



National Transportation Safety Board

Washington, DC 20594

Highway Accident Brief

Median-Crossing Multivehicle Crash and Postcrash Fire on Interstate 75, Alachua, Florida, January 3, 2019

Accident Number:	HWY19MH007
Accident Type:	Median-crossing multivehicle crash and postcrash fire
Location:	Interstate 75 at mile marker 393.53, 1.89 miles south of the city of Alachua, Alachua County, Florida
Date and Time:	January 3, 2019, about 3:41 p.m. eastern standard time
Vehicle 1:	2016 Freightliner truck-tractor in combination with a 2018 Vanguard enclosed semitrailer, operated by Eagle Express Lines
Vehicle 2:	2016 Acura MDX, private operator
Vehicle 3:	2006 Chevrolet Express 3500 12-passenger van, private operator
Vehicle 4:	2018 Freightliner truck-tractor in combination with a 2016 Utility enclosed semitrailer, operated by New Prime, Inc.
Vehicle 5:	2006 Chevrolet 1500 pickup truck, private operator
Fatalities:	7
Injuries:	8

Crash Description

On Thursday, January 3, 2019, about 3:41 p.m. eastern standard time, a 2016 Freightliner truck-tractor in combination with a semitrailer, operated by Eagle Express Lines (Eagle Express truck), was traveling north in the right lane of Interstate 75 (I-75) near mile marker 393 in Alachua County, Florida, when it abruptly veered to the left and began an arcing path of travel across the other two travel lanes. Before the loss of control, the truck was traveling at a speed of 69–70 mph. As the vehicle veered left, the semitrailer sideswiped and appeared to ensnare a 2016 Acura MDX passenger car that was traveling in the left lane. The Eagle Express truck continued to the left, along with the redirected Acura, crashed through a W-beam median barrier at an encroachment angle of about 20 degrees, and entered the oncoming traffic in the southbound lanes.¹ As the Eagle Express truck crossed into the southbound lanes, it struck a 2006 Chevrolet Express 3500 12-passenger van, owned and operated by a church group, which was traveling in the left lane. As a result of the impact, the van rolled over twice before coming to rest in an upright position. Ten of the 12 persons on board were ejected through windows and openings in the vehicle structure. Debris from the

¹ The north- and southbound roadways have three travel lanes each and paved left and right shoulders.

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collision between the Eagle Express truck and the van struck a 2006 Chevrolet pickup truck traveling south in the center lane, behind the passenger van. The van and pickup truck were traveling at speeds of 75 and 72 mph, respectively.²

The Eagle Express truck continued across the southbound lanes and struck a 2018 Freightliner truck-tractor in combination with a 2016 semitrailer, operated by New Prime, Inc. (New Prime truck), that was traveling in the far-right lane at about 61 mph. The crash sequence was captured by a dashboard camera in the New Prime truck, and a still image from that video (figure 1) shows the Eagle Express truck crossing the median. A postcrash fire, fed by fuel from a breached saddle tank on the Eagle Express truck, engulfed the Eagle Express truck, the New Prime truck, and the Acura passenger car.



Figure 1. Screenshot, captured by the southbound New Prime truck’s onboard camera, shows the Eagle Express truck veering left and crossing the median toward the southbound lanes. The passenger van and the pickup truck can be seen in the left and center lane, respectively.

The National Transportation Safety Board (NTSB) found no evidence indicating that the Eagle Express driver made evasive maneuvers in the moments preceding the vehicle’s leftward turn or through the end of the crash sequence. The onset of tire marks (shown in figure 2) did not begin until after the Eagle Express truck had departed the right lane into the leftward arc, which indicates a lack of attempted evasive maneuvers in the moments before the vehicle’s leftward turn. Witness observations and the video evidence from the New Prime truck did not indicate the presence of any objects near the Eagle Express truck before the crash sequence began. Furthermore, no vehicles passed the truck immediately before the leftward arc, and there was substantial distance between

² The speeds were determined from airbag control module data from the vehicles.

