

Chapter

06

Medicolegal Death Investigation

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Why it is important: The medicolegal death investigation (MLDI) system is responsible for conducting death investigations and certifying the cause and manner of deaths that are unnatural, violent or suspicious, sudden or unexpected, unusual, or otherwise represent a potential threat to public health and safety. Depending on the country, up to 20% of deaths are referred to the MLDI system. In Australia and the U.S. 13%¹ and 20%² of deaths, respectively, are referred to MLDI; and in Canada, depending on the jurisdiction, 7%–45% of deaths are investigated by the MLDI system annually. Most of these deaths are preventable. Quality information from the MLDI system provides valuable input for public health and other authorities to develop effective interventions, including interventions to prevent injury, suicide, violence, and substance abuse. In addition, a well-functioning MLDI system founded on a strong legal framework can strengthen the civil registration and vital statistics (CRVS) system. A connection between the MLDI system and CRVS system ensures that these deaths are registered and that the cause and manner of death are captured by the national statistics agency for use in vital statistics.

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Medicolegal death investigation (MLDI) Module

Why is it important?

The medicolegal death investigation (MLDI) system is responsible for conducting death investigations and certifying the cause and manner of deaths that are unnatural, violent or suspicious, sudden or unexpected, unusual, or otherwise represent a potential threat to public health and safety. Depending on the country, up to 20% of deaths are referred to the MLDI system. In Australia and the U.S. 13%¹ and 20%² of deaths, respectively, are referred to MLDI; and in Canada, depending on the jurisdiction, 7%–45% of deaths are investigated by the MLDI system annually. Most of these deaths are preventable. Quality information from the MLDI system provides valuable input for public health and other authorities to develop effective interventions, including interventions to prevent injury, suicide, violence, and substance abuse. In addition, a well-functioning MLDI system founded on a strong legal framework can strengthen the civil registration and vital statistics (CRVS) system. A connection between the MLDI system and CRVS system ensures that these deaths are registered and that the cause and manner of death are captured by the national statistics agency for use in vital statistics.

What is a medicolegal death investigation?

A medicolegal death investigation is a process whereby a coroner, medical examiner, or forensic pathologist working with the police, seeks to understand how and why a person died. The coroner, medical examiner, or pathologist must answer five questions when investigating a death:

- Who died - what was the person's name, if known?
- When did the death occur?
- Where did the death occur?
- What was the cause of death: What physical disease, physical condition, or physical injury (or combination of) caused death?
- What was the manner of death: Natural, accident, suicide, homicide, or undetermined?³

The purpose of a medicolegal death investigation is to present medical findings, not to determine civil or criminal liability. These findings may be submitted as evidence in criminal or civil proceedings; however, they are medical findings and are not legally binding. Throughout this module, when we refer to “medicolegal death investigation” we are referring specifically to this non-legally binding fact-finding process, not the criminal investigation process. The purpose of a criminal investigation is to determine if a crime has been committed, obtain evidence to identify the person responsible for the crime, and to provide the best possible evidence to the prosecutor. A judge or jury determines criminal or civil liability.

MLDI Systems and Stakeholders

MLDI systems vary greatly across the world. In general, MLDI systems can be categorized into three types: coroner systems, medical examiner systems, and law enforcement-led systems. The defining features of these types of systems are discussed in detail in Section 2.

Regardless of the type of system, every MLDI system has multiple stakeholders. At a minimum, stakeholders include: law enforcement, the office of the coroner or medical examiner (where relevant), the health sector, the public health agency, the civil registration agency, and the national statistics agency. In some systems, the judiciary and public prosecutors may also play an important role. Strong

¹ Australian Bureau of Statistics, *Causes of Death, Australia, 2015, Technical Note 1*, available at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/3303.0Technical%20Note12015>

² Hanzlick, R., Overview of Medicolegal Death Investigation in the United States, National Academy of Sciences, 2003, available at: <https://www.ncbi.nlm.nih.gov/books/NBK221926/>

³ See, e.g., Ministry of the Solicitor General, Ontario, Canada, Death Investigations website page, at: https://www.mcscs.jus.gov.on.ca/english/DeathInvestigations/CommonQuestionsAboutCoronersInvestigations/OCC_common_questions.html

cooperation is needed among all stakeholder entities to ensure efficient and effective medicolegal death investigation and compilation of quality MLDI statistics. The roles of these stakeholders and coordinating mechanisms are discussed in Section 4.

