

Deaths Among Criminal Suspects, Law Enforcement Officers, Civilians, and Prison Inmates

A Coroner-Based Study

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Abstract: During the interaction between a criminal suspect and a law enforcement officer, the risk of death to the suspect, police, or civilians is increased. Unfortunately, very little information is available on the death risks arising from this interaction. This study provides an assessment of the risk of death to law enforcement officers, suspects, and bystanders by separating the interactions into the following 4 phases: (1) events prior to and during arrest; (2) police pursuits or chases; (3) transport of the suspects; and (4) during incarceration. A 5-year (1994–1998) retrospective coroner-based study of all deaths that occurred during these 4 phases was conducted in Allegheny County, Pennsylvania. A total of 77 cases were identified; 14 deaths (18.1%) occurred prior to or during arrest, 10 (12.9%) during police chases, 2 (2.6%) occurred while the actors were being transported, and 51 (66.2%) during incarceration. The majority of cases (98.7%) were males, blacks (63.6%), and single (50.6%). The respective risks of death by phase were prearrest/arrest, 6.5 per 100,000 arrests; transport, 0.93 deaths per 100,000 arrests; and incarceration, 268 deaths per 100,000 inmates. Study showed the following: (1) risk of death to offenders was greatest during police pursuits; (2) the risks during arrests are not insignificant and involved an officer being threatened with a weapon in one-third of the events; and (3) deaths among inmates were primarily due to natural causes.

Key Words: deaths, criminal suspects, law enforcement officers, civilians, prison inmates, coroner-based study, risk of death

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The perception of the risk for death among criminal suspects, the police, and civilians during crime-related events has been heavily influenced by television and the movies. A review of the literature reveals that there is comparatively limited information on this topic. In general, there are 4 phases of interaction between a criminal suspect and the police: (1) the events prior to and during arrest; (2) police pursuits or chases; (3) the transport of suspects; and (4) incarceration. The first interaction between a criminal suspect and law enforcement officer often involves circumstances such as an officer attempting to apprehend a suspect, an officer serving a warrant, or the escalation of random events, such as during the issuance a traffic citation. There is very little information available on the death risks arising from such events.

In contrast, high-speed motor vehicle chases or pursuits by the police are widely publicized by the media and others as extremely dangerous to the police, the suspect(s), and innocent bystanders. Reports from large police agencies suggest that 30% of pursuits result in collisions, 10%-15% involve injuries, and about 1% result in fatalities.¹⁻³ While large-scale evaluations of the fatalities from pursuits are rare, existing reports suggest that most deaths occur among offenders and the occupants of their vehicles.^{2,3}

Deaths during transportation of a suspect by law enforcement have been reported but appear to be rare.^{4,5} One report highlights a heightened death risk posed by positional asphyxia that occurs when the suspect is handcuffed and placed in the prone position during transport.⁴ Subsequently, changes in the method of transport have been implemented to reduce this risk.

Several studies have reported on deaths among those incarcerated.⁶⁻¹⁷ Most of the reports are limited in that they have failed to include inmates in both short-term and long-term facilities in their assessments. As a result, there are conflicting findings regarding the leading cause of death

during incarceration.¹³ Numerous studies report suicide as the leading cause of death.^{13,14} In contrast, reports by Salive et al.,¹⁵ Copeland,¹⁶ and Lanphear¹⁷ showed that natural disease processes were the leading cause of death. Two population-based studies^{15,18} indicate that deaths from natural causes are the leading causes of death among prison inmates.

This study seeks to provide a comprehensive county assessment of the risk of death to suspects, bystanders, and criminal inmates. The aim of this study is to describe the frequency of death and the related circumstances associated with each phase of the law enforcement process in Allegheny County, Pennsylvania.

MATERIALS AND METHODS

This study is a retrospective, coroner-based investigation of all deaths that occurred in prisons or during an interaction between a law enforcement officer (on or off duty) and a suspect between 1994 and 1998 in Allegheny County, Pennsylvania. The Allegheny County Coroner's Office serves a community of approximately 1.3 million individuals, including the city of Pittsburgh and 129 other municipalities in western Pennsylvania. Allegheny County contains a county jail, a state penitentiary, a juvenile detention center, and a number of small jails (holding cells).