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the Eagle Express truck and the vehicles ahead of it as the truck entered the median. A witness in the vehicle behind the truck reported not seeing any evasive maneuvers or braking.



Figure 2. Northbound view of the crash scene, including tire marks from the leftward arc of the Eagle Express truck. (Source: Florida Highway Patrol)

The crash occurred during daylight hours. The weather was clear and the roadway was dry.

Injuries

Of the 16 vehicle occupants involved in the crash, 7 were fatally injured, including both truck-tractor drivers, and 5 of the passengers ejected from the van. Of the five other ejected van passengers, four sustained serious injuries and one sustained minor injuries. The van driver and the passenger in the front seat remained in the van; the driver was injured seriously and the passenger minorly. The driver of the Acura passenger car sustained minor injuries and was able to self-extricate before flames engulfed her vehicle. The driver of the pickup truck was uninjured (see summary in table 1). None of the injuries or fatalities were directly attributable to the postcrash fire.

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Table 1. Injury severity by vehicle.

Vehicle	Fatal^a	Serious	Minor	None	TOTAL
Eagle Express truck	1	0	0	0	1
Acura car	0	0	1	0	1
Chevrolet van					
- Driver	0	1	0	0	1
- Passengers	5	4	2	0	11
New Prime truck	1	0	0	0	1
Chevrolet pickup truck	0	0	0	1	1
TOTAL	7	5	3	1	16

^a The injury levels were evaluated according to 49 *Code of Federal Regulations* 830.2, which defines fatal injury as “any injury which results in death within 30 days of the accident” and serious injury as “any injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burn affecting more than 5 percent of the body surface.”

The Eagle Express and New Prime trucks were significantly damaged in the crash. It is unknown whether the 59-year-old male driver of the Eagle Express truck was wearing a lap/shoulder belt; regardless, he was ejected from the vehicle when it collided with the New Prime truck. The 49-year-old male driver of the New Prime truck was wearing a lap/shoulder belt at the time of the crash but was also fatally injured.

The impact of the Eagle Express truck with the left side of the van caused significant deformation, resulting in the loss of integrity along the entire left side of the van. The roof collapsed onto the seats as a result of the pillar support failing due to structural damage from the initial collision and the subsequent rollover event. Figure 3 shows the van’s postcrash deformation. The van’s loss of integrity down the entire left side, rear hatch, and D-pillar on the right side compromised the left-side seat belt anchors and the fourth row’s right window seat’s upper attachment for the lap/shoulder belt. These failures led to the ejection of three passengers despite their being restrained by lap/shoulder belts. Further description of ejections and seat belt use is provided in figure 4.³

³ The van had lap-only seat belts in the center seat of row 3 and the two center seats of row 4.

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Figure 3. Damage to the van seen from the front-left (left) and rear-left sides (right).