Focus of this module

A strong legal framework for the MLDI system, among other things, sets the jurisdictional scope for the MLDI authority; defines the terms and conditions under which the authority operates; establishes the powers, duties and responsibilities of the MLDI authority and other system stakeholders; creates protections to ensure independence in the conduct of MLDI work; authorizes practices and procedures; provides a connection to the CRVS system; and ensures sufficient resources to perform the required work.⁴

The subject of MLDI is complex and a strong MLDI legal framework may address many more topics than are included in this module. We have selected the included topics in order to aid the reviewer in determining: 1) whether the MLDI legal framework aids or hinders timely, complete and accurate MLDI information, and in particular cause and manner of death information, and 2) whether information from the MLDI system is shared with the CRVS system in a manner that aids or hinders timely, complete, and accurate statistics on deaths under the jurisdiction of the MLDI authority.

How to use this Module

This chapter covers the following topics:

1. Definitions
2. Structure of the MLDI System
3. Organizational Situs of the Office of the Medical Examiner/Coroner within the MLDI system
4. Stakeholder Cooperation
5. Qualifications of head of MLDI authority and head of subnational offices
6. Power to issue SOPs, practice guidelines
7. Staffing
8. Accessibility of forensic services throughout the country and transportation of human remains
9. Scope of Jurisdiction - Cases that must be referred to MLDI for investigation
10. Cases requiring autopsy
11. Autopsy/External Examination Report and Case File
12. Powers of medical examiner/coroner to investigate
13. Medical Certificate of Cause of Death (MCCD)
14. Connection to the CRVS system: Death Registration and Statistics
15. Time Limits on Investigation
16. Mass Fatality Management
17. Resources
18. Training
19. Supervision and Enforcement

The principles presented in this module hold for countrywide MDLI systems, as well as for systems established at a sub-national level in decentralized MLDI systems. We use the term “country” as shorthand for “country or jurisdiction”. If you are completing this toolkit for a specific jurisdiction (province, city, district, etc.), consider the term “country” to mean “jurisdiction” unless otherwise indicated.

Throughout this module, we use the term “*medicolegal death investigation*” or *MLDI* to refer to the process of seeking to understand how and why a person died. Specifically, the process of determining: Who died? When did the death occur? Where did the death occur? What was the cause of death? And what was the manner of death?

⁴ Weedn, V.W., Model Medical Examiner Legislation, Academic Forensic Pathology 2015 5(4): 614-627

We use the term “*MLDI authority*” to mean the entity that bears the ultimate responsibility for finding of facts regarding these Who, Where, When and What questions. Depending on the system established in your country the “MLDI authority” may be, for example, the Office of the Chief Coroner, the Office of the Chief Medical Examiner, the National Police Department, the Office of the Chief Prosecutor, or a Medicolegal Division within the police or prosecutor’s office.

The term “*head of MLDI authority*” means the person who is at the top of the organization chart of the MLDI authority. This could be a Chief Coroner, a Chief Medical Examiner, a Chief of Police, the Chief Prosecutor (which, depending on the country, may be known as the Prosecutor General, the Attorney General, the Solicitor General, or some other title), or the Chief of Medicolegal Division within the police or prosecutor’s office.

Suggested Reading and Resource: Annex B contains a Resources page with suggested reading and links for a variety of MLDI topics including: general information on MLDI systems; codes of ethics and independence of MLDI professionals; inquests; death in custody; and peer review process. There are also links to example laws on coroner and medical examiner systems.

1. Definitions

Good Practice: Clear definitions in the laws governing MLDI help ensure that all stakeholders understand key terminology in the same way. Any technical terminology, or not commonly understood terms, used in your country's laws should be clearly defined.

Below are some terms that are used throughout this toolkit module, which may be misunderstood if not clearly defined. Please read the terms and definitions below carefully. It is important for reviewers to understand the terms below before proceeding with the analysis in this module.

Autopsy is a highly specialized surgical procedure that consists of a thorough examination of a corpse to determine the cause and manner of death and to evaluate any disease or injury that may be present. It should be performed by a specialized medical doctor called a pathologist.⁵ [Note: the term "autopsy" should not be confused with "verbal autopsy," which is defined below.]

