scores for verbal response (1-5); motor function (1-6) and eye response (1-4).

ground with seizure like activity lasted less than 2 seconds with confusion.”

The physician documentation states, “He states he was prescribed Dilantin as a child for seizures, but hasn’t taken it in decades.” The school bus driver denied having any other medical conditions or using any medication. The driver left the Emergency Department without completing the intended evaluation.

Pharmacy Records

Pharmacy records were obtained from Giant Food Pharmacy and Rite Aid Pharmacy. These indicated the school bus driver filled 30 days’ worth of carbamazepine on 4/6/2011, 5/18/2011, and 7/22/2011 as well as 90 days’ worth on 10/17/2011.

In addition, he filled 30 days’ worth of carbamazepine on 1/24/2012; 30 days’ worth of lisinopril, metformin, and glucose test strips on 5/30/2013, and 30 days’ worth of carbamazepine on 11/18/2013 and 12/26/2013. Finally, 30 days’ worth of lisinopril, carbamazepine, and glucose testing items were filled on 8/7/2015. No other pharmacy records were identified by the investigation.

Autopsy

According to the autopsy performed by the Office of the Chief Medical Examiner, State of Maryland, the cause of death was multiple injuries and the manner of death was accident.

In addition, the autopsy identified heart disease. The school bus driver’s heart weighed 410 grams. This is in the normal range for a man of his size.²³ In addition, there was significant coronary artery disease; both the proximal right coronary artery and the proximal left anterior descending artery had areas of 75% luminal narrowing; the mid-left circumflex artery had 40% narrowing. On microscopy, mild biventricular myocyte hypertrophy with subendocardial and perivascular interstitial fibrosis was identified along with increased interstitial and focal replacement fibrosis in the ventricular septum. These findings are consistent with scarring from small amounts of previous ischemia.

Mild hydrocephalus (enlargement of the ventricles with shrinking of nearby brain tissue) was noted on coronal sections through the cerebral hemispheres. On microscopy, very rare neurofibrillary tangles were found in the hippocampal gyrus but there were no signs of hypoxic-ischemic

²³ Kitzman DW, Scholz DG, Hagen PT, Ilstrup DM, Edwards WD. Age-related changes in normal human hearts during the first 10 decades of life. Part II (Maturity): A quantitative anatomic study of 765 specimens from subjects 20 to 99 years old. *Mayo Clinic Proc.*, 1988. 63(2):137-46.

injury or inflammatory changes. These findings do not suggest a specific disease process.

On microscopic evaluation, the kidney demonstrated arterionephrosclerosis with cortical scarring indicating hypertension. In the liver, there was evidence of chronic inflammation and fibrosis of the portal triads with focal bridging and extension into the parenchyma consistent with the effects of his known Hepatitis C infection. Finally, there were scattered glycogenated nuclei in liver cells, which are most commonly found in diabetic patients.

Toxicology

Toxicology testing performed by the Office of the Chief Medical Examiner, State of Maryland, did not identify any tested-for substances. Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified 1.858 ug/ml of carbamazepine in blood. Carbamazepine and 17,280 mg/dl of glucose were found in urine.²⁴

D. SUMMARY OF MEDICAL FINDINGS

The 33 year old female MTA bus driver had a history of migraines but had not reported any medication use. No significant natural disease was identified at autopsy and extensive post accident toxicology testing did not identify any drugs in her system.

The 67 year old male school bus driver did not report any chronic medical conditions or the use of any medication to the certified medical examiners (CMEs) during his CDL exams. On the forms, he regularly denied having epilepsy, seizures, diabetes, or hypertension. However, he had a history of epilepsy since childhood with documented ongoing seizures and been diagnosed with Hepatitis C, hypertension, and diabetes for several years before the accident. Medication for these conditions had been prescribed but the school bus driver refused to take any medication other than for his seizures, and he did not take that medication (carbamazepine) consistently. Although the school bus driver denied his diagnoses to the CMEs who evaluated him, he reported his epilepsy to many of his personal health care providers over the years; a few of them also knew he was a commercial driver. Few of the health care providers recorded any information regarding his driving status, even when caring for him following an acute seizure. None of the school bus driver's health care providers reported him to the Maryland Motor Vehicle Administration after 1990 and they were not required to do so.

