



Dean A. Beers, AST  
Karen S. Beers, BSW

Forensic Investigators  
of Colorado, LLC  
*Personal Injury, Negligence & Death  
Criminal Defense*

2908 Killarney Dr.  
LaPorte, CO. 80535-9339

Office (970) 691-0813  
Fax (970) 372-4717

# **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers, Legal Investigator**

**Applicant for Certified Legal Investigator**

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers – Applicant for Certified Legal Investigator**

Voltaire said ‘To the living we owe respect, but to the dead we owe only the truth’.<sup>1</sup> This is the definitive task of the medicolegal death investigator and forensic pathologist. The course of the death investigation has multiple phases including: scene investigation, body assessment, medical records, and the forensic autopsy. This is finalized in three documents: the death certificate, the investigator’s report, and the autopsy report. In order to understand the importance of the autopsy report, and how to interpret it, you should understand how all the other factors influence the report and why you cannot rely on the autopsy report alone. ‘Autopsy’ is from the Greek ‘autopsia’, meaning ‘to see with one’s own eyes’.<sup>2</sup> The following discussion will dissect the autopsy report and supporting death investigation in order to allow the professional Legal Investigator to view death and non-death cases ‘with one’s own eyes’.

For simplicity, all references will be to medical examiners and not on the difference between the medical examiner and coroner systems, or a hospital autopsy and forensic autopsy. For our purposes, the focus will be on the forensic autopsy conducted by a board certified forensic pathologist and autopsy technician. In addition, there are exceptions to every protocol, and jurisdictional policies will differ. Two important things to consider are: 1. the medical examiner’s office is an independent, often law enforcement based, agency which is supposed to be neutral as to their findings; they conduct separate investigations; and 2. these investigations are often concurrent and cooperative investigations between the medical examiner’s office and the law enforcement agency.

### **AN OVERVIEW OF DEATH INVESTIGATION**

At all death scenes there are two scenes: location(s) of the incident; and the body itself. If a crime is suspected (and all suspicious death investigations are treated as such) the incident will belong to the investigating law enforcement agency; and the body, together with all items on or about it, will belong to the medical examiner’s office. The agencies will work independently of each other with overlapping goals. The death investigator has certain responsibilities and a duty to pursue those responsibilities. Of course there are legal and cooperative exceptions to these based on the greater good of the needs of all investigating agencies, particularly involving possible homicides. The body is exclusively under the custody and control of the death investigator. Until they arrive on scene no other person can touch, move or remove the body, or those items on or about it. The assessment includes complete photography, documenting wounds and injuries, or lack thereof, rigor and livor mortis, body position and relationship to the scene and condition of the body due to postmortem interval and environment. If the body has been moved, possibly to a remote area, there will be another crime scene at the place the death actually occurred.

Another component of death investigation concerns the confidentiality of medical records [HIPAA – Health Insurance Portability and Accountability Act].<sup>3</sup> Medical records are a very important component of the investigation and may be referred to in the autopsy report. In addition to medical history, these records may include mental health history, prescription and medication history, family history, and social history. It is

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

Dean A. Beers – Applicant for Certified Legal Investigator

Page 2 of 18

important for the medical history to be shared with the forensic pathologist at the time of autopsy or as soon thereafter as possible. What might be seen as a fall and head injury at autopsy may instead be a spontaneous bleed with previous history and consequential falls.

The 'CSI Effect' has influenced the perceived value of an autopsy. Autopsies are valuable and are a component of a complete investigation, if one is performed. All violent, suspicious, unnatural and unattended deaths are investigated, which account for a small percentage of reported deaths. A preliminary investigation, statute and protocol will dictate if an autopsy is performed. The authorization of the autopsy depends on the circumstances of the death and the protocol of the medical examiner's office.<sup>4</sup> The autopsy consists of the gross external examination (detailed examination and documentation of the body), gross internal examination (detailed examination and documentation of the organs and internal body structure), toxicology tests, and microscopic examinations. The external examination is head to toe and includes measurements of all wounds, scars, marks, tattoos, and condition of the body and structure.

The internal examination is what is often thought of when 'autopsy' is mentioned. This surgical procedure includes the in situ examination of the organs, removal of them with weights, and complete external/internal examination of the organs. This examination also includes the assessment of bullet trajectory, wound tracts, ligature markings, etc. One area of specific forensic pathologist training is wound (all injuries and trauma) examination.<sup>5</sup> Specimens of each organ are collected for microscopic examination, part of the anatomical and clinical certifications preceding a pathologist's forensic certification. At the conclusion of the autopsy the functions of the forensic pathologist and death investigator temporarily separate into two different tasks. The death investigator will submit his report, detailing the findings of his scene investigation, evidence review, and medical records review. The forensic pathologist will review the death investigator's report and case file to finalize his autopsy report and certify the Cause and Manner of Death. This is a very similar role to ours as professional Legal Investigators. We conduct our investigation, complete detailed reports and present our findings and supporting documentation to the attorney. The attorney enjoins our findings into their legal strategy to advocate for our client.