Autopsy report is a report completed by the medical examiner, or other physician trained in this assessment, to present results on examination findings, evidence of injury and therapy, and the cause and manner of death.⁶

Cause of death is all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced such injuries.⁷

Manner of death explains the circumstances in which a death arose. The International Classification of Diseases (ICD) classifies manner of death as disease, accident, intentional self-harm, assault, legal intervention, war, pending investigation, unknown, or "manner undetermined."

Medical certificate of cause of death is the WHO International Standard Form of the Medical Certificate of Cause of Death (MCCD). This is the recommended form for recording cause of death information for certification. The form contains data fields for the immediate, antecedent and underlying causes of death, and manner of death for completion by a physician.

Post-mortem: an examination of a body that takes place after death to determine the cause and manner of death. The term post-mortem is sometimes used interchangeably with autopsy. In this Chapter, we define post-mortem as a broader term, encompassing any examination of the body post-death, which could be an external examination only or include an internal examination (autopsy).

Underlying cause of death is the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.⁸

Guidance: State whether each term below (or similar term) is used in your MLDI legal framework and whether it is defined. If defined, state the definition contained in the legal framework. Provide the legal citation where the term is found. If other key terms are used in your MLDI legal framework, state the definition and provide the citation. In the comment sections, provide your analysis on whether a definition is needed, or whether the definition is clear and understood in the context of the law. State how the definition could be improved if necessary.

a. *Autopsy (or "post-mortem" or similar term):*

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

⁵ Los Angeles County Medical Examiner-Coroner website, at FAQs/Glossary of Terms, available at: <https://mec.lacounty.gov/>

⁶ Dolinak D., Matshes E.W., & Lew, E.O., *Forensic Pathology: Principles and practice*, Elsevier Academic Press (2005).

⁷ World Health Organization, *International Classification of Diseases, 2016, volume 2*; See also *Health Topics*, World Health Organization website, available at: https://www.who.int/bulletin/volumes/84/3/mortality_glossary/en/

⁸ WHO website, available at: https://www.who.int/bulletin/volumes/84/3/mortality_glossary/en/

Citation:

Comment:

b. Autopsy report (or "post-mortem report" or similar term):

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

Citation:

Comment:

c. Cause of death:

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

Citation:

Comment:

d. Manner of death:

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

Citation:

Comment:

e. Medical certification of cause of death:

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

Citation:

Comment:

f. Underlying cause of death:

Used in law? _____ Yes _____ No Defined? _____ Yes _____ No

Definition:

Citation:

Comment:

g. Other key terms (provide as many as necessary):

Definition:

Citations:

Comment:

2. Structure of the MLDI System

Good practices: Medical legal death investigation systems vary greatly across the world. In general, MLDI systems can be categorized into three types of systems: coroner systems, medical examiner systems, and law enforcement-led systems.⁹ In addition, some jurisdictions have a hybrid coroner/medical examiner system.

Coroner system: In a coroner system, the Coroner is responsible for ensuring that the body is identified and that the cause and circumstances of death are determined. In other words, the coroner is responsible for answering: Who died? When did the death occur? Where did the death occur? What was the cause of death? And what was the manner of death? However, coroners themselves generally do not conduct the medical examinations necessary to answer these questions. A coroner's level of education varies by jurisdiction. In many countries, coroners are legal professionals, such as a judge, magistrate, or prosecutor; in some countries, coroners are certified physicians; and in some countries, there are no required qualifications for coroners, which is not good practice (see Section 5 on Qualifications of Coroners and Medical Examiners). Therefore, coroners who are not physicians work with medical and forensic professionals to conduct an investigation.

Some coroner systems combine medical and scientific investigation with a judicial enquiry in open court called an inquest. An inquest is a special court proceeding in which the coroner acts as judge, and sometimes involves a jury. In an inquest, the coroner summons witnesses to testify in order to determine who the dead person was and the circumstances of the death.¹⁰ Historically, coroners used an inquest to determine who might be criminally liable, much like an indictment. However, a present-day inquest is not a criminal proceeding and is not intended as a means to determine criminal liability, but rather, is a means of fact-finding that is non-binding.¹¹

The use and function of the inquest has evolved over the last century with the rise of modern medicine and medical forensic investigative techniques. In U.S. coroner systems, open court inquests are now rarely held.¹² Instead, the coroner determines the who, when, where and what questions solely through medical and scientific investigation, with the assistance of trained medical and forensic professionals (see Section 7 below – Staffing and Qualifications).

