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Traffic Crash Investigations Involving Serious Injury or Death

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ABSTRACT

Because traffic crashes involving serious injury and death on public streets and highways are an ever-growing concern, the need for a complete and thorough investigation of these crashes has never been more important. Proper and thorough investigations do several things. Crash data collected by trained crash investigators can be analyzed and used for several purposes, including criminal prosecution, civil litigation, improved engineering of the roadway system and education of the public.

The National Highway Traffic Safety Administration's (NHTSA) statistical projection of traffic fatalities for the first quarter of 2014 stated that approximately 6,800 people died in traffic crashes (US Department of Transportation, 2014). In order to ensure that investigations involving serious injury and/or death related crashes are conducted thoroughly and properly, law enforcement agencies should have trained crash investigators who are trained in the latest equipment and investigative techniques available. Because these serious crashes require extensive investigation and analysis, specialized training is required. To effectively address this need for trained crash investigators, a law enforcement agency can create a traffic crash investigations unit. This unit cannot only complement the patrol division, but can also provide the specialized investigative analysis needed in serious injury or fatality crashes. All of these factors together show that the need for law enforcement agencies to have properly trained crash investigators, as well as a well-organized crash investigation unit, has never been more important.

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INTRODUCTION

Traffic crashes involving serious injury and death on public streets and highways are an ever-growing concern. The need for a complete and thorough investigation of these crashes has never been more important. Proper and thorough crash investigations accomplish several things. Crash data collected by crash investigators is used for several purposes, including criminal prosecution, civil litigation, improved engineering of the roadway system and education of the public.

With the modernization of motor vehicles safety equipment such as electronic control modules (ECM) and airbag control modules (ACM), crash investigators must be trained in many areas of investigations. These investigators must be trained in determining the cause of the crash through the use of very sophisticated instruments as well as determining the sobriety of persons involved to ensure that proper charges are filed and properly prosecuted in the judicial system on the behalf of the injured or deceased victim(s) and their families. The community has the expectation for their law enforcement agency to be equipped and respond with the latest equipment and technology as well as to have investigators who are properly trained in the use of this equipment to conduct the investigation.

For these reasons, a law enforcement agency should have properly trained investigators to conduct serious injury and/or death related traffic crashes. These particular types of crashes require specialized training in order to conduct a proper and thorough investigation. Law enforcement agencies throughout the country need to have trained crash investigators conduct these types of crashes when they occur in their

jurisdiction to ensure that the crash investigation is conducted with integrity, using the latest equipment and investigative techniques available.

POSITION

The need for law enforcement agencies to have properly trained crash investigators is emphasized by the high number of fatalities caused by motor vehicle crashes. According to the National Highway Traffic Safety Administration's (NHTSA) (2014) first quarter statistical projection, it is determined that approximately 6,800 people were killed in traffic crashes. Proper training is crucial when investigating these types of crashes for multiple reasons. Properly trained crash investigators will have completed training in crash investigation and crash reconstruction, as well as have training in the use of the total station for mapping and documenting crash scenes. Other ongoing training for these investigators will include more advanced techniques in the use of the Bosch crash data retrieval (CDR) instrument to extract and analyze data collected from the engine control module (ECM) and/or airbag control module (ACM) of vehicles involved in crashes.

Trained crash investigators will further have the knowledge and experience to calculate complicated vehicle velocity as well as crush deformation data to determine the speeds of vehicles both pre and post impact. Trained investigators will also have the proper knowledge and training in standardized field sobriety testing and be certified to administer a breath test utilizing the Intoxilyzer instrument to ensure proper charges are filed on suspected impaired drivers causing a crash. The investigators will also have a greater understanding of working with the prosecutor at the district attorney's office who will ultimately be prosecuting the case. Many of these crashes will result in

charges ranging from intoxication assault to intoxication manslaughter. The Texas Penal Code Sec. 49.07 states that an intoxicated driver has committed intoxication assault in a traffic crash when their intoxication causes “serious bodily injury,” which is defined as an “injury that creates a substantial risk of death or that causes serious permanent disfigurement or protracted loss or impairment of the function of any bodily member or organ” (Texas Penal Code Sec 49.07, 2007, p.113). According to Texas Penal Code Sec. 49.08, intoxication manslaughter occurs when an individual uses a “motor vehicle in a public place, operates an aircraft, a watercraft, or an amusement ride, or assembles a mobile amusement ride; and is intoxicated and by reason of that intoxication causes the death of another by accident or mistake” (Texas Penal Code Sec 49.08, 2007, p. 113).