This study identified all deaths that occurred while an individual was under either direct or indirect police authority within the county of Allegheny. Under the prevailing statute, once the death occurs, the jurisdictional responsibility shifts from law enforcement to the coroner's office. The body is examined by a forensic pathologist, who is charged with the responsibility of determining the cause and manner of death. In making this determination, the pathologist has to correlate the circumstances of the death as reported in the deputy coroner's report and police reports with the results of the autopsy and toxicology findings. This generally involves a historical step-by-step reconstruction of the events preceding death, with a review of the circumstances, such as the location of the event, type of restraint used, any injury involvement, and the timing of events.

In this assessment, the following documents were reviewed for each death: the deputy coroner's report; police reports; autopsy results; toxicologic analysis of the blood, urine, bile, and eye fluid; hospital records; coroner inquests; and court records. Demographic information, including age, sex, race, date and time of injury, and time and date of death, was abstracted for each fatality. In addition, the following pathologic information was abstracted: location of all external and internal injuries, the cause and manner of death, and the severity of preexisting medical conditions. The circumstances surrounding the death were determined by reviewing the information contained within deputy reports, police reports, and coroner's inquest records.

Deaths in this report include all sudden and unexpected events due to a natural, accidental, or intentional cause. Deaths among nonresidents and those where the incident occurred outside Allegheny County were excluded. All noted deaths were categorized into 4 phases, as follows. 1. Prior to and during arrest: This phase is the interaction between an individual and law enforcement (on or off duty) before and during formal arrest (not inclusive of chases). This includes a police officer apprehending a suspect, serving a warrant, or issuing a traffic citation. It includes the restraint of the offender by either handcuffs or chemical agents, depending on the level of resistance of the suspect. 2. Police chases: If during apprehension the suspect flees either by vehicle or on foot, a police chase results. 3. Transport: After a suspect has been apprehended and is in police custody, the suspect is then transferred from the scene to either a local hospital if medical attention is required or to the local jail. 4. Incarceration: This phase includes deaths that occur while an individual was confined either in a holding cell or in long-term facilities.

Information on the number of arrests, police pursuits, and prison inmates in Allegheny County was obtained to calculate death risks during the 4 phases of law enforcement interaction. From 1994–1998, there were an average of 42,999 arrests and 3802 inmates.^{19,20} The average inmate population was based upon the December census in each year. Rates were determined over a 5-year interval by assessing the total number of deaths per total number of arrests, pursuits, or inmates (where appropriate).

RESULTS

Overall

Between 1994 and 1998, a total of 77 cases were identified in which death occurred during the interaction between a law enforcement officer and an individual. The majority of cases (98.7%) were males, blacks (63.6%), and single (50.6%). In this time period, 14 deaths (18.1%) occurred prior to or during arrest, 10 (12.9%) occurred during police chases, 2 (2.6%) occurred while the individuals were being transported, and 51 (66.2%) occurred during incarceration (Table 1). The respective risks of death by phase were as follows: prearrest/arrest, 6.5 per 100,000 arrests; transport, 0.93 deaths per 100,000 arrests; and incarceration, 268 deaths per 100,000 inmates. Details regarding the deaths observed are described below.

The manner of death by type of interaction is shown in Table 2. Among those deaths that occurred prior to or during arrest, the manner of death was homicide. Among the 10 deaths that occurred during a police chase, an equal number of deaths were ruled homicide as accidental. All the deaths that occurred during transport of a suspect were ruled suicide. The majority of people who died during incarceration died of natural causes (58.8%), followed by suicide (29%).

TABLE 1. Total number of deaths by level of interaction between the suspect and the police, 1994–1998

Year	Prior to and during arrest	During police chase	During transport	Incarceration	Total
1994	3	1	-	14	18
1995	2	3	1	12	18
1996	4	1	-	6	11
1997	1	1	1	13	16
1998	4	4	-	6	14
Total	14	10	2	51	77

Prior to and During Arrest

Fourteen deaths occurred during this phase all offenders. All victims were male, 10 black and 4 white. Eleven of the deaths were ruled as homicides in a coroner's inquest (Table 2). Nine of these deaths were ruled as justifiable homicide, 1 death with a recommendation that criminal charges not be filed against the police and 1 death with a recommendation that charges of criminal homicide be filed. An offender threatened an officer with a weapon in 5 of these events. Two deaths were related to suicide and 1 death was an accident. The suicide deaths were among individuals being served an arrest warrant. The accidental death occurred when the offender was struck by an oncoming vehicle while under arrest.

