

TEXAS STATE FIRE MARSHAL'S OFFICE

Firefighter Fatality Investigation



Investigation Number FY 11-04

Firefighter Chris Pham

Dallas Fire-Rescue
June 23, 2011

Texas Department of Insurance
Austin, Texas

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Executive Summary

On June 23, 2011, 35-year-old Dallas Fire-Rescue (DFR) Firefighter/Paramedic Chris Pham was assigned to the Mobile Intensive Care Unit (MICU) at Station 49. Firefighter Pham returned to the station after making the last call of his shift at approximately 6:08 AM. Firefighter Pham went to his bunk to rest and complete his shift. Firefighter Pham was found unconscious at approximately 7:45 AM. Firefighter Pham was transported to Methodist Charlton Medical Center in Dallas, where he died at 8:47 AM.

Firefighter Chris Pham was a five-year veteran of the Dallas Fire-Rescue Department.



Introduction

On June 23, 2011, the Texas State Fire Marshal's Office (SFMO) learned of the death of Dallas Fire Rescue Firefighter Chris Pham. The State Fire Marshal assigned Fire and Arson Investigator/K-9 Handler Clinton Williams to investigate the circumstances of the death. Investigator Williams traveled to Dallas on June 23, 2011, and conducted the investigation.

The State Fire Marshal's Office (SFMO) commenced the firefighter fatality investigation under the authority of Texas Government Code Section 417.0075.

(a) In this section, the term "firefighter" includes an individual who performs fire suppression duties for a governmental entity or volunteer fire department.

(b) If a firefighter dies in the line of duty or if the firefighter's death occurs in connection with an on-duty incident in this state, the state fire marshal shall investigate the circumstances surrounding the death of the firefighter, including any factors that may have contributed to the death of the firefighter.

(c) The state fire marshal shall coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist in the investigation.

Investigator Williams worked closely with Dallas Fire-Rescue investigators throughout the course of the investigation.

Firefighter Fatality Investigation

On June 22, 2011, 35-year-old Firefighter/Paramedic Chris Pham was working for Dallas Fire-Rescue on the Mobile Intensive Care Unit (MICU) as a paramedic, at Station 49. The normal shift schedule for Dallas Fire-Rescue firefighters is 24 hours on and 48 hours off.

On June 22, 2011, Firefighter/Paramedic Pham was assigned to Rescue 49 with Firefighter/Paramedic Darren Ingram. Shift change occurs at 7:00 AM. Pham responded to 10 EMS incidents during his 24-hour shift with the last run lasting from approximately 5:11 AM to 6:08 AM on the morning of June 23, 2011. Weather records indicated that on June 22, 2011, the high temperature was 91 degrees. Ingram indicated that none of the calls had required exceptional physical exertion.

After returning to the station, Firefighter Pham went to his bunk. Several firefighters saw him and/or spoke with him before he went to his bunk, and none reported obvious signs of distress or difficulty.

At approximately 7:45 AM, Firefighter Pham was in his bunk when one of the oncoming shift personnel tried to awaken him. Firefighter Pham appeared pale and he gave no response. Firefighter Pham's vital signs were checked and none were found. Firefighter Pham was placed on the floor and CPR was administered.

Advanced life support measures were initiated and Firefighter Pham was transported to Methodist Charlton Medical Center.

Firefighter Pham died at approximately 8:47 AM on June 23, 2011.

Medical Background of Firefighter

Firefighter Chris Pham was a 35-year-old male. Born on June 3, 1976, in Saigon, Vietnam, he had served in the Dallas Fire-Rescue Department since September 21, 2006. During his career with Dallas Fire-Rescue, no injuries requiring medical attention were reported by Firefighter Pham to his immediate supervisors.

On September 2, 2008, Firefighter Pham was scheduled for his Wellness-Fitness evaluation. His duty status notification form received from the contracting medical facility indicated that he was "Fit for Duty - He was deemed medically qualified for firefighting operations," Firefighter Pham's fitness assessment report indicated that he graded out as physically "Superior." (*DFR Investigation Report*)

On June 28, 2011, Investigator Williams met with the sister of Firefighter Pham. She stated that Firefighter Pham had been experiencing chest pains and weight loss for several months. The sister stated that her brother had been to several doctors, including a cardiologist, for testing and treatment.