### **AUTOPSY REPORT FORMAT AND CONTENTS**

The autopsy findings will have a Cause of Death, which will include any factors directly contributing to or causing the death (i.e. blunt force trauma or a cardiac event); and Manner of Death, which include Natural, Accident, Suicide, Homicide and Undetermined. The Mechanism of Death, or the instrument or action causing death, is often overlooked. This notation may include stab wounds, gunshot wounds, ligature strangulation, drug overdose, etc. The autopsy may support the pre-autopsy investigation and medical records, or possibly make a determination that seems unrelated to the event. An example of this is a motor vehicle collision caused by the driver having a sudden cardiac event which caused death before the accident. This is a

Natural death which caused the accident. Often we see deaths caused by blunt force injuries as a result of the accident, which is ruled an 'Accident'.

The least desirable or used finding, 'Undetermined' is used when there has been no definitive finding as to the Manner, and possibly Cause, of death at the conclusion of the complete autopsy protocol and concurrent investigation(s). This is often seen in cases where the preponderance of one Manner does not prevail, but is consistent with or equal to another. One example of this might be a hunting incident where the decedent was alone, had suicidal history and a thorough autopsy and investigation was inconclusive as to the totality of 'Accident' versus 'Suicide'.

Autopsy reports are not casual or interesting reading material. They are very informative when reviewed with all concurrent investigative reports and evidence. All autopsy reports follow a general format as approved by the National Association of Medical Examiners (thename.org). Although they may differ in appearance, the general content format consists of: Diagnoses, Toxicology, Opinion, Circumstances of Death, Identification of the Decedent, General Description of Clothing and Personal Effects, Evidence of Medical Intervention, External Examination, External Evidence of Injury, Internal Examination, Samples Obtained – Evidence, Histology and Toxicology, and Microscopic Examination.<sup>6</sup> When the autopsy report is reviewed by the lay person their focus is on the first four items, as these are the summary of the remaining medical details of the report. It is important to review the report and all of the information contained therein for the complete picture. It is also important to understand what is in an autopsy report before we can begin to decipher all the latent and patent information it contains.

#### **DIAGNOSES AND/OR MEDICOLEGAL INVESTIGATION**

This section will detail the specific findings of the autopsy. This will include all trauma and medical conditions contributing to the death, medical conditions not contributing to the death, and evidence pointing to the Cause and Manner of Death. Examples include injuries sustained in a motor vehicle collision, injuries consequential to homicide or suicide, or medical findings consequential to a natural death.

The Cause and Manner of Death may often seem concluded by the investigation only, such as ligature strangulation or blunt force trauma. There are events which lead to the medical consequences of injuries, which 'Cause' the death. An applied 'choke hold' or neck compression reduces or ceases oxygenated blood to the brain (arterial), or the return of deoxygenated blood (venous – carbon dioxide) to the heart and lungs. Evidence of this may be found in petechial hemorrhages of the eyes (the 'whites' or sclera), soft tissue hemorrhaging of the area of compression, cerebral edema, and hypoxic (oxygen deprivation) damage to other organs. It will also note other findings, such as an enlarged heart (cardiomegaly), often seen in athletes, obese persons, and some chronic drug abuse. Another important consideration is what is not noted – such as injuries or medical findings expected to be found in alternate, but similar, circumstances of death. In the case of manual strangulation and resulting asphyxiation

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 4 of 18

we might find a fractured hyoid bone. If this were found in the above neck compression by restraint, most often by compression to the lateral aspects of the neck, the forensic pathologist would inform the case investigators of this inconsistency with witness and/or suspect statements. The fracture of the hyoid bone is most often seen in compression to the front of the neck, often found in manual strangulation homicides.

### TOXICOLOGY

Routine toxicology for all autopsies includes urine drug screen and blood alcohol.<sup>7</sup> Positive results are confirmed by blood and quantified as directed by the attending forensic pathologist. Other tests may include HIV (especially if there was an exposure during resuscitative efforts) and other natural disease processes (i.e. hepatitis). The toxicology findings have three possibilities in the death investigation – directly contributing (i.e. fatal drug toxicity), indirectly contributing (i.e. operating machinery contradictory to the prescription directives resulting in a motor vehicle collision) and non-contributing (i.e. therapeutic levels of prescribed psychotropic medications). The analysis of the toxicology report (separate from, but detailed within, the autopsy report) is best deferred to a forensic pathologist and forensic toxicologist. This is important as the type and level of drugs have different interactions, may have different contributions to the death or injuries, or may have no effect. All toxicological assay reports include a therapeutic range and the toxic or fatal level. The therapeutic range defines the drug levels expected to be found in non-abusive and recommended prescription dosages. Toxicology may also include chemicals, such as ethylene glycol (anti-freeze). It may also be necessary to determine if the death was caused by a natural event (i.e. cardiac event or diabetes) requiring specific tests of the blood and/or vitreous humor (fluid in the eyeball). For both the death investigator and professional Legal Investigator, it is important to determine if the findings are expected or unusual for the decedent's lifestyle and consistent with the investigative process.

### OPINION OF THE FORENSIC PATHOLOGIST

This section is a brief summary of the Cause and Manner of Death, but in more detail than what is found on the death certificate. It will detail the medical Cause of Death, followed by the contributing factors (i.e. blunt force chest trauma, lacerated spleen as a consequence of the unrestrained driver impacting the steering wheel in a motor vehicle collision). This is the definitive opinion of the forensic pathologist.

### CIRCUMSTANCES OF DEATH

This section consists of one to two paragraphs briefly describing the perimortem circumstances as known at the time of autopsy. Autopsies are often performed within 24-48 hours of discovering the body, with the full medicolegal and law enforcement investigation ongoing, nor have medical records likely been received or reviewed. This narrative is important because it summarizes initial investigative findings and hearsay reports of witnesses, also includes evidence found at the scene, such as: projectiles, syringes, paraphernalia, disarray of the scene, vomitous, etc.