On at least one occasion, evidence of the school bus driver's hypertension and diabetes were found during his occupational medical examinations and further information sought from his primary care provider. The information regarding his epilepsy was not transmitted to the CME by the primary care provider on these occasions.

The autopsy identified mild hydrocephalus and significant coronary artery disease as well as evidence consistent with hypertension, Hepatitis C, and diabetes on the microscopic evaluation of his organs. Post accident toxicology testing identified 1.858

²⁴ Testing included more than 1300 illicit, prescription, and over the counter drugs and their metabolites, see <http://jag.cami.jccbi.gov/toxicology/default.asp?offset=0> for a complete listing.

ug/ml of carbamazepine in blood. Therapeutic levels of carbamazepine are between 4 and 11 ug/ml. In urine, carbamazepine as well as 17,280 mg/dl of glucose were found.

Public Burden Statement

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2126-0006. Public reporting for this collection of information is estimated to be approximately 25 minutes per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Motor Carrier Safety Administration, MC-RRA, 1200 New Jersey Avenue, SE, Washington, D.C. 20590.



U.S. Department of Transportation
Federal Motor Carrier
Safety Administration

Medical Examination Report Form
(for Commercial Driver Medical Certification)

PRIVACY ACT STATEMENT: This statement is provided pursuant to the Privacy Act of 1974, 5 USC § 552a.

AUTHORITY: Title 49, United States Code (USC), [49 USC 31133\(a\)\(8\)](#) and [31149\(c\)\(1\)\(E\)](#).

PURPOSE: To record results of a driver's physical examination, to determine qualification to operate a commercial motor vehicle (CMV), and to promote driver health in interstate commerce according to the requirements in [49 CFR 391.41-49](#). Providing this information is mandatory. If this information is not provided, the medical examiner will not be able to determine qualification to operate a CMV in interstate commerce according to the requirements in [49 CFR 391.41-49](#). To record results of a driver's physical examination and to determine qualification to operate a CMV in intrastate commerce when the driver is required by a State to be examined by a medical examiner listed on the National Registry of Certified Medical Examiners in accordance with the provisions of [49 CFR 391.41-49](#) and any variances from the physical qualification standards adopted by such State.

MEDICAL RECORD #

(or sticker)

Medical examiners are required to complete the Medical Examination Report Form for every driver physical examination performed in accordance with [49 CFR 391.41](#). Each original (paper or electronic) completed Medical Examination Report Form must be retained on file at the office of the medical examiner for at least 3 years from the date of examination. The medical examiner must make all records and information in these files 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\(i\)\]](#).

ROUTINE USES: The information is used for the purpose set forth above and may be forwarded to Federal, State, or local law enforcement agencies for their use. Medical Examination Report Forms collected by FMCSA will be stored in FMCSA's automated National Registry of Certified Medical Examiners System and will be used to monitor the performance of medical examiners listed on the National Registry.

In addition to those disclosures permitted under [5 USC 552a\(b\)](#) of the Privacy Act of 1974, additional disclosures may be made in accordance with the U.S. Department of Transportation (DOT) Prefatory Statement of General Routine Uses published in the Federal Register on December 29, 2010 ([75 FR 82132](#)), under "Prefatory Statement of General Routine Uses" (available at <http://www.dot.gov/privacy/privacyactnotices>).

ACKNOWLEDGMENT: I understand the provisions of the Privacy Act of 1974 as related to me through the above-mentioned statement.

Driver's Signature: _____ Date: _____

SECTION 1. Driver Information (to be filled out by the driver)

PERSONAL INFORMATION

Last Name: _____ First Name: _____ Middle Initial: _____ Date of Birth: _____ Age: _____
 Street Address: _____ City: _____ State/Province: _____ Zip Code: _____
 Driver's License Number: _____ Issuing State/Province: _____ Phone: _____ Gender: M F
 E-mail (optional): _____ CLP/CDL Applicant/Holder*: Yes No
 Driver ID Verified By**: _____
 Has your USDOT/FMCSA medical certificate ever been denied or issued for less than 2 years? Yes No Not Sure

*CLP/CDL Applicant/Holder: See instructions for definitions.