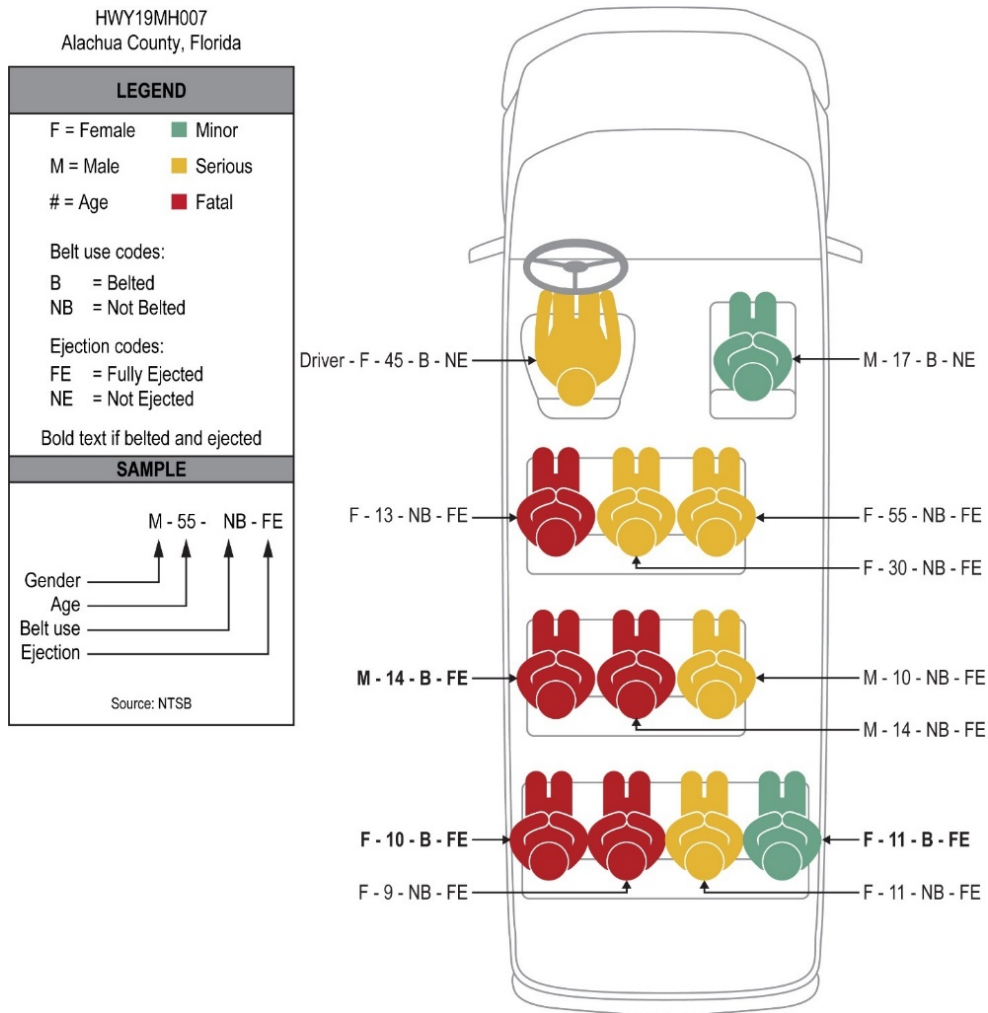


Figure 4. Seating, restraint, ejection, and injury chart for van passengers, generated from Florida Highway Patrol interviews. The three passengers labeled with bold print were restrained yet ejected.

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A state trooper, parked in the median just north of the crash site, notified the Florida Highway Patrol at 3:41 p.m., moments after the collisions occurred. The Alachua County Sheriff's Combined Communications Center notified Alachua County Fire and Rescue (ACFR) at 3:42 p.m. The first rescue unit arrived on scene at 3:50 p.m., and the first fire unit arrived at 3:54 p.m. A total of six rescue units responded to the scene of the crash and transported eight patients to two area hospitals. One tanker and three engine units from the ACFR responded for fire suppression (one of these engine crews ultimately assisted with treatment and triage). In total, nine local and state emergency service agencies responded to the collision site.

Highway Factors

I-75 is an asphalt-paved highway with three 12-foot-wide travel lanes in northbound and southbound directions. Both shoulders in each direction have milled rumble strips. In the crash area, the roadway is on a straight segment with a 3 percent upgrade. The posted speed limit is 70 mph, and the average daily traffic was about 55,500 vehicles per day, as measured on September 26–27, 2017. Heavy truck traffic was an average of 15,707 trucks each day, accounting for 28 percent of the total volume. In the 5 years before this crash, only one other cross-median collision had occurred within 5 miles of the crash location.