### IDENTIFICATION OF THE DECEDENT

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers – Applicant for Certified Legal Investigator**

**Page 5 of 18**

It is not necessary to further traumatize a family by having someone personally identify a decedent. Doing so will leave them with the lasting impression of the trauma and not as they last saw them alive or even at the funeral home. There are multiple methods of determining and confirming positive identification. All identifications must be positive and confirmed. Tragic mistakes have been made in misidentifying decedents. A recent incident involved the misidentification of two female high school friends following a motor vehicle collision. One was pronounced dead at the scene and the other survived, in a coma, at the hospital. Positive identification was determined only after she came out of the coma and the decedent's funeral.<sup>8</sup> Presumptive identification includes photographs, scars, marks, tattoos and last known clothing. Often identification is found on the person, which is only presumptive and all presumptive identification is a starting point. Positive, or scientific, identification includes (from common methods) fingerprints, dental records, surgical records medical device records (defibrillators/pacemakers and breast implants are serial numbered) and DNA. Each person has unique fingerprints, dentition, sinus cavities, DNA, etc. and can easily be confirmed by comparison. The method of identification will be detailed in this section of the report. For example, a family member may have identified the decedent at the hospital, with confirmation, the duty of the medical examiner, made by fingerprints.

### **AUTHORITY TO CONDUCT THE AUTOPSY**

This section is important as autopsies can only be directed by the authority of the medical examiner's office and supporting statute, or at the direction of the next-of-kin for private autopsies.<sup>9</sup> This section will also detail the location of the autopsy, date and time, the prosecutor (forensic pathologist), deiner (assistant), and persons present at the autopsy. The persons listed in this section may be important to be interviewed and possibly subpoenaed to testify.

### **DESCRIPTION AND CLOTHING**

This section will provide a general physical description of the decedent at autopsy. This may include common descriptors such as height, weight, hair and eye color, and general physical condition, including any unusual deformities. This description may not concur with a driver's license description and may be affected by the circumstances of how the body was found (i.e. several days postmortem or exposed to the elements). Also noted will be the description and general condition of the clothing.

### **EVIDENCE OF MEDICAL INTERVENTION**

If the decedent was treated at a hospital, status post operative or resuscitative efforts attempted by paramedics, there will be evidence of medical intervention, such as EKG patches, intravenous lines, and similar artifacts on or about the decedent. This is important to note as upon death all items on or about the decedent are to remain in place and are evidence to the medical examiner. There should be no exceptions to this and should be questioned if there are any peculiarities discovered.

### **GROSS AUTOPSY FINDINGS - EXTERNAL EXAMINATION**

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers – Applicant for Certified Legal Investigator**

**Page 6 of 18**

This section may have the general description of the decedent, if not found included with the clothing description section. This section will detail the decedent's general description, scars, marks, tattoos, and general condition of the body. It will not include injuries and trauma, as this is a separate section. These descriptions are in detail with locations and measurements. The Evidence of External Injury may be included in this section or a separately entitled section.

This section will also detail the injuries and trauma. This will include previously noted, but not detailed, observations. In this section the descriptions are in detail with locations and measurements. Areas of no injury and appearing normal will also be noted. Subsections will include examination of the head, neck, chest, abdomen, genitalia, back and sacrum, and extremities. It is important to note and correlate with investigative reports, medical records and witness statements with this section of the autopsy report. Any inconsistencies should be noted and investigated; still considering the death investigation at the time of autopsy may have been ongoing. The injuries found in this section may provide information supporting or refuting suicide (i.e. a close contact gunshot wound to the head, with defensive wounds on the hands is contrary to suicide). Further, the details of the injuries – such as stippling, trajectory, depth, etc. may direct you to pursue additional details in your investigation.

### **GROSS AUTOPSY FINDINGS - INTERNAL EXAMINATION**

This is the section most people think of when they hear 'autopsy'. This is the opening of the body cavity and cranium, observations of all organs in situ, followed by the removal of each organ and sectioning. The Evidence of Internal Injury may be included in this section or a separately entitled section.

There will be multiple subsections, including cardiovascular, respiratory, hepatobiliary, endocrine, digestive, genitourinary, reticuloendothelial, musculoskeletal, head and central nervous system, and neck. As with the External Evidence of Injury and Trauma, this section will also have detailed descriptions and measurements. Areas of no injury and appearing normal will also be noted. This section of the autopsy report is also important to note and correlate with investigative reports, medical records and witness statements. Of interest will be determining if any internal injuries were a result of resuscitative efforts, if they correspond to external injuries (i.e. a perforating gunshot wound of the torso), or are consistent with any known natural disease process. Any inconsistencies should be noted and investigated, especially if the death investigation was in progress at the time of the autopsy.

### **MICROSCOPY / HISTOPATHOLOGY**

This section will detail the microscopic findings of the tissues retained for examination. These include representative sections of each organ, including skin, also muscle and vertebrae samples. All activity, down to the cellular level, stops at the time of death – fingernails and hair do not continue to grow. Skin shrinkage gives the perception of continued hair and finger and toe nail growth.