Firefighters working with Firefighter Pham indicated that he would fatigue more easily, and that weight loss and stamina problems became evident after he returned from a trip to Vietnam in 2010.

Medical records from a cardiologist indicate that Firefighter Pham wore a heart monitor for a twenty-four-hour period from June 7, 2011, to June 8, 2011. The resulting electrocardiogram (ECG) failed to show any complications.

On June 28, 2011, Investigator Williams spoke to the Dallas County Medical Examiner's Office Prosector Dr. Reade Quinton. Dr. Quinton advised that Firefighter Pham had blockage of 80% to 90% on the right coronary artery and 70% to 80% on the left descending coronary artery.

The medical examiner determined the cause of death as a result of atherosclerotic coronary artery disease.

Findings and Recommendations

The following findings of fact and recommendations are based upon nationally recognized consensus standards for the fire service, and are excerpted from published investigation reports provided by the Centers for Disease Control's National Institute for Occupational Safety and Health. Refer to the appendix for additional information.

The Dallas Fire-Rescue Department Wellness-Fitness program was implemented within the department on March 3, 2008. A medical evaluation and fitness assessment was provided by a Baylor Health Care System (BHCS) physician to 1,437 DFR firefighters employed at 55 fire stations located throughout the city of Dallas.

Although there are no findings to report as a result of this investigation, nor is there any indication that the following recommendations could have prevented the death of Firefighter Phamm, the Texas The State Fire Marshal's Office offers these recommendations to reduce the risk of on-the-job heart attacks and sudden cardiac arrest among firefighters.

All fire departments should be aware of the content of the standards and may choose to develop programs based on them to increase the level of safety for fire department personnel.

*Provide mandatory pre-placement and annual medical evaluations to all firefighters consistent with **NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments**, to determine their medical ability to perform duties without presenting a significant risk to the safety and health of themselves or others.*

Perform an annual physical performance evaluation to ensure firefighters are physically capable of performing the essential job tasks of structural fire fighting.

*Ensure that firefighters are cleared for duty by a physician knowledgeable about the physical demands of fire fighting, the personal protective equipment used by firefighters, and the various components of **NFPA 1582, Standard on Comprehensive Occupational Medicine Program for Fire Departments**.*

*Fire departments should establish physical performance requirements for firefighters and develop physical fitness programs. **NFPA 1583, Standard on Health-Related Fitness Programs for Fire Fighters** is an excellent resource.*

APPENDIX

TIMELINE

(Courtesy of Dallas Fire-Rescue)

June 22, 2011 (A-Shift) (Rescue 49 staffed by D. Ingram and C. Pham)

08:40	Medical call incident #2011120329	(Rescue 49)
10:40	Medical call incident #2011120385	(Rescue 49)
11:51	Medical call incident #2011120427	(Rescue 49)
12:41	Medical call incident #2011120458	(Rescue 49)
16:26	Medical call incident #2011120597	(Rescue 49)
18:58	Medical call incident #2011120690	(Rescue 49)
20:12	Medical call incident #2011120752	(Rescue 49)
22:58	Medical call incident #2011120834	(Rescue 49)

June 23, 2011 (A-Shift 00:00-07:00) & (B-Shift 07:00-07:00)

01:40	Medical call incident #2011120896	(Rescue 49)
05:11	Medical call incident #2011120947	(Rescue 49)
06:08	Rescue 49 returns to the fire station after responding to incident #2011120947	

06:15-06:20	Chris Pham last seen awake prior to retiring to dormitory area	
07:40-07:45	Chris Pham found unresponsive in bed by Corey Nix and Ron Barree	
07:40-07:45	CPR begun on unresponsive member Chris Pham	
08:04	Rescue 49 assigned to Unconscious Person-Chris Pham	
08:12	Rescue 49 en route to Methodist Charlton Medical Center with Chris Pham	
08:21	Rescue 49 arrives at Methodist Charlton Medical Center	
09:39	Rescue 49 clears from Methodist Charlton Medical Center	

**State Fire Marshal Alert:
Heart Attacks Leading Cause of On-Duty Texas Firefighter Deaths**

(State Fire Marshal's Office website: <http://www.tdi.texas.gov/fire/fmloddinvesti.html>)

The State Fire Marshal's Office has investigated more than 30 on-duty fatalities of firefighters in Texas since September 2001. These investigations have revealed [some vital facts](#) every Texas fire official needs to know.