In many Commonwealth countries, inquests are still regularly used. However, the modern inquest usually does not have a jury and is not used to determine criminal responsibility, and often serves a public interest function. For example, in Canada, Australia, and New Zealand, coroners regularly use inquest verdicts as a means of communicating safety hazards to the public. Coroners in Australia have issued reports regarding fire risk, unfenced swimming pools, drug addiction in prison, carbon monoxide poisoning, and gun ownership.¹³ In England, inquests have been used in cases of public importance. For example, a decade after the deaths of Princess Diana and Dodi Al-Fayed, an inquest was held and concluded that the deaths had resulted from gross negligence by the deceased's chauffeur (who also died

⁹ James JVP Kalougivaki, Medico-Legal Death Investigation Systems in the Pacific and Creating a Stronger Pacific Disaster Victim Identification Network, *Journal of Forensic Research*, 2015, 6:1, p2.

¹⁰ Dr. Judy Melinek, *A Forensic Primer for Journalists*, Forensic Pathology Forum, January 9, 2015, available at: <http://pathologyexpert.blogspot.com/2015/01/a-forensic-primer-for-journalists.html?m=1>

¹¹ Manchester City Council, *The Inquest System, What is the purpose of an Inquest?*, available at: https://secure.manchester.gov.uk/info/626/coroners/5533/the_inquest_system/4.

¹² "Why Modern Medical Examiners Don't Hold Inquests", website of Spokane County, Washington, available at: <https://www.spokanecounty.org/834/Why-Modern-Medical-Examiners-Dont-Hold-I>

¹³ Paul, MacMahon, *The Inquest and the Virtues of Soft Adjudication*, 33 *Yale Law & Policy Rev.* 275 (2015), p. 295, available at: <https://ylpr.yale.edu/inquest-and-virtues-soft-adjudication>.

in the accident) and from negligence on the part of those driving vehicles pursuing the car. This helped to quell conspiracy theories about the deaths.¹⁴ The inquest into the “7/7 bombings” in London in 2007, in which 52 people died, concluded with a series of recommendations for emergency planners, the security services, and the London transport authorities for how to deal with future acts of terrorism.¹⁵ The inquest has also been particularly important in post-Troubles Northern Ireland, where the coroner has played a significant role in examining cold cases from the 1970s, 1980s, and 1990s.¹⁶

Do not confuse the term “inquest” with the term “investigation” or “inquiry.” In laws establishing coroner systems, the term “investigation” or “inquiry” is the broader term and refers to the process of reviewing a case; an investigation or inquiry may include an inquest, or an inquest may be waived.

Medical examiner system: In a medical examiner system, the Medical Examiner, is responsible for ensuring that the body is identified and that the cause and circumstances (the who, when, where and what questions) are determined. The Medical Examiner is a medical professional trained, at a minimum, in pathology and ideally in forensic pathology (see section 5 below – Qualifications of Head of MLDI System). The Medical Examiner leads the medical and scientific investigation and, unlike coroners, usually does not have the power to hold an inquest. The Medical Examiner may work with various medical and forensic professionals to conduct a thorough clinical examination for the determination of cause and manner of death and to identify an unidentified body (see Section 7 below – Staffing and Qualifications).

Coroner/Medical Examiner hybrid system: The structures of hybrid systems vary by country. However, in general, a hybrid system is one where a coroner refers cases to an established medical examiner system for autopsy or external examination. Hybrid systems have developed in countries with a long-established coroner system that aim to improve quality of cause and manner of death information by working with trained medical examiners. For example, reforms to the coroner system in the U.K. were introduced through the Coroner and Justice Act 2009. The Act establishes an Office of the Chief Coroner for England and Wales and also provides for the appointment of a National Medical Examiner. The Act authorizes regulations “requiring a senior coroner to refer a case to a medical examiner”.¹⁷ Several jurisdictions in the United States have hybrid systems as well. Hybrid systems differ from coroner systems that refer cases to outside medical professionals for autopsy on an ad hoc basis in that, in a hybrid system, cases are referred to trained medical examiners that are part of an established coroner system.