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers – Applicant for Certified Legal Investigator**

**Page 7 of 18**

Because cell structure can be examined as it was at the time of death, there are specific findings and determinations from microscopic examination at autopsy. These include cancer, organ damage due to natural disease process, hypoxia, traumatic injury, cardiac event, confirmation of gunshot residue stippling, and so forth. Questions from this section should also be deferred to a forensic pathologist.

### **SAMPLES OBTAINED – EVIDENCE, HISTOLOGY AND TOXICOLOGY**

A forensic autopsy is a medical procedure to determine the legal cause and manner of death.<sup>10</sup> Evidence from the body is collected in the autopsy suite. This may include: hair and fibers, DNA swabs, pulled and combed pubic and head hair, fingernail scrapings, and swabs of oral, vaginal, penile, and anal areas. In all cases collected toxicology samples include: blood, urine and vitreous humour. A special card is used to collect blood for DNA (i.e. evidence and paternity testing). The last items collected are the above noted tissue and organ specimens for histology. Any additional evidence, such as toxicology samples from hospital admission, gastric contents and pill fragments are also collected and retained. This is evidence from the autopsy which is documented and logged with a chain of custody.

### **NON-CONFORMING AUTOPSY REPORTS**

Some autopsy reports may not follow the above guidelines due to circumstances of death. For example, a Natural death may have category headings more appropriate to the investigation such as 'Complications of Alcoholism' or 'Complications of Emphysema' and continuing with details of the findings which support this. Another example might be a carbon monoxide death (Accident, Suicide or Homicide) which lists non-medical evidentiary findings supporting the Cause and Manner of death – such as pets also found in the home, vehicles running, defective stove or furnace, and toxic carbon monoxide levels found throughout the structure.

### **WHAT TO LOOK FOR**

With the basics of the general autopsy report covered, it is time to look at the specifics. What you look for in an autopsy report will be dependent on the type of case you are investigating. Often a report is reviewed with the anticipation of it stating what you want it to. This is the wrong approach. Look at what it is telling you and what it is not telling you. Does it support the other ancillary evidence you have from other reports, photographs and records? What is contradictory within the report (very rare), or what contradicts the report. How does the autopsy report relate to your investigative findings? We know what is in the report – but what is missing? These issues are addressed with each report and case. Your case will provide the focus of the autopsy report.

In addition to determining the Cause and Manner of Death, also the Mechanism of Death, autopsies and the final report can also clarify a cause of action for both civil and criminal cases. Alcohol and other drugs used by a surviving driver, exceeding therapeutic levels of prescriptions medications, non-compliant use of therapeutic medication, medical malpractice, and other often overlooked but actionable negligence.

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 8 of 18

An example is a person with epilepsy who did not comply with the prescription directives which resulted in a seizure and a collision and thereby causing serious bodily injury or death to himself and/or others. A forensic autopsy is available at any time, including by private request and following embalming or burial, regardless of the interim period of time. Cremation, without any previous examination or toxicology collection, is an obvious exception. In all other cases, circumstances will have a bearing on the results of the private, delayed or second opinion autopsy.

### GUNSHOT WOUNDS

A common gunshot wound autopsy is to the head and ruled a Suicide. With the recommended reports and records in hand, next consider the toxicology and condition of the organs. Drug abuse affects the heart and other organs, and can support a reported history of illicit drug abuse. Although not directly associated with the act of suicide it is relevant to the history of suicidal ideation. Could the decedent have been too intoxicated to cause a self-inflicted gunshot wound and was instead 'assisted' by an associate with a resulting finding of Homicide? The ruling of Suicide is based upon evidence supporting Suicide and the absence of evidence supporting the possibility of an Accident or Homicide. If there were evidence suggesting the possibility of another finding, it should instead be ruled 'Undetermined'. The first question is: What factors contributed to suicidal ideation?

Let's consider a suicide due to a terminal disease process. In the investigation prescription medications would be expected and toxicology levels must be considered. Next we look at the terminal disease process, which affects the weight and condition of the effected organs. The forensic pathologist will consider the information of how the body was found and the wound. Was it contact, close contact, or greater distance; was the angle appropriate? At autopsy the weapon is also examined at for blowback and, if a contact wound, appropriate muzzle imprint to the scalp. The specifics of the wound are also examined and reported – entrance, pathway, trajectory, exit and evidence of the projectile. Notations of muzzle discharge tattooing, stellate wound of the scalp and beveling of the skull at the entrance and exit sites. Measurements and trajectory information will be detailed in the report. This information is compared to the ancillary reports, records and scene investigation to reach a conclusion. Similar examinations are considered in ligature strangulations, stabbings, motor vehicle accidents, etc. Each type of gunshot wound have specific criteria – burns with tattooing or stippling, wounds with stellate and non-stellate patterns, angle and trajectory, etc. It is important to know what criteria to expect and to confirm the existence of each expected criteria. The absence of an expected result (i.e. no stellate wound in a reported contact is contradicting) is cause to closely investigate the case.

### MOTOR VEHICLE INCIDENTS

Not all motor vehicle 'accidents' are such – they are collisions, which may have been an accident or deliberate (i.e. staged accident for insurance fraud gone bad). The dynamics of a motor vehicle collision on the vehicle, occupants, items in the vehicle, and the scene are complex and very dependent upon the totality of the circumstances.