**Driver ID Verified By: Record what type of photo ID was used to verify the identity of the driver, e.g., CDL, driver's license, passport.

DRIVER HEALTH HISTORY

Have you ever had surgery? If "yes," please list and explain below. Yes No Not Sure

Are you currently taking medications (prescription, over-the-counter, herbal remedies, diet supplements)? Yes No Not Sure

If "yes," please describe below.

(Attach additional sheets if necessary)

Last Name: _____ First Name: _____ DOB: _____ Exam Date: _____

DRIVER HEALTH HISTORY (continued)

Do you have or have you ever had:	Not				Not		
	Yes	No	Sure		Yes	No	Sure
1. Head/brain injuries or illnesses (e.g., concussion)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16. Dizziness, headaches, numbness, tingling, or memory loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Seizures, epilepsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17. Unexplained weight loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Eye problems (except glasses or contacts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18. Stroke, mini-stroke (TIA), paralysis, or weakness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Ear and/or hearing problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19. Missing or limited use of arm, hand, finger, leg, foot, toe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Heart disease, heart attack, bypass, or other heart problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20. Neck or back problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Pacemaker, stents, implantable devices, or other heart procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	21. Bone, muscle, joint, or nerve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. High blood pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	22. Blood clots or bleeding problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. High cholesterol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	23. Cancer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Chronic (long-term) cough, shortness of breath, or other breathing problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	24. Chronic (long-term) infection or other chronic diseases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Lung disease (e.g., asthma)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	25. Sleep disorders, pauses in breathing while asleep, daytime sleepiness, loud snoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Kidney problems, kidney stones, or pain/problems with urination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	26. Have you ever had a sleep test (e.g., sleep apnea)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Stomach, liver, or digestive problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27. Have you ever spent a night in the hospital?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Diabetes or blood sugar problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	28. Have you ever had a broken bone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insulin used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29. Have you ever used or do you now use tobacco?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Anxiety, depression, nervousness, other mental health problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	30. Do you currently drink alcohol?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Fainting or passing out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	31. Have you used an illegal substance within the past two years?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				32. Have you ever failed a drug test or been dependent on an illegal substance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other health condition(s) not described above: Yes No Not Sure

Did you answer "yes" to any of questions 1-32? If so, please comment further on those health conditions below. Yes No Not Sure

(Attach additional sheets if necessary)

CMV DRIVER'S SIGNATURE

I certify that the above information is accurate and complete. I understand that inaccurate, false or missing information may invalidate the examination and my Medical Examiner's Certificate, that submission of fraudulent or intentionally false information is a violation of [49 CFR 390.35](#), and that submission of fraudulent or intentionally false information may subject me to civil or criminal penalties under [49 CFR 390.37](#) and [49 CFR 386](#) Appendices A and B.

Driver's Signature: _____ Date: _____

SECTION 2. Examination Report (to be filled out by the medical examiner)

DRIVER HEALTH HISTORY REVIEW

Review and discuss pertinent driver answers and any available medical records. Comment on the driver's responses to the "health history" questions that may affect the driver's safe operation of a commercial motor vehicle (CMV).

(Attach additional sheets if necessary)

Last Name: _____ First Name: _____ DOB: _____ Exam Date: _____

TESTING

Pulse rate: _____ Pulse rhythm regular: Yes No Height: ___ feet ___ inches Weight: ___ pounds

Blood Pressure	Systolic	Diastolic	Urinalysis	Sp. Gr.	Protein	Blood	Sugar
Sitting			Urinalysis is required. Numerical readings must be recorded.				
Second reading (optional)							
Other testing if indicated			<i>Protein, blood, or sugar in the urine may be an indication for further testing to rule out any underlying medical problem.</i>				
<div style="border: 1px solid black; height: 30px;"></div>							