Law enforcement-led system: In this type of system, the law enforcement initiate and lead the medicolegal death investigation, as well as the criminal investigation. It is important not to confuse the criminal investigation and the medicolegal death investigation. As discussed above, the purpose of the medicolegal death investigation is to answer the questions: Who died? When did the death occur? Where did the death occur? What was the cause of death? And what was the manner of death? The results of the medicolegal death investigation are findings, they do not establish criminal or civil liability. The findings from a medicolegal death investigation may be presented as evidence in a criminal or civil case. The purpose of a criminal investigation is to determine if a crime has been committed, obtain evidence to identify the person responsible for the crime, and to provide the best possible evidence to the Prosecutor to present the case to a judge or jury. The judge or jury determine criminal liability.

In a law enforcement-led system, the police and/or prosecutor are responsible for leading both the criminal and medicolegal investigation. In some countries, there is a medicolegal division within the police department or the prosecutor’s office with trained medical and forensic specialists who help identify the body and determine cause and manner of death. In other countries, the police or prosecutor contract with outside medical and forensic specialists to identify the body and determine the cause and manner of death. In a law enforcement-led system, the chief of the police department or prosecutor’s office, or the head of the medicolegal division within the police department or prosecutor’s office, is ultimately

¹⁴ Id. at p. 287.

¹⁵ Id. at p.287.

¹⁶ Id. at 285.

¹⁷ Coroner and Justice Act 2009, Sec. 20, 21.

responsible for ensuring that the body is identified and that the circumstances surrounding the death are determined.

Centralized versus Decentralized: Some countries have a centralized system and others have a decentralized system. In a centralized system, there will be an individual at the national level that leads the entire system for the country, with local offices that answer to the national level. For example, New Zealand has a Chief Coroner who is responsible for oversight of the work of all sub-national level coroners to ensure orderly, efficient and standardized practice throughout the country.¹⁸ In a medical examiner system, it is the role of a Chief Medical Examiner at the national level to oversee the work of subnational level medical examiners to ensure orderly, efficient and standardized practice throughout the country. In a law enforcement-led system, the chief of police, chief prosecutor, or the head of a medicolegal death investigation division within the national police department or prosecutor's office, supervises medicolegal death investigations conducted by local police departments throughout the country.

In a decentralized system, jurisdictions at the subnational level maintain their own MLDI systems, and the type of system may vary across jurisdictions. For example, in Canada, the provinces of Alberta, Manitoba, Nova Scotia and Newfoundland, and Labrador have a Medical Examiner system. All other provinces have a coroner system. Even in a decentralized system, there should be an agency at the national level to create minimum standards or to work cooperatively with decentralized offices to ensure generally uniform practices and procedures. While many decentralized systems lack this guidance from a central authority, there have been calls in recent years for more uniformity of practice in decentralized systems. For example, in 2016, the Canadian Medical Association Journal called for a national authority for coroners and medical examiners, which would ensure different jurisdictions use the same standards and classify deaths in the same way.¹⁹ In the US in 2016, the National Commission on Forensic Science recommended drafting of model law to assist State governments to improve the quality of their medicolegal death investigation statutory framework and their ability to conduct adequate medicolegal death investigations.²⁰

As shown from the above discussion, there is no "best practice" regarding the structure of MLDI systems. Regardless of the type of system a country maintains, the focus should be on producing high quality, independent, accurate, timely and complete information, including cause and manner of death, for medicolegal death investigations. To this end, regardless of the type of system, it is essential that a physician leads the medical evaluation in an MLDI case and be responsible for determining cause and manner of death.

Guidance: The questions in this section will help you assess the type of system you have. The questions in the sections that follow will help assess whether the system in your country is producing the best possible information and guide an analysis of opportunities for reform. First, determine whether your system is centralized or decentralized, then answer the questions under the appropriate section. In making this determination, consider questions of federal versus local authority in your country's Constitution. In the comment sections, state any additional observations you have about the structure of your MLDI system and any opportunities for regulatory reform.

If your system is centralized, answer the questions in section a. If decentralized, answer the questions in section b.

a. Centralized Systems:

- i. Describe type of MLDI system in your country** (i.e. coroner, medical examiner, hybrid or law enforcement-led system).

¹⁸ New Zealand Coroners Act 2006, Section 7, available at: <http://www.legislation.govt.nz/act/public/2006/0038/latest/whole.html>

¹⁹ Elyse Skura, CBC News, *National standards needed for coroners, medical examiners, says CMAJ editorial*, 1 February 2016, available at: <https://www.cbc.ca/news/canada/north/coroners-medical-examiners-national-authority-cmaj-editorial-1.3428705>.