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 9 of 18

For our purposes there are criteria to look for in the autopsy report. One area is the trauma to the internal organs, such as being lacerated, macerated, or transected, etc. Multiple occupants, surviving and deceased, will have different injuries dependent upon where they were in the vehicle relative to the point of impact and speed, and if they were restrained or hit by other objects. A common task is determining or verifying who was driving. Often complicating this is if any or all of the occupants were ejected or left the scene. Another consideration is multiple impacts, determined by the location and types of injuries, to the decedent as a result of a multi-vehicle collision. Which injury(ies), and corresponding impact, caused the death?

The most common injury classification is summarized on the death certificate as 'multiple blunt force injuries', which is detailed in the autopsy report. What elements helps determine who the driver was, if the occupants were restrained and other contributing factors? Was this an accident, staged or suicide? A single decedent (or injured person) at the scene is not prima facie evidence of them being the driver. People have walked away from a scene, both deliberately and in a semi-conscious state. People have intentionally driven off of roadsides or into stationary and solid obstacles. A medical condition which may have preceded and contributed to the collision should be considered. With these, did the collision cause the death or was the death caused by the natural event. In one case, a person exited the interstate and then shot herself in the head with a small caliber pistol, which was ejected from her rolled vehicle. This appeared to be an accident, but was easily determined at autopsy to be a suicide.<sup>11</sup> The time of death can be important for hereditary and insurance purposes of survivorship, also associated civil or criminal action.

The ruling of a Natural death will include examination of the organs and toxicology. The ruling of a Suicide will be primarily dependent on the investigation as a whole. As most motor vehicle related deaths are ruled 'Accident', the primary issues become the drivers and passengers, time of death and nature of the injuries. Sudden impact and associated forces cause the body to continue in its original direction of travel; or if stationary, with the direction of impact. Sudden deceleration can cause both internal and external injuries. External injuries to look for, including the absence of, are dicing injuries from impacting the windshield or side window. This indicates unrestrained occupants. For front seat occupants left side injuries indicate the driver and right side injuries indicate the passenger. Additional pattern injuries include impressions from the seatbelt across the chest – left shoulder to right abdomen indicates driver, and right shoulder to left abdomen indicates passenger.

Evidence collected may include hair from the windshield or airbag fibers from the decedent's face and clothing. Shoe impressions from an occupant can be matched to the brake, clutch or gas pedals are also indicative of both who was driving and what actions were taken proximate to and during impact. Other injuries will correspond to the type of collision, occupant position and even expected injuries from certain types and models of vehicles.

## **PEDESTRIAN ACCIDENTS**

When a pedestrian (including a bicyclist) is struck and killed by a motorist, it is often classified as motor vehicle-pedestrian accident. The assumption is often the driver is at fault, but circumstances of the investigation might conclude otherwise. An example of a pedestrian at fault accident would be an intoxicated pedestrian, or a wheelchair bound person crossing a major thoroughfare, outside of the crosswalk and without the aid of reflectors or street lighting. In another example a pedestrian is crossing a dark street and obeying all laws. He has an acute cardiac event and collapses, and is struck by a vehicle turning the corner and the driver could not see him. Was the death a result of the heart attack or impact of the vehicle? Let's assume the driver was intoxicated and the question becomes, absent the subsequent impact by the vehicle, would the decedent have died at the scene? In all of these examples it is the autopsy which determines the events causing death and the underlying investigation determines fault / no fault. This is a classic example of how an incident may take on two separate but cooperative investigations – a surviving driver (law enforcement) and the deceased pedestrian (medical examiner's office).

Of primary concern to the professional Legal Investigator is the nature of the injuries. Common injuries include hyperextension of the torso, broken long bones, soft tissue and head injuries, abrasions and lacerations, and various injuries to the extremities. These will tell us if the decedent was facing to or away from the vehicle, walking or pedaling, crouching or lying down, etc. These injuries will also be able to tell us if the vehicle braked, accelerated or decelerated prior to, at the time of, or after, the impact. Although these deaths are predominantly ruled as 'Accident', criminal charges of vehicular homicide or a civil action for wrongful death can be very dependent on the autopsy findings.

## **WORKPLACE ACCIDENTS**

Accidents occurring in the workplace take on a new aspect of investigation, similar to aircraft and amusement park deaths. Every aspect of litigation could be involved, and as with all civil claims – contributing negligence is always a factor. The autopsy may determine the Mechanism of Death, such as a fan blade separating from the shaft and impaling the decedent. The investigation and autopsy reveals this death was an accident – but it does not specifically address the incident and related causation – the blade and shaft separation. Also consider a construction worker who falls and is impaled on a pile of metal debris or building material. Several questions, answerable at autopsy, come to mind. These include the possibility of a natural event, such as an acute cardiac event causing him to fall – was he deceased before or after the fall? Was death caused by the impalement? The issue of appropriate harnessing, restraint and material storage, although very relevant and part of the death investigation, may not be relevant at autopsy.

As with motor vehicle collisions, the nature of the injuries, also the sequence of events will assist with the autopsy and may also be answered at autopsy. The findings may

bring to issue if this is a workers' compensation claim, also other insurance and survivor implications.