The northbound roadway at the crash location is separated from the southbound lanes by an earthen median and a double-faced, strong-post, 27-inch-high W-beam guardrail median barrier. The median in this location is 43 feet wide and the guardrail is located adjacent to the northbound shoulder. A 6-inch-wide rub rail is installed on the barrier on the southbound side to assist in preventing errant vehicles from striking and catching the posts on the barrier system. The forces generated by the mass and speed of the Eagle Express truck would have exceeded even the capacity of a stronger-standard median barrier, had one been in place.⁴

Postcrash Inspection of Eagle Express Truck

Although the Eagle Express truck and trailer were severely crash-damaged (figure 5), investigators were able to determine that the vehicle's steering, braking, and suspension systems, as well as the tires, had no apparent defects that would have led to the crash. Further, analysis of maintenance records and a search of the safety recall database and related records showed no factors relevant to the events in this crash.

⁴ The strong-post W-beam median barrier installed at the crash location was tested to Test Level 3, which means that the barrier can redirect a 4,400-pound pickup truck striking it at 62 mph and at a 25-degree impact angle. Test levels for barriers are outlined in the National Cooperative Research Report 350 and range from Test Level 1 through 6. The forces generated by the Eagle Express truck would have exceeded the capacity of a standard Test Level 5 concrete median barrier had one been installed, which is tested with a truck-tractor semitrailer striking it at 50 mph and at a 15-degree impact angle.

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Figure 5. Damage to the Eagle Express truck-tractor (left) and its driver and passenger seats (right).

Human Performance Factors for the Eagle Express Truck Driver

Licensing, Certification, and Driving History

At the time of the crash, the 59-year-old Eagle Express driver held a Florida class A commercial driver’s license (CDL) with tank endorsement and no restrictions. He had obtained his CDL in 1995 after attending the Metropolitan Driving School in West Palm Beach, Florida, and had held several CDL driving positions before being hired by Eagle Express on March 13, 2016. Eagle Express provided a driver qualification (DQ) file for the driver, showing that he met or exceeded the standards required for commercial vehicle drivers as stipulated in 49 *CFR* Part 391. The DQ file contained his application for employment, background check and employment verification, annual review of violations/driving records, and copies of his CDL, motor vehicle record, medical certificate, and road test. His most recent medical certificate was issued in February 2018 and was valid for 2 years.

Investigators queried the Commercial Driver’s License Information System (CDLIS), Lexis/Nexis, and state motor vehicle records for the driver’s traffic violations in the past 10 years and found three violations (detailed in table 2). The records did not indicate any prior license suspensions, revocations, or reportable crashes within the 10-year span.⁵

Table 2. Driver violation history.

Violation Date	State	Violation	Disposition	Source
None given	Ohio	“Overload – axel [sic] or gross”	Conviction	Lexis/Nexis
January 2014	Pennsylvania	“Exceed 8 ft width”	Conviction	Lexis/Nexis
September 2013	Virginia	“Failure to obey traffic sign/device” [noncommercial]	Conviction	State motor vehicle records

⁵ See 49 *CFR* 390.15 for details about reportable commercial vehicle crashes.

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Pre-crash Activities

The Eagle Express driver operated a US Postal Service (USPS) mail route that began in Opa-Locka, Florida, and ended in Tifton, Georgia. The driver lived in West Palm Beach, Florida, about 65 miles (1 hour) from the Opa-Locka route start. Once the driver arrived in Tifton, he would give the vehicle over (or “slip-seat” it) to another Eagle Express driver, who would continue operating the remainder of the route to other USPS distribution centers.⁶ After ending his shift, the driver had access to a company-rented trailer or “bunkhouse” in Tifton.

Investigators determined the Eagle Express driver’s pre-crash activities by reviewing electronic logs and cell phone records. The driver was off duty on December 30, worked 8.5 hours on December 31, and did not work the 2 days before the crash (January 1–2). Dispatch records indicated that, on January 3, 2019, the driver was scheduled to drive his usual route. He went on duty at 6:50 a.m. and began his trip at 7:05 a.m. He took a break near Williston, Florida, at 2:35 p.m. and resumed driving at 3:17 p.m. The crash occurred 23 minutes later. Figure 6 provides an overview of his schedule and activities in the days before the crash.

