GENERAL PRINCIPLES, PRACTICES AND GUIDELINES FOR DEATH INVESTIGATION BY THE PIERCE COUNTY MEDICAL EXAMINER'S OFFICE

The primary mission of the Pierce County Medical Examiner's Office is to identify and develop an understanding of ***unnatural and unlawful deaths*** occurring in this county. This is done in the interest of the public in general, for public safety, public health, vital statistics, and criminal justice reasons. The public deserves to know what hazards and events are causing sudden and unnatural deaths in their communities.

Jurisdiction over human remains is defined by law [RCW 68.50.010]. The decision to assume or decline jurisdiction will be made by the Medical Examiner's Office, not the reporting individual or agency.

The performance of an autopsy is an important forensic tool to be applied to certain cases as needed, not an end point, and not a 'lab procedure' done on request. The Medical Examiner has statutory authority to perform autopsies and post mortems [RCW 68.50.010, RCW 68.50.101, RCW 68.50.103, and RCW 68.50.106].

The public should understand that the work of the Medical Examiner's Office involves investigations of unnatural or unlawful death, and that the office does not exist to be an autopsy service for individuals or groups with special interests.

'In the case of any death without medical attendance in which there is no suspicion of death from unlawful or unnatural causes, the local health officer or his deputy, the coroner and if none, the prosecuting attorney, shall complete and sign the certification, noting upon the certificate that no physician was in attendance at the time of death, and noting the cause of death without the holding of an inquest or performing of an autopsy or postmortem, but from statements of relatives, persons in attendance during the last sickness, persons present at the time of death or other persons having adequate knowledge of the facts.' -RCW 70.58.180

The Pierce County Medical Examiner's Office will investigate cases of death with known or suspected physical injury directly leading to death, drug or chemical poisoning leading to death, and exposure to environmental hazards that relate to death [such as, but not limited to, heat, cold, fire, explosion, electrical, water, low oxygen environments, insect or animal contact, radiation, and fumes or gases].

It is the duty of *every person* with knowledge of an *unnatural* death occurring in Pierce County to report it to the Pierce County Medical Examiner's Office [the responsibility is defined by RCW 68.50.020]. -failure to do so is a crime.

In cases of death that fall under the jurisdiction of the Medical Examiner, the body of the deceased must not be moved without Medical Examiner authorization [RCW 68.50.050, **criminal** penalties apply].

The Pierce County Medical Examiner's Office provides and coordinates a variety of forensic medicine and forensic science activities. The root word of the term *'forensics'* is 'forum' implying being suitable for public debate, particularly in a court of law. The forensic sciences should be

utilized to address issues that are of concern to the general public rather than the specific interest of a particular individual or group. Medical Examiner reports and records of autopsies or postmortems are confidential (RCW 68.50.105) except that the following persons may examine and obtain copies of any such report or record: the personal representative of the decedent (as defined in RCW 11.02.005), the surviving spouse, any child, parent, grandparent, grandchild, brother, or sister of the decedent, any person who was guardian of the decedent at the time of death, the attending physician, the prosecuting attorney or law enforcement agencies having jurisdictions, public health officials, or the department of labor and industry in cases in which it has an interest under RCW 68.50.105.

The term *'medicolegal'* includes forensic issues, but is much broader, and covers many other issues. The term 'medicolegal' is a very general and quite vague concept which includes any interaction between medical and health concerns and the law; such as standards of practice, claims of misdiagnosis, malpractice, maltreatment, wrongful injury or death, settlements of wills and estates, issues of paternity and custody, insurance claims, workers' compensation issues, directives to physicians, mental competency, 'living wills,' defining brain death, and organ harvesting and transplantation. Many individuals, private groups, corporations, government agencies, public offices, and attorneys are involved in 'medicolegal' issues. A potential civil law action, somehow related to a death, does not serve as sufficient reason by itself, for the Medical Examiner to assume jurisdiction in a particular death case. The question still remains: Is a death *unnatural* or of specific *general public* concern? It is not the authority, nor the responsibility of the Medical Examiner's Office to investigate or be involved with all 'medicolegal' issues. State law very narrowly defines the jurisdiction and authority of the medical examiner. It is clear that within the narrow spectrum of medical examiner cases, such deaths, due to their commonly 'sudden' or 'violent' nature will have many related criminal and/or civil law actions. The work of the Medical Examiner's Office must remain focused on identifying and investigating deaths that are of immediate concern to the public as a whole.