#### **WRONGFUL DEATH**

The issue of a wrongful death claim, including criminal homicide, can be dependent on many factors often addressed at autopsy. These include intoxication of the decedent, health history (acute event or chronic history), debilitating or restrictive factors (aforementioned epileptic driver who was non-compliant with their medications), and activity at death such as leaving the danger zone or acting in self defense (turning away from the attack or protecting their face or vital organs), surprise attack, mutual combat, etc. These types of deaths can be supported by a separate law enforcement investigation and all deaths are supported by the autopsy findings. The nature of the injuries, contributing natural disease processes, levels of intoxication, proper restraint, etc., are all issues which should be noted for both support of the wrongful death claim, as the plaintiff, or comparative negligence, as both the plaintiff and defense. All wrongful death claims originate from the more specific event causing the underlying incident. It is important to look at the specifics of the autopsy and supporting investigation.

#### **NEGLIGENCE AND PERSONAL INJURY**

Most Causes of Death can be the foundation of a civil action claim, which are covered in more detail in the appropriate subcategories of this paper. The most common, and obvious, purpose of the autopsy report is a wrongful death action. This is followed by being the foundation of negligence or personal injury actions. The latter should be conducted in the same manner as a death investigation, sans the death and benefit of an autopsy. If you are familiar with death investigation and autopsy protocol, a personal injury or negligence investigation will seem very familiar. Autopsy reports will have detailed and important information requiring further investigation and documentation to support your claim. As an example, if the decedent was the causing factor, such as being an intoxicated driver who paralyzed a pedestrian, but was killed in the resulting collision.

#### **DRUG AND ALCOHOL OVERDOSES**

Overdoses, dependent on circumstances and levels of intoxication, can be any Manner of Death, excluding Natural. Examples include: Homicide (i.e. intentional poisoning of another), Suicide (acetaminophen overdose), Accident (acute ethanol poisoning) or Undetermined. A common example of a Natural death due to alcohol is cirrhosis of the liver, a natural disease process onset by the alcoholism. An acute alcoholic event is not Natural, it is ruled Accident due to the nature of the specific event causing death. These deaths can be combined with motor vehicle collisions, workplace accidents, also other injuries – such as self-inflicted wounds and head injuries from a fall. Evidence found on the body – fresh needle marks, cone of foam at the nose and mouth (often indicative of opiate overdose), also evidence found on scene – syringes, illicit drug paraphernalia, prescription medication bottles and receipts, etc., are important and are often noted in the report.

The two important factors are the underlying investigation and toxicology results. With the autopsy report should be a reference to the therapeutic level, or non-fatal level of any positive results (marijuana is not quantified). One important consideration is the combination of alcohol and drugs, mixed illicit drugs, and illicit drugs mixed with prescription medications. Drug and alcohol related deaths may have non-fatal levels of individual drugs, which when combined become toxic, especially mixed narcotic drugs. This is often recorded on the death certificate as multi-drug toxicity, with the Manner of death determined by the investigation and circumstances of death. The autopsy may also reveal if the person was deceased at the scene, was moved or died while being transported to a hospital. The first concern is the time of death and the related circumstances. It is important to consult with a forensic toxicologist to formulate a timeline and effects of the drug(s) to the body during the perimortem period.

### **SPECIAL CIRCUMSTANCES**

An example of a special circumstance is the death of an unborn fetus, which may be actionable as a wrongful death. Autopsies of a fetus are dependent upon statute. In Colorado a hospital fetal demise of under 20 weeks gestation is considered not viable and therefore, regardless of most circumstances, will not be autopsied in most jurisdictions; hence the use of 'Fetal Demise' versus 'Death' certificates.<sup>1212</sup> An exception to this would be outside of the hospital, such as the death of, or injury to, the mother due to homicide, suicide, motor vehicle collision, arson, drug overdose, or other mishap. The death of the mother and/or fetus may be attributable to medical malpractice. In all cases the gestation of the fetus, also the Cause and Manner of Death, will be paramount to your case. In most cases, such as a motor vehicle collision, if the fetal demise was proximate to the death of the mother or due to a placental abruption due to an abdominal impact (i.e. fall, attack or motor vehicle collision), the autopsy findings will also be key to your case.

A second example is the death of a newborn or infant without a specific known cause (i.e. child abuse or congenital defect). Infant deaths of approximately under one year of age and without determination of Cause and Manner of Death are now referred to as SUIDS (Sudden Unexplained Infant Death Syndrome), formerly known as SIDS (Sudden Infant Death Syndrome).<sup>13</sup> Only after a complete investigation, external and internal examination, toxicology, microscopy, review of the medical history, and no remaining definitive answer as to this death, will this be ruled a SUIDS death. Any death, and especially of an infant or child, is traumatizing for the family. To hear 'we don't know' is neither easy to convey or hear. Infant and child deaths are investigations, and a future article, all unto their own. In all other circumstances, the investigation and resulting autopsy report will provide the information necessary to determine if you have an actionable civil case, such as medical malpractice, or a death which could not have been prevented, such as congestive heart failure at birth. A careful review of the complete death investigation and interview of the attending forensic pathologist is recommended to determine if prenatal or pediatric care could have prevented this death.

## **INVESTIGATIVE CONSIDERATIONS**

We are professional Legal Investigators – impartial gatherers of facts and information to better prepare our clients for judicial adversarial battle. To be effective we need as much complete information as possible. I have been contacted by attorneys to review the autopsy report, sometimes accompanied by a police report or two. Rarely is any additional information provided, often because they have not received full discovery. Although I commend these attorneys for trying to get a jumpstart on their legal strategy, complete information is the foundation of a detailed investigation. Death investigation is nothing more than a fatal personal injury investigation. Fractions of an inch can separate life and death, just as the death or personal injury incident is nothing more than the consequence of a perfect series of events. The job of the professional Legal Investigator is to find and analyze these included events. To do so requires as much information as possible.