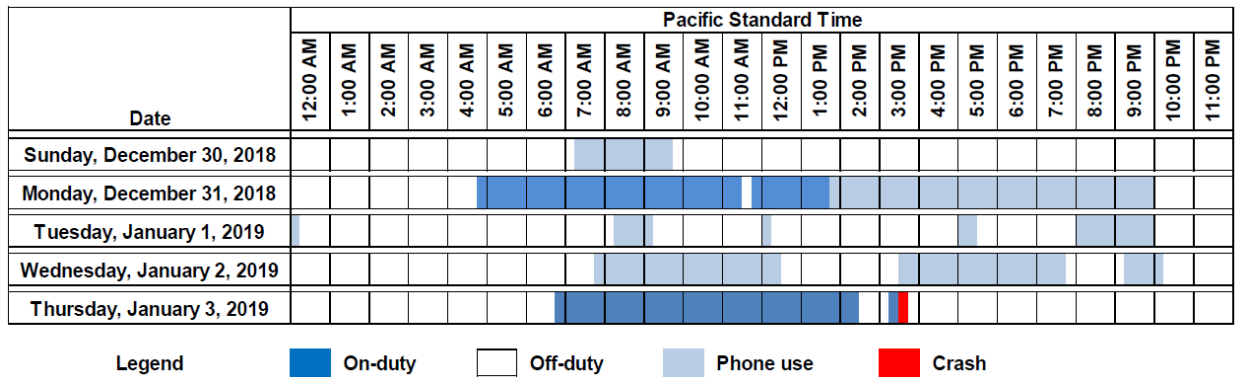


Figure 6. Eagle Express driver's pre-crash activities.

Cell phone records suggest that the driver had about 8 hours of uninterrupted sleep opportunity for several nights before the crash. The records show no evidence of cell phone use at the time of the crash.

Eagle Express equipped its trucks with an automatic onboard recording device.⁷ The carrier produced 30 days of logs for the driver and also supplied his self-reported time sheet. Investigators found no issues with his hours of service in the 7 days before the crash. When the crash occurred, he had been on duty for about 8 hours and 23 minutes.

⁶ Slip-seating is a practice where a vehicle rotates between drivers.

⁷ The more-advanced and now-required *electronic logging device* was not yet mandatory; the *automatic onboard recording device* in the Eagle Express truck met federal regulations in place at the time of the crash.

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Postcrash Toxicology

The University of Florida Pathology Laboratories conducted toxicological testing of specimens taken from the Eagle Express driver, and the results were negative for any tested-for substances.⁸

Medical History

The Eagle Express driver had several serious medical conditions. He had previously suffered a heart attack and, although he had been treated with stents, the stented blood vessels became 100 percent stenosed (that is, the artery was completely blocked). In 2010, he had a 2-vessel coronary artery bypass graft operation to preserve flow to the remaining arteries in his heart. Moreover, he had had surgery for a hiatal hernia.⁹

The driver intermittently visited a primary care physician between February 2014 and May 2017 and informed the physician about his surgeries. In June 2014, the driver underwent an echocardiogram that demonstrated mild left ventricular dysfunction with an ejection fraction of only 45–50 percent.¹⁰ Additionally, he had a doppler examination of his carotid arteries that showed partial blockage.

The NTSB also reviewed records from a cardiology clinic that the driver visited starting in May 2016. According to notes from the initial visit, the driver was not experiencing ongoing chest pain or other cardiac symptoms at that time. He was diagnosed with coronary artery disease, high blood pressure, obesity, and high cholesterol, and the clinic staff prescribed medications to treat those conditions. The driver returned to the clinic in September 2016 for a followup and again in March 2018 to reestablish care. He reported remaining symptom-free during this time.

In July 2018, the driver had a chest X-ray taken because of a “cough for 4 weeks.” The findings were consistent with a recurrent hiatal hernia; further, his trachea was deviated to the left, possibly suggesting a mass on the right side of the thyroid gland. In November 2018, the driver, with persistent coughing, visited an ear-nose-and-throat specialist who found chronic sinusitis with polyps, oral candidiasis, and allergic rhinitis; the specialist placed the driver on steroids and antibiotics.