Ultimately, a law enforcement agency would create a traffic crash investigations unit to conduct these types of investigations. The agency could operate this unit as a traffic unit conducting normal duties, such as speed enforcement in problematic areas and school zones to work as crash prevention. Failed to control speed is the number one cause of traffic crashes in the state of Texas, according to the 2013 statistical data released by Texas Department of Transportation (TxDOT) statistical crash data (2014). The unit can also respond to and conduct normal traffic duties, including traffic mobility issues and non-injury crashes. Additionally, this unit can complement the patrol division with additional uniformed personnel on major calls, such as disturbance calls, when uniform patrol needs additional units. The unit would be equipped with all the equipment and trained personnel needed to conduct the complicated serious injury and /or death related crash investigations when needed. In these cases, the professional

crash investigators will be called upon to locate the crash scene and the vehicles involved, as well as to take measurements and photographs. The investigator will also identify contacts for the vehicle occupants (U. S. Department of Transportation, 2014).

Data collection consists of four main parts: the scene inspection, the vehicle inspection(s), the interview(s) of the crash victims, and a review of the toxicology report of drivers. The scene investigation involves the collection of data such as skid/yaw marks and other relevant data in attempt to document the point of impact, the crash dynamics and the final rest positions of the vehicles in the crash. The vehicle(s) is/are inspected and an analysis is made of the crash dynamics, damage, occupant kinematics, and the safety systems. A complete set of images is taken of the scene and each vehicle. The data from the scene and vehicle are augmented by interviews of the crash victims and any other surrogates or witnesses. The investigations are further augmented by official records, such as the police report that provides details on the crash and medical records which provide the level of injuries sustained and any intoxication/impairment of a driver. This will allow the investigator to have proper investigative information to file the appropriate criminal charges in the crash (NHTSA) Special Crash Investigations (SCI).

A trained crash investigator will seek all relevant information in order to determine the facts of the crash. Because these investigations require extensive analysis of the vehicles involved, their occupants, and other contributing factors before, during, and after the crash, proper investigative training is critical. These factors show the need for trained crash investigators to conduct these types of crashes (NHTSA) Special Crash Investigations (SCI).

COUNTER POSITION

Police administrators will often view a crash investigation as a routine patrol duty and, for the most part, they are partially correct, if the crash is a simple non-injury, property damage only, minor crash. However, when the crash is of a serious nature and involves injury or death, this is when the investigation should be conducted by a trained crash investigator with the necessary knowledge and skill level to properly conduct such an investigation.

The crash investigator will be trained in and knowledgeable of the procedures to conduct a high level investigation to not only determine the cause of the crash, but the criminal offenses that were committed prior to and during the crash. These types of crashes should be treated as any other crime scene. When a person is killed or injured, the crash is just the same as that of a homicide or assault case, and most all law enforcement agencies, regardless of size, will have a trained police detective to investigate these types of cases. Crash investigation training should be conducted by a reputable training institution such as Texas A&M Extension Service (TEEX), which offers crash investigation training from the intermediate level of crash investigation through the advanced levels of reconstruction (including specific training such as bicycle and pedestrian crash reconstruction) and has scheduled classes throughout the state of Texas. The Institute of Police Technology and Management (IPTM) of the University of North Florida also instructs courses from the intermediate level to some of the most advanced levels and has scheduled training throughout the United States, as does the Northwestern University Institute of Police Management Traffic Safety Institute.