<p>Vision Standard is at least 20/40 acuity (Snellen) in each eye with or without correction. At least 70° field of vision in horizontal meridian measured in each eye. The use of corrective lenses should be noted on the Medical Examiner's Certificate.</p>			<p>Hearing Standard: Must first perceive whispered voice at not less than 5 feet OR average hearing loss of less than or equal to 40 dB, in better ear (with or without hearing aid).</p>																						
<p>Acuity</p> <table border="0"> <tr> <td></td> <td>Uncorrected</td> <td>Corrected</td> <td>Horizontal Field of Vision</td> </tr> <tr> <td>Right Eye:</td> <td>20/ _____</td> <td>20/ _____</td> <td>Right Eye: _____ degrees</td> </tr> <tr> <td>Left Eye:</td> <td>20/ _____</td> <td>20/ _____</td> <td>Left Eye: _____ degrees</td> </tr> <tr> <td>Both Eyes:</td> <td>20/ _____</td> <td>20/ _____</td> <td></td> </tr> </table>		Uncorrected	Corrected	Horizontal Field of Vision	Right Eye:	20/ _____	20/ _____	Right Eye: _____ degrees	Left Eye:	20/ _____	20/ _____	Left Eye: _____ degrees	Both Eyes:	20/ _____	20/ _____		<p>Check if hearing aid used for test: <input type="checkbox"/> Right Ear <input type="checkbox"/> Left Ear <input type="checkbox"/> Neither</p>		<p>Whisper Test Results</p> <p>Record distance (in feet) from driver at which a forced whispered voice can first be heard</p> <p style="text-align: right;">Right Ear Left Ear</p> <p style="text-align: right;">_____ _____</p>						
	Uncorrected	Corrected	Horizontal Field of Vision																						
Right Eye:	20/ _____	20/ _____	Right Eye: _____ degrees																						
Left Eye:	20/ _____	20/ _____	Left Eye: _____ degrees																						
Both Eyes:	20/ _____	20/ _____																							
<p>Applicant can recognize and distinguish among traffic control signals and devices showing red, green, and amber colors <input type="radio"/> Yes <input type="radio"/> No</p> <p>Monocular vision <input type="radio"/> Yes <input type="radio"/> No</p> <p>Referred to ophthalmologist or optometrist? <input type="radio"/> Yes <input type="radio"/> No</p> <p>Received documentation from ophthalmologist or optometrist? <input type="radio"/> Yes <input type="radio"/> No</p>	<p>Audiometric Test Results</p> <table border="0"> <tr> <td></td> <td colspan="3">Right Ear</td> <td colspan="3">Left Ear</td> </tr> <tr> <td></td> <td>500 Hz</td> <td>1000 Hz</td> <td>2000 Hz</td> <td>500 Hz</td> <td>1000 Hz</td> <td>2000 Hz</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table>			Right Ear			Left Ear				500 Hz	1000 Hz	2000 Hz	500 Hz	1000 Hz	2000 Hz		_____	_____	_____	_____	_____	_____	<p>OR</p> <p>Average (right): _____ Average (left): _____</p>	
	Right Ear			Left Ear																					
	500 Hz	1000 Hz	2000 Hz	500 Hz	1000 Hz	2000 Hz																			
	_____	_____	_____	_____	_____	_____																			

PHYSICAL EXAMINATION

The presence of a certain condition may not necessarily disqualify a driver, particularly if the condition is controlled adequately, is not likely to worsen, or is readily amenable to treatment. Even if a condition does not disqualify a driver, the Medical Examiner may consider deferring the driver temporarily. Also, the driver should be advised to take the necessary steps to correct the condition as soon as possible, particularly if neglecting the condition could result in a more serious illness that might affect driving.

Check the body systems for abnormalities.