The driver was admitted to an emergency department on December 4, 2018, after complaining of persistent cough and weakness for the preceding 3 weeks. This visit included evaluation with an electrocardiogram and a set of laboratory tests, which did not reveal any acute coronary issues. The driver was discharged with a diagnosis of bronchitis. On December 12, 2018, he had a followup visit with his primary care physician, who diagnosed him with chronic sinusitis and prescribed continued antibiotics for treatment. On December 24, 2018, the driver visited an

⁸ Tested-for drugs include those in the following categories: antiarrhythmics, antidepressants, antiepileptics, antihistamines, antipsychotics, barbiturates, benzodiazepines, cannabinoids, cocaine, sympathomimetics, opioids (but not fentanyl), and other. Sufficient specimens to enable additional toxicology testing at the Federal Aviation Administration Forensic Sciences Laboratory were not available.

⁹ *Hiatal hernia* is a condition where the upper part of one’s stomach bulges into one’s diaphragm.

¹⁰ *Ejection fraction* is the proportion of blood in the left ventricle that is ejected into the aorta with each beat of the heart. Normal ejection is 55–70 percent.

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urgent care center complaining of a sore throat. He was diagnosed with a mouth ulcer and continued taking his antibiotics.

The driver's autopsy identified severe coronary artery disease with stents in the right and circumflex arteries, as well as widely patent bypass grafts to the left anterior descending and to the posterior right coronary artery. He had a 4-centimeter transmural posteroseptal myocardial scar from his previous heart attack. Microscopic evaluation revealed subendocardial and transmural scars, but no acute myocardial necrosis. Ischemic (coronary) heart disease was identified as a contributing factor to the driver's death, and the manner of death was ruled an accident.¹¹ The autopsy also showed that his lungs were mildly hyperinflated with an area of bronchiectasis, which is an acute inflammatory destruction identified by microscopy.

NTSB investigators interviewed the driver who slip-seated with the crash driver. When asked if he could recall anything of note in the days before the collision, the slip-seat driver stated that the crash driver had complained about chest pains, and that the slip-seat driver then recommended that he see his doctor for evaluation.

At the time of the crash, the driver was being treated with the following medications: lisinopril (to lower blood pressure), rosuvastatin (to lower cholesterol), aspirin (an anti-platelet drug to prevent recurrent heart attacks), fluticasone (for nasal congestion), albuterol (to treat wheezing), and levofloxacin (an antibiotic known to increase the risk of seizures).

Overall, several medical conditions and medications had the potential to render the Eagle Express driver incapacitated at the time of the crash. These include medical complications from severe coronary artery disease, persistent aspiration due to a recurrent hiatal hernia, and prescription medications.

Medical Certification

The Federal Motor Carrier Safety Administration (FMCSA) stipulates that an individual must not operate a commercial motor vehicle unless he or she is medically fit to drive, in accordance with 49 *Code of Federal Regulations (CFR)* 391.41. Under this regulation, interstate drivers must undergo regular medical evaluation and certification (defined in 49 *CFR* 391.43). On April 20, 2012, the FMCSA published a final rule that established the National Registry of Certified Medical Examiners (effective May 12, 2012). This rule requires that all medical examiners who conduct physical exams for interstate commercial motor vehicle drivers (1) complete training on the FMCSA's qualification standards, (2) pass a test to verify an understanding of those standards, and (3) maintain and demonstrate competence through periodic training and testing.

The medical examination contains two parts, which are documented on Form MCA-5875.¹² The first part is a form completed by the driver where he or she provides information about previous medical conditions, current health, and medications. It includes 32 health history questions that can be answered "yes," "no," or "not sure." In particular, questions 5–9 were relevant to the health of

¹¹ *Ischemic, or coronary, heart disease* refers to heart problems caused by narrowed coronary arteries that supply blood to the heart muscle as a result of damage or disease.