It should be considered that everyone will die and that, in truth, all deaths are 'sudden.' One moment a person has a heart beat and the next, the heart has stopped forever. Deaths, as thought of by the general public, are often considered to be 'sudden' when death occurs within seconds, minutes, or hours from the first onset of symptoms for someone thought to be in apparent good health. The Medical Examiner's Office will investigate many such deaths, with the understanding that collapse and death may be the only symptom of a *natural* disease in individuals who were previously thought to be in good health. The medical examiner's investigation into 'sudden' deaths of individuals who are thought to be in apparent good heath is justified in that for some cases, there is evidence or specific concern for an ***un****natural* component. 'Good health' is best thought of as an absence of known disease, injury, or syndrome in someone who is fully functional, or a person previously diagnosed with a disease or ailment not needing further treatment. Many types of natural disease can cause death rapidly with few or no warning signs or symptoms. It is the differentiation between such natural deaths and unnatural deaths that is the appropriate focus of the Medical Examiner's Office. The Medical Examiner may take charge of the remains of deceased individuals who died of natural causes when they are unidentified or unclaimed.

The medical examiner will assume jurisdiction in a small number of natural deaths in cases where a 'violent' contagious disease of an immediate life-threatening nature to the general public is suspected, but has not or cannot be confirmed by the evaluating and treating physicians, or hospital, clinic, or nursing facility in which the individual died. Examples of such illnesses would include bacterial meningitis and Hanta virus. If the diagnosis has already been established, the death should not become a Medical Examiner's case. The individuals having knowledge of the nature of the death are responsible for reporting such a case directly to the Public Health Department. The Medical Examiner's Office should be involved only when the disease suspected has not and cannot be confirmed in the clinical setting, and postmortem examination studies have a high likelihood of establishing the diagnosis. Hospitals, clinics, and nursing facilities should proceed with clinical and laboratory means of confirming the diagnosis if such tests have already been initiated. It is their responsibility to the public to continue their efforts in such a case. Stopping such evaluations, examinations, and tests, and waiting for the Medical Examiner's Office to arrange for postmortem studies will greatly delay and possibly prevent specific identification of such a disease, illness, or syndrome. If the Medical Examiner's Office does take jurisdiction and identifies such a death, it is the Medical Examiner's responsibility to report such deaths to the appropriate public health authority when significant disease has been identified or confirmed. The forensic pathologist/Medical Examiner should be directly involved in the decision-making process concerning such cases as soon as possible.

It is the mission of the Medical Examiner to conduct death investigation in the interest of the public as a whole, not to serve the self-interests of a particular individual or group. The mission is to seek out and speak the truth about a given death. It is recognized that the truth is not always very popular, but best serves the public as a whole. The Medical Examiner's conclusions are intended to be shared with the public, individuals within the public, and other government agencies and public offices, but must be arrived at independently.

It should be understood that the death certificate is a public record intended to inform the public and be utilized by a variety of agencies, but does not mandate nor prevent or preclude any other type of action by any other individual, agency, or public office. In other words, a death certificate is a 'legal' statement of the cause and manner of death, but is not otherwise legally binding for any other agency or any other individual. Guidelines for death certification have been established by the National Center for Health Statistics of the Centers for Disease Control and Prevention (CDC) and the Washington State Department of Health, Center for Health Statistics. Forensic Pathologists are formally trained and experienced in the formulation of conclusions as to the cause(s) and manner of death and the death certification process. The Medical Examiner's Office considers the CDC and State guidelines when certifying death.

The National Center for Health Statistics has published statements regarding the 'precision of knowledge required to complete death certificate items' which include: 'The cause-of death section in the medical-legal officer's certification is always an opinion'; 'It represents the best effort of the medical-legal officer to reduce to a few words his or her entire synthesis of the cause of death'; and 'a best estimate of the manner of death and the time and date of injury may also be required when neither investigation nor examination of the deceased provides definitive information.' The Medical Examiners use reasonable medical probability in the formulation of opinions and in the certification of death in the same way that clinicians make diagnoses and

plans for treatment. Published operational criteria for determination of suicide are considered in the designation of manner of death.

The death certificate is a civil law document, not a medical science document, and is specific to each state, but based on a national standard form. The *cause or causes of death* should be listed on the death certificate along with significant conditions *contributing* (contributing causes) to death. Modes or mechanisms of death should not be entered on the death certificate. Conditions that existed, but that did not contribute to death, should not be entered. It is proper for *natural* deaths to be certified by one of the decedent's attending physicians. Washington State licensed physicians, physician's assistants, or advanced registered nurse practitioners (ARNP) may, and should, certify in cases of *natural* death.