Heart attacks or related cardiac problems have caused 12 of the 33 deaths investigated through the end of fiscal year 2011.

Since 1995, heart attacks have been the leading cause of on-duty deaths of Texas firefighters.

Every fire department (paid and volunteer), fire chief, and firefighter must take the initiative in reducing the number of on-duty heart attack deaths.

Fire departments should establish physical performance requirements for firefighters and develop physical fitness programs. *NFPA 1583, Standard on Health-Related Fitness Programs for Fire Fighters*, is an excellent resource.

When it comes to physical fitness and overall health, every little bit of effort counts.

Extensive research has shown that you can improve your overall health, thus preventing disease and premature death, by making small adjustments and improvements in your daily activities, including physical activity, nutrition, and behavior.

Five chronic diseases associated with obesity:

- heart disease
- cancer
- stroke
- chronic obstructive pulmonary disease (e.g., bronchitis, emphysema, asthma)
- diabetes

account for more than two-thirds of all deaths in the United States. They claim more than 1.7 million American lives each year and hinder daily living for more than one of every 10 Americans. More than 100 million Americans live with chronic disease, and millions of new cases are diagnosed each year.

These chronic diseases are among the most prevalent and deadly health problems facing our nation, but some of them are very preventable. Firefighters and their families can take simple, affordable steps to work physical activity, good nutrition, and behavior changes into their daily routine. You don't have to become a marathon runner or buy a health club membership to improve personal fitness. Your health will improve with modest but regular physical activity and better eating habits.

There are four keys for a healthier America:

- Be Physically Active Every Day.
- Eat a Nutritious Diet.
- Get Preventive Screenings.
- Make Healthy Choices.

The State Fire Marshal's Office also recommends that fire departments and firefighters adopt physical exercise regimens that will best prepare firefighters for the strenuous, often prolonged physical effort involved in fighting fires.

Here are some excellent resources:

Volunteer Fire Service Fitness And Wellness Program: The U. S. Fire Administration (USFA) and the National Volunteer Fire Council (NVFC) have created the Volunteer Fire Service Fitness and Wellness Project, a partnership initiative to reduce loss of life among volunteer firefighters from heart attack and stress. USFA is a part of the Federal Emergency Management Agency. You can find out more at http://www.usfa.dhs.gov/downloads/pdf/publications/fa_321.pdf.

The National Fallen Firefighters Foundation (NFFF) and PennWell Corporation have established a Web site, www.everyonegoeshome.com, for the nationwide Firefighter Life Safety Initiatives program.

An alert issued by the State Fire Marshal's Office in 2003 remains relevant today as cardiovascular disease continues to plague the Texas fire service as a leading cause of death.

ALERT

HEART ATTACKS: LEADING CAUSE OF ON-DUTY TEXAS FIREFIGHTER DEATHS

- Heart attacks one of the leading causes of on-duty deaths among Texas fire service personnel.
- Of the **line-of-duty deaths** not caused by heart attacks, autopsies revealed two of these three firefighters had early stages of heart disease.
- Four firefighters that died of heart attacks had a history of some form of heart disease.
- Four out of the five heart attack deaths occurred during the performance of emergency duties.
- All five firefighters that died of heart attacks were less than 52 years old.

Every firefighter (paid and volunteer) and every fire officer must take the initiative in reducing the number of on-duty heart attack deaths. The State Fire Marshal recommends the following:

- Fire departments should make every reasonable effort to screen firefighters and fire officers for heart disease in an effort to reduce the number of heart attack deaths.
- Departments must encourage applicants to be forthright in disclosing medical conditions that may endanger their lives or the lives of other firefighters or civilians.
- Periodic medical examinations of firefighters should be conducted as outlined in NFPA 1582, Standard on Medical Requirements for Fire Fighters and Information for Fire Department Physicians.
- Fire departments should establish physical performance requirements for firefighters and fire officers and develop physical fitness programs. NFPA 1583, Standard on Health-Related Fitness Programs for Fire Fighters is an excellent resource.
- Fire departments should implement SOPs to addresses these fitness issues.

The Annual Line-of-Duty Death Report and individual investigation reports may be viewed at the State Fire Marshal web site: <http://www.tdi.state.tx.us/fire>

First Responders at Risk

Analysis of recent firefighter line-of-duty deaths revealed that three-fourths of deaths occurred responding to, or within ten minutes of arrival on the scene.