Police Pursuit

In this study, 10 individuals were killed either during or immediately following a police chase. On average, there was 1 fatal police chase each year, with 4 fatalities in 1998. Among the 10 deaths, all were males and 90% were black. Nine fleeing offenders died, while 1 pedestrian bystander died. Overall, 40% of the cases were ruled accidental deaths and 40% were classified as homicide, and in 2 cases (20%), the death was ruled a suicide (Table 2).

Four of the chases involved the individual stealing a vehicle, 3 ensued after other types of criminal offenses, and 3 pursuits involved the offender committing a motor vehicle violation. In each of the 4 accidental deaths, the actor lost control of the vehicle he was operating and the vehicle hit a stationary object. Death was due to blunt force trauma (BFT). Among the 4 deaths ruled as homicide, the police officer involved in the chase was charged in 3 cases, and the offender was charged in 1 fatality where a civilian was killed when the actor struck him with a car while fleeing the police. The 3 cases involved the following: in 1 case, the police fired at the suspect and a jury convicted the police of involuntary manslaughter, the second case involved a combative driver who resisted arrest and became unresponsive during the arrest

phase (the police officers in this case were found not guilty), and the third case involved suspected fleeing during a traffic stop. The police officer gave chase; gunfire was exchanged following the chase. A coroner's inquest recommended that criminal homicide be charged against the officer.

Two of the police chases ended with the suspect committing suicide. In 1 case, the victim stole a vehicle, the police gave chase, and then the victim fled the vehicle and was found 1000 feet from the vehicle with a self-inflicted gunshot wound to the head. In the second case, the victim fled on foot, shot at police, and then shot himself in the head.

During Transport

Among the 77 deaths, only 2 occurred during the transportation of the suspect from the scene to the police station. In these 2 cases, 1 was male and 1 was female. In both cases, the offender was placed in the back of a police van (paddy wagon) for transport to the county jail. Both actors hanged themselves in the rear of the police van, one with a shoelace, the other with a belt attached to the inner door panel of the wagon. The manner of death was ruled a suicide in both cases.

Jail Deaths

Between 1994 and 1998, 51 individuals died during incarceration. Among the 51 deaths, all were males. A breakdown of the manner of death was as follows: 58.8% were due to natural causes, 29.4% were ruled as suicides, 5.9% were accidental in nature, and 3.9% were homicides (Table 2). Overall, 5.9% were <20 years old, 7.8% were 21–30 years, 27.5% were 31–40 years, 41.2% were 41–50 years, 9.8% were 51–60 years, and 7.8% were over the age of 60 years. The average age at death was 47.8 among those who died of natural causes, 31.9 among the suicides, 40 among the homicides, and 34.5 among the accidental deaths.

Among natural deaths, the leading cause of death was due to acquired immunodeficiency syndrome ($n = 6$), followed by arteriosclerotic cardiovascular disease ($n = 5$), cancer ($n = 4$), and gastrointestinal bleeding ($n = 3$). Cases of glioblastoma, intracerebral bleeding, and seizure disorder accounted for 6 additional deaths. One death occurred from each of the following causes: cardiomyopathy, bronchopneumonia, pulmonary emboli, diffuse alveolar damage, cirrhosis of the liver, and renal failure. Over 56% of the natural jail deaths occurred in either the prison infirmary or the individual's jail cell. The remaining deaths occurred in a hospital after transport from the jail.

Among the 51 jail deaths, 15 were ruled as suicides. Hanging accounted for all but 1 of the deaths, with BFT from a fall causing the other death. Two deaths during incarceration were homicides from BFT to the head. Among the 3 accidental jail deaths, 1 was the result of heroin intoxication, 1 by electrocution when the wires from ear phones that he

TABLE 2. Number of Cases by Manner of Death and Type of Police Interaction, 1994–98

Interaction	Manner of death			
	Natural	Suicide	Homicide	Accidental
Prior to or during arrest	-	2	11	1
Police pursuits	-	2	4	4
Police transport	-	2	-	-
Incarceration	30	15	2	4
Total	30 (39%)	21 (27.3%)	17 (22.1%)	9 (11.7%)

was connecting to a jack on a portable TV touched the aluminum toilet he was sitting on, and 1 from BFT to the head during an escape attempt.