Death is inevitable for everyone. We all get there, no exceptions. The vast majority of deaths in Pierce County are from entirely *natural causes*. For most deaths occurring in Pierce County, a physician who has medically attended the patient, should, and usually will certify the cause of death. The office of the Medical Examiner does not exist to be involved in all deaths in Pierce County. The responsibility of the Pierce County Medical Examiner's Office is to remain focused on the investigation of *unnatural* deaths.

THE PROCESS OF DEATH INVESTIGATION

Forensic pathologists are trained to conduct comprehensive death investigations. Good forensic death investigations follow the traditional physician's approach of gathering **history**, performing **physical examinations**, and utilizing directed **laboratory and imaging studies.** All the information gained by these methods needs to be appropriately evaluated and considered in order to arrive at appropriate conclusions.

The first step is to gain **history**. The history needs to include medical history concerning the deceased's prior health and activities and the history of the circumstances immediately surrounding death.

Everyone has a medical history. Contacting family, physicians, nurses, friends, employers, fellow workers, neighbors, and acquaintances, may gain information concerning what the individual's past medical history was. There are three possibilities. The first is that the individual's medical history is not currently known. A second is that the history is known and the person was in apparent good health. The third possibility is that the history is known and the individual was known to have one or more disease, injury, illness, or syndrome. The details of such diseases, injuries, illnesses, and syndromes need to be identified and recorded. Medical records including paramedic and ambulance reports, air care and transportation reports, emergency room, outpatient, medical, clinic, and hospital records and nursing care records may contain information that is pertinent to the medical examiner's investigations.

The second aspect of gathering history concerns the development of information about the circumstances surrounding the death. Information from verbal reports from law enforcement, neighbors, family members, eye or ear witnesses to events, fire personnel, paramedics, emergency medical technicians, physicians, and nurses needs to be obtained and recorded.

Information contained in written reports such as police reports, reports concerning fire and arson investigation, reports produced by other agencies involved in the investigation, and written statements from witnesses, may be reviewed and considered when such information exists.

The third aspect of gathering information concerning the circumstances surrounding death is the investigator's or pathologist's own observations at the scene; direct viewing of the place of injury, the place of death, or place of discovery of the body. Examination of the body at the scene and examination of the immediate surrounding physical environment can identify evidence of injury or hazards that provide clues to answering the critical questions of death that are discussed in the following sections.

The medical examiner has jurisdiction over human remains, but does not have jurisdiction over scenes/places. By having jurisdiction over human remains, the medical examiner can access any scene/place where the human remains/body(s) are. When there is evidence of a death being unnatural and the body is still at the scene/place of injury and death or at the scene/place where the body (or remains) was first found dead (the body/human remains have not been transported from the scene to some other location), all reasonable efforts will be made to have a medical investigator and/or medical examiner-forensic pathologist respond to and examine the scene.

If the body/human remains have been moved from the scene/place of injury, or from the scene/place of death, of from the scene/place where the body (or remains) were first found dead, the decision to attempt to have a medical investigator and/or medical examiner-forensic pathologist examine the scene will be made on a case-by-case basis, weighing the extent of scene investigation already done by another agency and the extent to which the scene has been altered, including the length of time that has elapsed since transportation of the injured person or dead body from the scene - the decision will be made by the medical examiner/forensic pathologist involved in the case.

The second main step in death investigation is performance of **physical examinations**. These include examinations of bodies at scenes or in hospitals, and external examinations ('inspections') and forensic autopsies (external and internal examinations) conducted at the Medical Examiner's Office. Dental and anthropological examinations and collection of physical material having potential evidentiary value may be a part of the examinations.

The term autopsy means 'to see for one's self.' Many people incorrectly think of the autopsy as being the same as a dissection. The purpose of dissection of the human remains is to allow ***observation*** *by the pathologist*. The autopsy involves *observing* the external and internal structures of the body to gain information about that individual and that individual's death. The autopsy is a critical tool of investigation. To the question, 'What do you look for at autopsy?' there is only one answer: anything and everything. Is there evidence of abnormal development? Is there evidence of natural disease? Is there evidence of injury (physical, electrical, heat, cold, drug, chemical, radiation)? Are there clues to the identity of the deceased? Is physical evidence related to an unnatural event present? Are there clues that would help answer the critical questions of death?

The Medical Examiner has *statutory* authority to perform autopsies. Family permission is not required as it is in a hospital setting. This allows the Medical Examiner to function independently to serve the public. The goals of the forensic autopsy are to *discover* information that cannot be obtained in other ways, to provide *independent confirmation* of what is known or suspected, and to provide a variety of means of *documentation* of findings.