Body System	Normal	Abnormal	Body System	Normal	Abnormal
1. General	<input type="radio"/>	<input type="radio"/>	8. Abdomen	<input type="radio"/>	<input type="radio"/>
2. Skin	<input type="radio"/>	<input type="radio"/>	9. Genito-urinary system including hernias	<input type="radio"/>	<input type="radio"/>
3. Eyes	<input type="radio"/>	<input type="radio"/>	10. Back/Spine	<input type="radio"/>	<input type="radio"/>
4. Ears	<input type="radio"/>	<input type="radio"/>	11. Extremities/joints	<input type="radio"/>	<input type="radio"/>
5. Mouth/throat	<input type="radio"/>	<input type="radio"/>	12. Neurological system including reflexes	<input type="radio"/>	<input type="radio"/>
6. Cardiovascular	<input type="radio"/>	<input type="radio"/>	13. Gait	<input type="radio"/>	<input type="radio"/>
7. Lungs/chest	<input type="radio"/>	<input type="radio"/>	14. Vascular system	<input type="radio"/>	<input type="radio"/>

Discuss any abnormal answers in detail in the space below and indicate whether it would affect the driver's ability to operate a CMV. Enter applicable item number before each comment.

(Attach additional sheets if necessary)

Last Name: _____ First Name: _____ DOB: _____ Exam Date: _____

Please complete only one of the following (Federal or State) Medical Examiner Determination sections:

MEDICAL EXAMINER DETERMINATION (Federal)

Use this section for examinations performed in accordance with the Federal Motor Carrier Safety Regulations (49 CFR 391.41-391.49):

Does not meet standards (specify reason): _____

Meets standards in [49 CFR 391.41](#); qualifies for 2-year certificate

Meets standards, but periodic monitoring required (specify reason): _____

Driver qualified for: 3 months 6 months 1 year other (specify): _____

Wearing corrective lenses Wearing hearing aid Accompanied by a waiver/exemption (specify type): _____

Accompanied by a Skill Performance Evaluation (SPE) Certificate Qualified by operation of [49 CFR 391.64 \(Federal\)](#)

Driving within an exempt intracity zone (see [49 CFR 391.62 \(Federal\)](#))

Determination pending (specify reason): _____

Return to medical exam office for follow-up on (must be 45 days or less): _____

Medical Examination Report amended (specify reason): _____

(if amended) Medical Examiner's Signature: _____ Date: _____

Incomplete examination (specify reason): _____

If the driver meets the standards outlined in [49 CFR 391.41](#), then complete a Medical Examiner's Certificate as stated in [49 CFR 391.43\(h\)](#), as appropriate.

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: _____

Last Name: _____ First Name: _____ DOB: _____ Exam Date: _____

MEDICAL EXAMINER DETERMINATION (State)

Use this section for examinations performed in accordance with the Federal Motor Carrier Safety Regulations (49 CFR 391.41-391.49) with any applicable State variances (which will only be valid for intrastate operations):

- Does not meet standards in [49 CFR 391.41](#) with any applicable State variances (*specify reason*): _____
- Meets standards in [49 CFR 391.41](#) with any applicable State variances
- Meets standards, but periodic monitoring required (*specify reason*): _____
- Driver qualified for: 3 months 6 months 1 year other (*specify*): _____
- Wearing corrective lenses Wearing hearing aid Accompanied by a waiver/exemption (*specify type*): _____
- Accompanied by a Skill Performance Evaluation (SPE) Certificate Grandfathered from State requirements (*State*)

If the driver meets the standards outlined in [49 CFR 391.41](#), with applicable State variances, then complete a Medical Examiner's Certificate, as appropriate.

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: _____



Voluntary Physician Referral to the Maryland MVA

Note: This form is only to be used for a physician referral of a driver to the Maryland MVA.

Patient's Name: (last) _____ (first) _____ (MI) _____

License Number (if known) ____ - ____ - ____ - ____ - ____

Please check any of the medical condition(s) below for which you have a concern in relationship to your patient's driving and provide an explanation. Note: Currently, The Code of Maryland (COMAR) (11.17.03.02; .02-1) informs a licensee or applicant for a driver's license that he/she "shall notify the Administration if the licensee or applicant is diagnosed as having any of the following disorders."