DISCUSSION

The process of investigating deaths that resulted from the interaction between an individual and law enforcement officers has inherent consequences for law enforcement, forensic, legal, and public health agencies. This study examined the frequency and cause of death among criminal suspects, law enforcement officers, civilians, and prison inmates in Allegheny County, Pennsylvania, and reveals 3 important findings. First, the risk of death to offenders is greatest during police pursuits. Second, the risks during arrests are not insignificant and involved an officer being threatened with a weapon in one-third of the events. Third, the deaths among inmates were primarily due to natural causes, although a large percentage of the events involved a suicide.

Deaths associated with police pursuits have been reported by others as representing less than 1% of the total number of police traffic fatalities.³ However, based on the media coverage and other investigations, police chases are often viewed as frequent and extremely dangerous events. Numerous debates have focused on the need for and justification of these high-speed pursuits. Those opposed to police pursuits frequently mention the danger it poses to other drivers and pedestrians in the path of the chase, while those with the opposite opinion believe that the police have a duty to pursue individuals who flee arrest.

In this study, police chases represented the greatest risk of death to the criminal suspect. Overall, police chases represent 12% of the deaths resulting from an interaction between a suspect and a law enforcement officer. All but 1 of the deaths involved the actor who was being pursued by the police. These findings are contrary to those presented by a similar study of deaths in Metropolitan Dade County, Florida. The authors in that study reported that the majority of the fatalities were pedestrians or occupants within the vehicle fleeing from police. Offender deaths were far less common.³

This report documents the death risk arising during arrests. The findings document that the interaction between police officers and suspected offenders can be dangerous. The number of deaths occurring during this phase represented 18% of the total number of deaths. In several cases, the actor threatened the police officer with bodily harm prior to the officer shooting the actor. The actor committed suicide in 2 cases while being served with an arrest warrant.

Serious injuries and death during police transports are noted to be extremely rare.⁴ Previous reported cases of death during transport involved a victim in the rear seat of a police car in the prone position. Death was caused by what is called positional asphyxia.⁴ After a number of these cases were investigated, a link was made between the use of restraints and the position of the suspect. Subsequent modifications in the method of transport of offenders have been implemented by most police departments throughout the United States.

During this study, the police officers in Allegheny County routinely transported an average of 43,000 suspects a year to a holding cell, a jail, or if they required medical attention, an area hospital. Only 2 deaths were noted in the 5 years under study. Both occurred in the back of a police van, and death was caused by asphyxiation due to hanging (suicide). In both cases, the suspects were handcuffed; however, they still managed to tie one end of the ligature to the inner screen door and place the other end around their neck.

While transport deaths are rare, the cause of death observed in this study, that of self hanging, has not been the focus of prior intervention programs that have focused their attention on reducing deaths from positional asphyxiation. Following these 2 deaths, a coroner’s inquest recommended that belts and shoelaces of suspects be removed prior to transport. It was also recommended that a detailed inspection of police vans be undertaken to identify possible ligature attachment points.

Deaths during incarceration represent the most frequent type of death that occurred during the law enforcement process. Over 66% of the deaths in this study occurred during incarceration. The most common manner of death was natural.

Suicide in jail appears to be a significant issue. The suicide rate among inmates has been estimated at between 3 to 9 times higher than the general population.^{13,22} In this report, suicides represented nearly one-third of all deaths among inmates. The overwhelming number of suicide deaths was by hanging. Bed sheets were the most frequent item used to form a ligature, followed by shoelaces.

Arguments exist to suggest that suicides during incarceration have not received the attention they merit and that suicide represents potentially the most preventable cause of death in prisons. Salive et al.¹⁵ argue, for example, that all incoming inmates should be assessed for suicide risk. Lanphear¹⁷ suggests several additional strategies, including screening by medical staff, increased communication between medical and correction personnel about high-risk persons, the routine monitoring of such persons, and the elimination of obvious means of suspension within the cell. These strategies are currently being used in the general population to reduce suicide deaths.²¹

A review of in-custody deaths has a legitimate public health component. It provides a means to identify circumstances that, through modification, whether in the method of handling a prearrest situation, the methods of restraint or transport, or the various aspects of incarceration, may reduce the incidence of subsequent deaths.²³ This report suggests that significant death risks exist to criminal offenders prior to or at the time of arrest, during police pursuits, and from suicide during incarceration.

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