It is neither required nor proper to perform autopsies in all deaths. There are significant differences between hospital autopsies and forensic autopsies. The Office of the Medical Examiner does not exist to provide 'free' autopsies. There are no 'free' autopsies. All examinations incur costs. The authority to perform autopsies is used judiciously where the examinations are needed to provide information critical to the investigation in the interest of the general public. The costs must remain within a limited taxpayer paid budget and the Medical Examiner's Office must be a good steward of public funds.

RCW 68.50.102 Court petition for autopsy -- Cost.
Any party by showing just cause may petition the court to have autopsy made and results thereof made known to said party at his own expense. [1953 c 188 § 12. Formerly RCW **68.08.102**.]

In cases where a forensic autopsy is not indicated by the Medical Examiner, arrangements for private autopsies may be sought by the family or by a physician with family permission. Autopsy services are available in the community, separate from the Medical Examiner's Office. Pathologists associated with each hospital, as well as pathologists in private group or solo practice are trained, skilled, and available to perform autopsies and to provide interpretation of the results of such examinations. Also, the University of Washington School of Medicine operates an autopsy service (a section of Hospital Pathology). Forensic pathologists in private practice are available to perform postmortem examinations.

The third main step of death investigation is using directed **laboratory and imaging studies** such as X-rays, toxicologic analyses, chemical analyses, and histologic examinations, and consultation with other medical and forensic specialists.

All of the information gained from history taking, physical examinations, and laboratory and imaging studies are considered and integrated to allow synthesis of the most reasonable conclusions possible. Death investigation and the practice of forensic pathology must be much more that just the study of morbid anatomy. The examination of morbid anatomy is a tool that is critical to death investigation, but by no means will answer all of the critical questions.

All cases in which the Medical Examiner assumes jurisdiction should be dealt with as a general death investigation at the start and should not be quickly segregated into a homicide investigation or a suicide investigation, or an accident investigation. Preconceived and quickly arrived at notions concerning a death will lead investigators down a wrong path and may delay or prevent the Medical Examiner from identifying the true nature of the death. Beyond recognizing the potential for a death being unnatural, assigning a specific manner of death (Homicide, Suicide, or Accident) to an individual case should be the end result of careful consideration of all available information, not the starting point.

No Medical Examiner case is ever declared 'closed.' New or additional information that is presented to the Medical Examiner will be considered and evaluated. New or additional information may or *may not* change the preponderance of evidence and previously arrived at conclusions and classifications. Opinions and classifications, however, can change if the new information does significantly alter the preponderance of evidence for a given case. The Medical Examiner's Office, as a whole and each of its staff members, must keep an open mind in all cases.

THE CRITICAL QUESTIONS OF DEATH

For the Medical Examiner's Office, there are six critical questions of death that should be attempted to be answered in all cases. I give credit to Dr. Lester Adelson, who developed and discussed the six critical questions of death in his textbook, '**The Pathology of Homicide.**' The six critical questions and a discussion of their practical application will be presented in the following paragraphs. Once an individual dies, they can no longer verbally communicate, however, 'dead men do tell tales,' in that a careful investigation of the history leading to death, intelligently performed postmortem examinations, and wise use of laboratory studies can be utilized to arrive at reasonable answers to the critical questions of death.

The first question is: ***'Who are you?'*** Determining the identity of the deceased is the most important aspect of death investigation. This may be arrived at by visual recognition of the deceased by family members or acquaintances, or may require extensive study and forensic comparisons such as dental charting and DNA analysis. Obtaining a thumbprint, multiple fingerprints, hair samples, or blood samples, as a part of postmortem examinations provides materials that can be evaluated and compared in cases where the identity of the deceased is in question or becomes questioned at a later time.

The second critical question is one of timing of injury, illness, and death. ***'When were you hurt?' 'When did you become ill?' 'When did you die?'*** No postmortem laboratory tests, analyses, procedures, or scientific evaluation can specifically and accurately identify the exact time of death, the exact time of injury, or the exact time of onset of illness. Reasonable estimates as to the timing of injury, illness and death can be arrived at by obtaining historical information, the examination of the body, and by application of a variety of scientific and technological methods. It is important to ask: 'When was the person last seen alive, and when was the person first found dead?' This needs to be answered whenever possible and should be documented along with 'by whom' and 'where.' It must be noted that the examination of the body *at the scene* will yield information that is more useful to making estimates concerning the time of death than those obtained (usually many hours or even days later) at the time of autopsy. In general, the closer to the moment of death that observations can be made, the more accurate the estimates of time of death will be.