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Diabetes that has caused a low blood sugar episode requiring assistance from another person in the last 6 months; _____ 2. Epilepsy; _____ 3. Seizure; _____ 4. A heart condition that has caused a loss of consciousness in the past 6 months; _____ 5. Stroke; _____ 6. A condition that causes you to have dizzy spells, fainting, or blackouts; _____ 7. Sleep apnea or narcolepsy; _____ 8. A history of traumatic brain injury (TBI); _____ 9. A condition that causes weakness, shaking, or numbness in the arms, hands, legs, or feet that may affect your ability to drive; _____ | <ul style="list-style-type: none"> 10. A hand, arm, foot, or leg that is absent, amputated, or has a loss of function that may affect your ability to drive; _____ 11. An eye problem which prevents a corrected minimum visual acuity of 20/70 in at least one eye or binocular field of vision of at least 110 degrees; _____ 12. Alcohol use problem; _____ 13. Drug use problem; _____ 14. A mental health condition that may affect your ability to drive; _____ 15. Schizophrenia; or _____ 16. Dementia; _____ |
|---|--|

[Please Note: Maryland Vehicular Law §16-119 allows physicians to report individuals with 1) disorders characterized by lapses of consciousness; and 2) disorders that result in a corrected visual acuity that fails to comply with the vision requirements. Physician reports are 1) confidential; 2) may be disclosed only on court order; and 3) may be used only to determine the qualifications of an individual to drive. A civil or criminal action may not be brought against a physician who makes a report under this section and who does not violate any confidential or privileged relationship conferred by law. [Notes: Physician-patient privilege. – Apart from the psychologist and psychiatrist privilege in §9-109 of the Courts Article, there is no physician-patient privilege in Maryland. 71 Op. Att’y Gen. 407 (1986). Disclosure of records. – Prohibitions of §4-301 (b) of the Health – General Article do not prevent physicians from reporting under this section. 71 Op. Att’y Gen. 407 (1986)]

On the following page, please provide the requested information regarding your patient: Thank you.

Patient's Name: (last) _____ (first) _____ (MI) _____

Street Address _____

City, MD _____ Zip Code: _____

Date of Birth: Month _____ Day _____ Year _____

IMPORTANT: Is the level of concern about your patient's medical fitness to drive such that you would recommend IMMEDIATE SUSPENSION of their driving privilege until assessed by the MVA?

Yes _____ No _____

Do you think your patient's condition may improve and they will be a candidate to drive in the future?

Yes _____ No _____

If NO, please comment: _____

PHYSICIAN ATTESTATION:

1. How long has this patient been under your care? _____

2. Date of last visit (mm, day, year) _____ / _____ / _____

3. Your name _____
(Please print, type or use stamp)

4. License number _____ 5. Specialty _____

6. Address _____

7. Phone number _____ 8. FAX number _____

9. Physician Signature _____

10. Date of this report (mm, day, year) _____ / _____ / _____

This form may be Mailed to:

Maryland Motor Vehicle Administration
Driver Wellness and Safety Division
Attention: Nurse Case Review Manager
6601 Ritchie Highway, NE, Room 124
Glen Burnie, MD 21062

Fax to: 410-768-7627; (Phone 410-768-7511)

Email to: mvacs@mdot.state.md.us

Maryland MVA Driver Wellness and Safety Division, Attention: Nurse Case Review Manager

Per Maryland Vehicle Law §16-119, all medical information obtained will be kept CONFIDENTIAL and used to determine "the qualifications of an individual to drive." In some cases, "The Administration may use information in its records for the purpose of driver safety research, provided that personal information is not published or disclosed."



Apply to register to vote with your driver's license transaction. For details ask your customer agent.



DOT Medical Examiner Letter to Clinician: Hypertension

Date: _____

Driver Name: _____ DOB: _____

Dear medical clinician:

During a Department of Transportation (DOT) medical certification examination, the above driver was:

- Disqualified
Given a Limited Certification expiring on:
Given a Pending Determination - expires 45 days from:

The following condition(s) and/or concerns were identified:

Three horizontal lines for text entry.

U.S. CFR 391.41 (b)(6) states: 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 the ability to operate a commercial motor vehicle safely.