¹² Available at: <https://www.fmcsa.dot.gov/regulations/medical/medical-examination-report-form-commercial-driver-medical-certification>, accessed May 18, 2021.

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the Eagle Express driver and, based on his medical history, he should have answered “yes” to them during various medical examinations:

Do you have or have you ever had:

5. Heart disease, heart attack, bypass, or other heart problems
6. Pacemaker, stents, implantable devices, or other heart procedures
7. High blood pressure
8. High cholesterol
9. Chronic (long-term) cough, shortness of breath, or other breathing problems

This section of the medical examination form includes a provision that states: “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* [Part] 386 appendices A and B,” which drivers must sign. Section 390.35 identifies as an acute violation “making, or causing to make fraudulent or intentionally false statements or records and/or reproducing fraudulent records.”¹³ The second part of the examination is a physical checkup conducted by a medical professional listed on the National Registry of Certified Medical Examiners.

Investigators reviewed the long forms pertaining to the Eagle Express driver’s medical examinations for the years 2010–2016 and 2018. During his June 2010 examination, the driver reported that he had no medical conditions and took no medications. As a result, the medical examiner granted him the full 2-year medical certification. The driver’s next examination took place in February 2011, when he reported having had coronary artery bypass grafting in September 2010. During both his February 2011 and February 2012 examinations, the driver reported his hiatal hernia repair and complex coronary artery disease to the medical examiners. He also reported taking several prescription medications. In February 2013, the driver did not document his heart issues in the history portion of the form; however, the records show that the physician did note the driver’s history of coronary artery disease and hypertension. During the driver’s 2011–2013 examinations, the medical examiners did not identify any additional medical issues, and he received a medical certificate valid for 1 year, with periodic monitoring of his medical conditions.

Starting in January 2014, the driver began seeing different physicians for each of his medical examinations. He continued omitting his cardiovascular history on the examination form, and no evidence indicated that the examining physician was aware of this history. During each of the driver’s medical examinations in January 2014, February 2016, and February 2018, he answered “no” to key health questions and continued to report not taking any medications. The medical examiners noted no significant abnormalities during any of these visits. Again, without the driver

¹³ Acute violations are those where noncompliance is so severe that the carrier must take immediate corrective action.

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accurately reporting his health history, he began receiving medical certifications that were valid for the maximum allowed period of 2 years.

Discussion

The Eagle Express driver had proper licensing, training, and experience for the position he held as a commercial driver. Evidence from the roadway, dashboard camera, and witness interviews did not suggest that he attempted evasive action as the truck veered across the median and into oncoming traffic. Interviews and a review of cell phone and work records indicated that he had sufficient sleep opportunities in the days preceding the crash and was not using his cell phone when the crash occurred. These facts, and the lack of any roadway issues, adverse weather conditions, and vehicle-related malfunctions, indicate that the driver was incapacitated at the time of the crash and, given his numerous and serious health conditions, the incapacitation was likely medical in nature. Although autopsy results identified “ischemic heart disease” as a contributing factor in the cause of death, the exact medical condition that led to the driver’s incapacitation cannot be determined from the available evidence. NTSB investigators noted that the Eagle Express driver did not disclose relevant health information in his most recent medical certification exams, such as medical history and medication use. A complete medical exam might have resulted in a shorter medical certification period but would not have predicted his incapacitation on the day of the crash.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the Alachua, Florida, multivehicle crash was the medical incapacitation of the Eagle Express truck driver, which resulted in his failure to maintain his travel lane and led to the truck crossing the highway’s center median and colliding with several vehicles in the opposite lanes of travel.

REPORT DATE MAY 17, 2021

For additional details about this crash, visit the [NTSB public docket](#) and search for NTSB accident ID HWY19MH007.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” 49 *Code of Federal Regulations*, section 831.4. Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. 49 *United States Code*, section 1154(b).