The third critical question concerns place of injury and place of death: ***'Where did you become hurt?' 'Where did you die?'*** Deaths are rarely instantaneous, and even after sustaining what will prove to be a fatal injury, a given individual may remain sufficiently active to move a significant distance from where they were injured prior to death. Bodies can be moved, either intentionally or inadvertently after death. With modern emergency medical systems in place, injured

individuals are commonly transported great distances to medical centers following the development of illness or after being injured and prior to death. Answering the critical question of where injury or death occurred requires eliciting of history, gathering reports and records, and examining the body and the place where the body was found for evidence that would suggest that the injury occurred in another place or that death occurred in another place and the body was subsequently moved. Police reports, paramedic sheets, emergency room records, hospital records, and air care and transportation records may provide information about the movement of the injured or deceased individual.

The fourth critical question of death concerns identifying the cause or causes of death: ***'Did you die as a result of violence, from natural causes, or from a combination of both?'*** A single cause of death may be identified, or multiple natural diseases, illnesses, or syndromes can combine to cause death. Also, a single injury, multiple injuries, or a combination of injury and natural disease may result in an individual's death. Identification of the cause or causes of death requires knowledge of the individual's past medical history, the history of the circumstances surrounding death, information gained from examination at the scene of death, postmortem physical examination findings, and the results of various laboratory or technical studies. Many causes of death do not have a specific anatomic or laboratory marker. The autopsy alone will not answer this critical question in numerous cases. The goal is not to just find some convenient explanation for the cause of death, but to identify the true cause of death.

The fifth critical question of death concerns the manner of death: ***'If violence was completely or partially responsible for your death, was it suicidal, accidental, or homicidal?'*** Identifying a manner of death which best represents the events leading to death for an individual case requires knowledge of the circumstances in which death occurred. Identifying a manner of death is a quasi-judicial role and the responsibility of the Medical Examiner. For death certification purposes, the manners of death that may be utilized are: natural, suicide, accident, homicide, undetermined, or pending investigation. Identifying the cause or causes of death and developing a detailed understanding of the circumstances of death best allows an appropriate manner to be assigned for each case. Intellectual honesty does not allow for an absolute determination of a specific manner of death in all cases. The Medical Examiner's investigation is always after the fact. For a given case, available information may not clearly identify a preponderance of evidence which indicates one manner of death to the exclusion of the other possible manners of death. Physicians arriving at a diagnosis in a clinical setting for a live person provide professional predictions of the future. A 'diagnosis' categorizes the current condition of the patient and by knowing the natural history of diseases, allows predictions of future events to be made. For forensic pathologists acting as medical examiners, the conclusions arrived at serve as a 'prediction of the past.' The involvement of the Medical Examiner's Office is after the fact of death. The sequence leading to death occurred one and only one way, but the various pieces of the puzzle may not be known in all cases. A 100% accurate understanding of all aspects of every death is simply not possible.

RCW 68.50.015 Immunity for determining cause and manner of death -- Judicial review of determination. A county coroner or county medical examiner or persons acting in that capacity shall be immune from civil liability for determining the cause and manner of death. The accuracy of the determinations is subject to judicial review. [1987 c 263 § 1.]

The last critical question of death is ***'If someone killed you, who did it?'*** This question ultimately needs to be answered by a court of law. The role of the medical examiner/forensic pathologist is to arrive at the best possible answers for the first five critical questions of death and to serve as an objective, impartial, independent, and neutral party that can identify, collect, package, analyze, and interpret physical, biological, chemical, and 'trace' material and related information, that has potential evidentiary value. Such material can form a link between the decedent and a crime scene, a weapon, or an assailant. The recognition and proper interpretation of patterned injuries and injury patterns is a critical role in addressing the question.

A true scientist knows the limitations of current knowledge within his or her field, and restricts comments therein. As a forensic pathologist, the medical examiner will be called upon to provide discussion and testimony of specific details concerning deaths and events of a forensic nature.

Brouardel, a 19th century French medical legalist once wrote, *'If the law has made you a witness, remain a man of science; you have no victim to avenge, no guilty person to convict, and no innocent person to save. You must bear testimony within the limits of science.'* The public as a whole would be much better served if all people proclaiming to be scientists and 'experts' would follow this principle. Regretfully this is not the case. Many alleged 'experts' give testimony that goes far beyond the limits of science, and get well paid in the process. The community is best served by the members of the Medical Examiner's Office remaining neutral parties and restricting their conclusions to within the limits of science.

Forensic death investigation is a complex activity that requires much thought and consideration, time, and a great deal of hard work. The public is best served if the principles, practices, and guidelines discussed above are followed.

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