Satisfactory long term control is defined by the DOT as blood pressures <= 140/90.

We request that you evaluate and treat the driver for the above condition(s). Upon completion of treatment, please complete the bottom section of this form and provide any additional documentation requested, as follows:

- Current blood pressure readings - please provide at least ___ readings with the dates obtained.
Current antihypertensive treatment
Laboratory results

Two horizontal lines for text entry.

This driver's ability to operate a commercial motor vehicle in interstate commerce depends on your timely response to this request before the referenced expiration date.

Treating clinician's statement

As the treating clinician of the above commercial driver, I am familiar with the driver's condition(s) and treatment. I have read the relevant DOT regulation(s) and guidelines; I understand that the driver is in compliance and that:

- The identified condition(s) and/or treatment should not cause sudden impairment or interfere with the driver's ability to safely operate a commercial motor vehicle.
The following condition(s) and/or treatment have the potential to suddenly impair or interfere with the safe operation of a commercial vehicle:

Two horizontal lines for text entry.



DOT Medical Examiner Letter to Clinician: Hypertension

Clinician name: _____
Specialty: _____
Address: _____
City: _____ ST: _____ Zip: _____
Phone: _____ Fax: _____
Signature: _____

Please return this completed form and any additional requested documentation to:

Concentra Medical Centers _____ Fax: _____

_____ For questions, please call:
_____ Phone: _____



DOT Medical Examiner Letter to Clinician: Hypertension

Thank you for your cooperation.

Driver consent for release of medical information

I, _____ hereby authorize the release of the following medical information to Concentra Medical Centers for certification determination:

Driver signature

Witness signature

Date

Date



DOT Medical Examiner Letter to Clinician: Diabetes

Date: _____

Driver Name: _____ DOB: _____

Dear medical clinician:

During a Department of Transportation (DOT) medical certification examination, the above driver was:

- Disqualified
- Given a Limited Certification expiring on: _____
- Given a Pending Determination – expires 45 days from: : _____

The following condition(s) and/or concerns were identified:

U.S. CFR 391.41 (b)(3) states: A person is physically qualified to drive a commercial motor vehicle if that person has no current clinical diagnosis of diabetes currently requiring insulin for control.

We request that you evaluate and treat the driver for the above condition(s). Upon completion of treatment, please complete the bottom section of this form and provide any additional documentation requested, as follows:

- Does this driver require insulin to control his/her diabetes? Yes No
- All medical records and results pertaining to: _____
- Current hemoglobin A1C results
- Verification that the driver has not had more than 1 episode of hypoglycemia in the preceding 12 months
- Current medications and/or treatments
- Verify the driver has no complications of diabetes including but not limited to retinopathy, neuropathy, and nephropathy.
- Verification that driver has a glucose meter and how to operate it, has received diabetic education, and has been educated about hypoglycemia and what precautions are necessary

This driver’s ability to operate a commercial motor vehicle in interstate commerce depends on your timely response to this request before the referenced expiration date.

Treating clinician’s statement

As the treating clinician of the above commercial driver, I am familiar with the driver's condition(s) and treatment. I have read the relevant DOT regulation(s) and guidelines; I understand that the driver is in compliance and that:

- The identified condition(s) and/or treatment should not cause sudden impairment or interfere with the driver's ability to safely operate a commercial motor vehicle.
- The following condition(s) and/or treatment have the potential to suddenly impair or interfere with the safe operation of a commercial vehicle:



DOT Medical Examiner Letter to Clinician: Diabetes

Clinician name: _____
 Specialty: _____
 Address: _____
 City: _____ ST: _____ Zip: _____
 Phone: _____ Fax: _____
 Signature: _____

Please return this completed form and any additional requested documentation to:

Concentra Medical Centers _____ Fax: _____

 _____ For questions, please call:
 _____ Phone: _____



DOT Medical Examiner Letter to Clinician: Diabetes

Thank you for your cooperation.

Driver consent for release of medical information

I, _____ hereby authorize the release of the following medical information to Concentra Medical Centers for certification determination:

Driver signature

Witness signature

Date

Date