Medical records are not public information, while autopsy reports in most jurisdictions are. You may be able to sit and review various case files and talk to the case investigators and forensic pathologists. You can also request copies of public police reports and photographs of historical cases. Combine this information with a review of the public court case file and begin a unique learning process. Many things can be learned from these records – from injuries and causation, medical intervention, investigative techniques, investigative blunders, and legal strategies. Being prepared to investigate a serious bodily injury or death case, before it is first assigned to you, begins with learning the causation of injury and death.

As professional Legal Investigators we spend a great deal of time learning how to manage caseloads, witnesses, evidence and reports. Most civil personal injury and death cases are similar to criminal defense assault and homicide cases. Injuries are caused, serious bodily injury or death occurs, and a lawsuit or criminal charges are filed. Understanding and reviewing death cases of all types has given me the knowledge to expand my investigative skills in areas which are unique and stand out from other investigators. We may look into a person's rights having been violated, procedures and protocols followed, a complete investigation properly conducted, or if the incident happened as stated and reported. But, how skilled are you to look at a report of injury or death, associated photographs and supporting investigation, to further assist your client in determining if the incident happened as reported – and why? Or, as reported or investigated it could not have happened or may have happened in a different manner? Knowing how to investigate is not synonymous with knowing both how and what to investigate.

## **CONCLUSION**

Many investigators have a talent for conducting informative interviews, finding the nuances of a bad law enforcement investigation, and gathering the factual information necessary to support their client in the adversarial arena of the courtroom. The autopsy report is a valuable learning and investigative tool that many investigators first learn of

## **REVIEWING AND COMPREHENDING AUTOPSY REPORTS**

**Dean A. Beers – Applicant for Certified Legal Investigator**

**Page 14 of 18**

when they are assigned their first wrongful death case. I have found that understanding the value of the autopsy report and the information accompanying it – such as photographs, medical records, toxicology reports and body diagrams – are valuable assets to all professional Legal Investigators. Just as the final report to the client is a detailed overview of the case investigation, so is an autopsy report. Understanding what an autopsy report tells us about an incident will better prepare the professional Legal Investigator for any personal injury, death, negligence or criminal defense case. Death is the result of a series of events causing a fatal injury or injuries. Understanding what is in the autopsy report will give the professional Legal Investigator more insight and resources to rely upon in their own investigation, making them more valuable to their client.

#### APPENDIX A – Documents to Request

##### Supporting Information from the Medical Examiner's Office:

- Autopsy reports\*
- Body diagrams\*\*
- Complete toxicology reports\*
- Autopsy attendance logs\*\*
- Investigative reports\*\*
- Autopsy and scene photographs\*\*
- Morgue identification photographs and methodology\*\*
- Laboratory and imaging reports (with imaging)\*\*
- Medication logs\*\*
- Evidence logs\*\*
- Death certificate (including original pending death certificate if issued)\*\*
- Correspondence, including with family, friends and witnesses\*\*

\* Often public record

\*\* Often restricted by statute or considered work product. May require subpoena or court order

##### Supporting Information from the Medical Community\*:

- EMS and fire response trip sheets and reports
- Hospital records from all area hospital  
(Including regional trauma and children's' hospitals)
- Medical history and records (complete – never accept a summary report)  
(Note – hospital physicians include hospitalists, surgeons, specialists, radiologists, etc. maintain separate records – request this information)
- Laboratory and imaging reports (including images)
- Referrals and correspondence between physicians
- Prescription history from all area pharmacies (including hospitals – often separate)

\* Often restricted by statute and / or requiring HIPAA releases, subpoena or court order

##### Supporting Information from Law Enforcement and the Prosecutor's Office:

- All specific case reports, and subject history – patrol, investigative, crime scene and evidence laboratories
- Scene and autopsy photographs
- Evidence logs
- Correspondence, including with family, friends and witnesses

#### APPENDIX B - Definitions<sup>14</sup>

**Forensic Pathologist** – A subspecialist in pathology whose area of special competence is the examination of persons who die sudden, unexpected or violent death. The forensic pathologist is an expert in determining cause and manner of death. The forensic pathologist is specially trained: to perform autopsies to determine the presence or absence of disease, injury or poisoning; to evaluate historical and law-enforcement investigative information relating to manner of death; to collect medical evidence, such as trace evidence and secretions, to document sexual assault; and to

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 16 of 18

reconstruct how a person received injuries. Forensic pathologists are trained in multiple non medical sciences as well as traditional medicine. Other areas of science that the forensic pathologist must have a working knowledge of the applicability of are toxicology, firearms examination (wound ballistics), trace evidence, forensic serology and DNA technology. The forensic pathologist acts as the case coordinator for the medical and forensic scientific assessment of a given death, making sure that the appropriate procedures and evidence collection techniques are applied to the body. When forensic pathologists are employed as death investigators they bring their expertise to bear upon the interpretation of the scene of death, in the assessment of the consistency of witnesses statements with injuries, and the interpretation of injury patterns or patterned injuries. In jurisdictions where there are medical examiner systems, forensic pathologists are usually employed to perform autopsies to determine cause of death.

**Forensic Autopsy** – is a postmortem examination of a body performed with the intent of determining the cause and manner of a death in question. It may require evaluation of evidence attached to the body and/or found at the scene.