Most of these very-reputable training institutions will allow law enforcement training academies to host their training, saving a tremendous amount of funds that would otherwise have to be budgeted for travel and lodging (Northwestern University Center for Public Safety, n.d.). Founded in 1936, the Northwestern University Traffic Safety Institute has a reputation as a premier traffic crash investigation program, which offers extensive courses ranging from basic investigation to advanced crash reconstruction. The university's program has the distinction of being the founder of traffic crash investigations and wrote the first book related to crash reconstruction, which as quoted from their website, "The university literally "wrote the book" on crash investigation and reconstruction, and we continue to be world leaders in providing training in these areas" (Northwestern University Center for Public Safety, n.d., para. 2).

Implementation of a traffic enforcement unit to have trained crash investigators on staff can be viewed by police administrators as a loss of patrol personnel and a major budget cost. Some law enforcement administrators are ambivalent about the degree of specialization within their departments, especially when considering the establishment or evaluation of a traffic enforcement unit. Several questions must be considered during the decision making process, such as what resources will be required and what the expected benefits will be. It must also be determined what the results of the unit will be and what type equipment is best suited for the purpose (Booth, 1980). Some police administrators feel that this would be a duplication of services, given the fact that these groups of uniformed patrol resources are only conducting traffic duties and crash investigations and not being utilized for normal calls for service.

However, the traffic unit can be assigned to areas having traffic issues and target such issues as speeding, speeding in school zones, stop sign, and red light violators. These types of duties will actually relieve the uniformed patrol services division from the burden of the traffic issue complaints and, in fact, enhance them to conduct patrols in areas that have criminal complaints and concentrate the patrol services division in such areas. Furthermore, an unintended consequence is that the traffic enforcement unit generates revenue in their day to day activities from traffic citations issued for hazardous moving traffic violations, offsetting the overall cost burden of the traffic enforcement unit.

The following statistical information released by the Texas Department of Transportation (TxDOT Statistical Data, 2014) will show the need for such trained investigators, as well as the importance of having a traffic enforcement unit. The crash statistics for 2013 released by the Texas Department of Transportation show that there were 444,468 total crashes in 2013, with 3,039 fatal crashes totaling 3,377 fatalities. There were 232,041 persons injured in motor vehicle traffic crashes in 2013, with 89,270 of those people sustaining a serious injury (TxDOT Statistical Data, 2014). Based on reportable crashes in 2013, one person was killed every two hours and 36 minutes, one person was injured every two minutes and 16 seconds, and there was one reportable crash every 71 seconds. The above data released for Texas alone shows the need for crash investigators and the importance of thorough investigations. The cost could be budgeted in a law enforcement department's annual budget or there is the possibility of exploring the possibility of grants for the expense of equipment and training.

RECOMMENDATION

As earlier stated in this paper, there are several reasons for law enforcement agencies across the nation to strive to have trained crash investigators on staff. Every law enforcement agency must maintain public trust and ensure integrity in the law enforcement mission. Conducting any investigation can raise issues regarding trust and agency integrity. These concerns should always be avoided, which can be accomplished with very well trained investigators and proper oversight of the investigative process. However, the field of crash investigations can become just such an example of this type of community mistrust if crash investigations are not conducted properly. The need for a complete and thorough investigation of these crashes has never been more important. Proper and thorough investigations do several things. Crash data collected by trained crash investigators can be analyzed and used for several purposes, including criminal prosecution, civil litigation, improved engineering of the roadway system and education of the public.

As earlier stated, the National Highway Traffic Safety Administration's (NHTSA) statistical projection of traffic fatalities for the first quarter of 2014 shows that an estimated 6,800 people died in motor vehicle traffic crashes (US Department of Transportation, 2014). In Texas alone, the crash statistics for 2013 released by the Texas Department of Transportation (TxDOT-Statistical Data, 2014) show that there were 444,468 total crashes in 2013 with 3,039 fatal crashes totaling 3,377 fatalities (TxDOT-Fatalities, 2014). There were 232,041 persons injured in motor vehicle traffic crashes in 2013 (TxDOT- Injuries, 2014) with 89,270 of those people sustaining a serious injury (TxDOT- Serious Injuries, 2014). These statistics show the need for law

enforcement agencies to have properly trained crash investigators. The same information shows the need for a crash investigation unit for a law enforcement agency as well. These units can complement the uniform patrol operations division, as well as conducting the routine crash investigations and are there for the agency when a major crash investigation involving serious injury or death occurs.

It is not uncommon for police administrators to consider crash investigations as part of standard patrol duties. While these investigations can be conducted by any police officer, just as a homicide or robbery can be conducted by any police officer, the successful outcome will often be accomplished by the training and skill level of the officer conducting the investigation. The skill and knowledge of a trained crash investigator is critical when investigating a serious crash involving injury or death. Patrol commanders and supervisors often emphasize burglary or robbery patrol, ordering officers to get off the main streets and into high crime and residential areas and leave traffic to the traffic unit. Conversely, it can be argued that if such duties are not specialized and are left in patrol operations, most patrol officers will not neglect enforcement in these areas. Most patrol officers as well as police administrators, however, give traffic enforcement low priority whether a specialized unit exists or not (Booth, 1980).

The Humble Police Department implemented a traffic enforcement unit in 2003 that conducts daily traffic duties such as speed enforcement and minor crash investigations. All officers assigned to this unit are required to complete training through the crash reconstructionist level. When a fatal or serious injury crash occurs, the

Humble Police Traffic Unit responds with trained crash investigators to conduct the investigation with all necessary equipment to perform all levels of crash investigations. (Humble Police Department, n.d., para. a. 2).

Because of the specialized training required to determine the cause of traffic crashes, the following statistics further emphasize the need to have trained crash investigators, and, if possible, to employ a traffic enforcement unit. NHTSA (2013) reported that in 2012, there were 5,419,000 police-reported motor vehicle traffic crashes, with 33,561 people dying in motor vehicle crashes that year. In that same year, 10,322 people died in crashes involving a driver whose blood-alcohol content (BAC) was measured at .08% of higher. These incidents, classified as alcohol-impaired driving crashes, accounted for 31% of overall traffic fatalities that year (NHTSA, 2013). According to the NHTSA (2013), 18% of total economic loss from motor vehicle crashes was caused by drunk driving, with a cost of $199 billion in direct and quality-of-life losses. Statistics also showed that intoxicated drivers are more likely to be speeding in fatal traffic crashes. The U. S. Department of Transportation (2013) reported that 42% of drivers with a blood-alcohol content (BAC) at or above .08% who were involved in traffic fatalities were speeding, while only 16% of sober drivers involved in these types of crashes were speeding.

Speeding is also a major contributing factor in fatal traffic crashes, with the NHTSA reporting that 10,219 people died in 2012 in speed-related accidents (30% of all fatal crashes that year). This number represented a 2% increase from the 10,001 lives lost in 2011 in speed-related crashes (NHTSA, 2013). Crashes caused by speeding also led to significant economic loss, with these crashes comprising 21% of the total

economic cost, coming in at $210 billion dollars in costs (NHTSA, 2013). Another significant cause of traffic crashes is red light running. Drivers who run red lights are responsible for approximately 2,000 injuries and more than 900 deaths each year, with about half of those fatalities being pedestrians and occupants of other vehicles who are hit by red light runners (NHTSA, 2013).

These reports and statistics indicate the reason why a very well trained crash investigator, as well as a very well organized crash investigations unit, is necessary to conduct serious injury and fatal crashes. These investigators are equipped with the specialized training that is needed to determine the facts and circumstances surrounding these crashes. These statistics also show the need of the unit to be proactive in the day-to-day response to traffic complaints, aggressive driving and speed enforcement to reduce crashes of all types, especially crashes involving injury and/or death.

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