**Manner of Death** – "how" the person died; a one word description of intentions and circumstances which led to the stated medical cause of death. There are five:

- *Natural* is a death caused solely by disease or the aging process.
- *Accident* is a death caused by an unexpected or unplanned event.
- *Suicide* is a death solely by an intentional act of the decedent, knowing that the act may cause death and without regard to the intent to cause death.
- *Homicide* is a death solely by an intentional act of the decedent, knowing that the act may cause death and without regard to the intent to cause death. Note, this is the medical definition. The legal definition is an intentional act; unintentional acts are legally defined as manslaughter.
- *Undetermined* is used when the information pointing to one manner of death is no more compelling than one or more other competing manners of death in thorough consideration of all available information. For example, a gunshot wound without determining intent to inflict the wound would be 'Undetermined – Suicide versus Accident'. In this example, the Cause of Death is known – i.e. gunshot wound to the head.

'Undetermined' is also used in Cause of Death, such as a SUIDS death in which the event(s) causing the death are undetermined. If the Cause of Death is 'Undetermined' so must the Manner of Death be.

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 17 of 18

- *Pending* – A temporary Manner of Death used until further laboratory tests determine the actual Cause of Death. This allows for the disposition of the remains until the final autopsy report is available and the final certification of death made. There is no 'Manner of Death' noted or necessary.

**Cause of Death** – The underlying disease or injury that is the specific and immediate medical reason for death. This area of the death certificate has two components:

- Part One: Beginning with the immediate cause of death (e.g., Cirrhosis), followed by conditions resulting in the immediate cause of death (e.g., chronic ethanol abuse).
- Part Two: Significant, but non-contributing medical conditions (e.g., chronic tobacco smoker).

This Manner of Death is 'Natural'.

'Acute cardiac event' is specific and immediate; 'Cardiopulmonary arrest' is not – all deaths are the result of the ceased function of the heart, lungs and brain. This will be followed by the contributing factor to the immediate reason, such as 'Hypertension'. Reading 'backwards' – a history of hypertension (high blood pressure) caused an acute cardiac event (heart attack).

HIPAA – Health Insurance Portability and Accountability Act<sup>15</sup>

**Judicial and Administrative Proceedings:** Covered entities may disclose protected health information in a judicial or administrative proceeding if the request for the information is through an order from a court or administrative tribunal. Such information may also be disclosed in response to a subpoena or other lawful process if certain assurances regarding notice to the individual or a protective order are provided.

**Law Enforcement Purposes:** Covered entities may disclose protected health information to law enforcement officials for law enforcement purposes under the following six circumstances, and subject to specified conditions: (1) as required by law (including court orders, court-ordered warrants, subpoenas) and administrative requests; (2) to identify or locate a suspect, fugitive, material witness, or missing person; (3) in response to a law enforcement official's request for information about a victim or suspected victim of a crime; (4) to alert law enforcement of a person's death, if the covered entity suspects that criminal activity caused the death; (5) when a covered entity believes that protected health information is evidence of a crime that occurred on its premises; and (6) by a covered health care provider in a medical emergency not occurring on its premises, when necessary to inform law enforcement about the commission and nature of a crime, the location of the crime or crime victims, and the perpetrator of the crime.

**Decedents:** Covered entities may disclose protected health information to funeral directors as needed, and to coroners or medical examiners to identify a deceased person, determine the cause of death, and perform other functions authorized by law.

## REVIEWING AND COMPREHENDING AUTOPSY REPORTS

Dean A. Beers – Applicant for Certified Legal Investigator

Page 18 of 18

**Workers' Compensation:** Covered entities may disclose protected health information as authorized by, and to comply with, workers' compensation laws and other similar programs providing benefits for work-related injuries or illnesses.

### END NOTES:

---

<sup>1</sup> [www.memorablequotations.com/voltaire.htm](http://www.memorablequotations.com/voltaire.htm)

<sup>2</sup> West's Encyclopedia of American Law

<sup>3</sup> HIPAA – 45 C.F.R. § 164.512 et seq; [www.hhs.gov/privacy/hippa/understanding/index.htm](http://www.hhs.gov/privacy/hippa/understanding/index.htm)

<sup>4</sup> Colorado Revised Statutes (CRS) 30-10-601 et seq; National Association of Medical Examiners (The NAME)

<sup>5</sup> The NAME

<sup>6</sup> The NAME

<sup>7</sup> The NAME

<sup>8</sup> [www.cbc.ca/canada/story/2005/08/05/mix-up-050805.html](http://www.cbc.ca/canada/story/2005/08/05/mix-up-050805.html)

<sup>9</sup> CRS and NAME

<sup>10</sup> HIPAA – 45 C.F.R. § 164.512 et seq; [www.hhs.gov/privacy/hippa/understanding/index.htm](http://www.hhs.gov/privacy/hippa/understanding/index.htm)

<sup>11</sup> The Pueblo Chieftain – January 31, 2007

<sup>12</sup> CRS

<sup>13</sup> DeathReference.com and Medical Dictionary.com

<sup>14</sup> DeathReference.com and Medical Dictionary.com

<sup>15</sup> HIPAA – 45 C.F.R. § 164.512 et seq; [www.hhs.gov/privacy/hippa/understanding/index.htm](http://www.hhs.gov/privacy/hippa/understanding/index.htm)