²⁰ National Commission on Forensic Science, *Recommendation to the Attorney General Model Legislation for Medicolegal Death Investigation Systems*, January 2017, available at: <https://www.justice.gov/archives/ncfs/work-products-adopted-commission>

Citation:

Comment:

- ii. **Describe the location of subnational offices of the MLDI authority** (e.g., Province/State or District/City/County)

Citation:

Comment:

b. Decentralized Systems:

- i. **At what political sub-division level are MLDI lead offices located?** (e.g., Province/State or District/City/County)

Citation:

Comment:

- ii. **Describe the type of system or systems throughout the country** (noting whether each political subdivision has the same type of system or whether it varies by sub-division).

Citation:

Comment:

- iii. **Is there an agency at the national level that provides guidance or supports the sub-national jurisdiction MLDI authorities?** If so, state the agency and describe its role. State whether there is a model law or national guidance/standards issue by the agency.

Citation:

Comment:

3. Organizational Situs of the Office of the Medical Examiner/Coroner within the MLDI system

Good practice: Just as the structure of MLDI systems varies across countries, the ministry or agency in which the MLDI authority is housed varies across countries. [*Reminder: The “MLDI authority” is the entity responsible for non-legally binding finding of fact regarding: Who died? When did the death occur? Where did the death occur? What was the cause of death? And what was the manner of death?*]. For example, the office of the Chief Medical Examiner or Chief Coroner might be situated within the Ministry of Health, the Ministry of Justice, the Attorney General's Office, the Ministry of Interior or Home Affairs, or within an academic medical institution. In a law enforcement-led system the MLDI authority is the police

department or prosecutor's office (or a division within those entities) , which may be housed within a Ministry of Interior or Home Affairs, the Ministry of Justice, the office of the Attorney General or Chief Prosecutor, or another ministry. The MLDI authority may also be an autonomous agency overseen by a governing board.

There is no single best practice with regard to organizational location and there are advantages and disadvantages to each set up. For example, establishing the MLDI authority within law enforcement (e.g., Police Department, Office of the Prosecutor General, the Ministry of Interior) may help ensure sufficient funding and resources for the MLDI system, as law enforcement is often well funded. However, this set up may lead to, or give the appearance of, a lack of independence of forensic pathologists and other forensic experts that work with law enforcement, particularly when investigating deaths that occur while in custody or in other state institutions. In such systems where the medical professional has dual obligations, the system should be designed to maintain the medical professional's independence and duty to report cause and manner of death to the best of their knowledge.²¹ Situating the MLDI authority within the Ministry of Health may help ensure independence of medicolegal death investigations but may leave the MLDI authority with less resources, as the Ministry might prioritize the funding of other initiatives above MLDI.

Autonomous agencies might be well-funded and independent or ill-funded and subject to political influence. Autonomous agencies (and sometime other types of MLDI authorities as well) are overseen by a governing board, which can help detect and correct problems and failures of the office, maintain accountability, and provide the public with information. Members of a governing board should have an interest in and knowledge of the functions of the office, such as physicians, public health and public safety officials. However, if board members are politicians or appointed political officers, the work of the agency could be subject to influence or interference. Resources of an independent agency will depend on whether funding is guaranteed by establishing legislation and the priorities of the government.

Thus, every type of organizational set up has implications for two primary concerns: 1) independence of MLDI officials from influence by law enforcement or political agendas, and 2) sufficient funding and resourcing of the system to perform its duties appropriately and generate high quality information. What organizational situs for the MLDI authority is best will depend on country context. Regardless of where the MLDI authority is housed, there should be a clear organizational structure and lines of authority.

Guidance: Answer the questions below regarding the organizational situs of the MLDI authority. In the comment sections, state your observations about the pros and cons of the organizational situs of the MLDI authority, including whether and how the situs of the MDLI authority affects its independence and resources.

-
- a. Describe where the MLDI authority is located institutionally.** Under which ministry, agency or institution does it fall?

Citation:

Comment:

- b. Does the head of the MLDI authority (i.e., chief medical examiner, chief coroner, or chief of police) report to anyone and, if so, whom?**

Citation:

Comment:

²¹ See Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, United Nations, 2004, at paragraphs 66 – 73, available at: <https://phr.org/issues/istanbul-protocol/>

- c. **Does the MLDI authority have a clear organizational structure and chain of command, including clear lines of authority and reporting?**

Citation:

Comment:

- d. **Is there an oversight board for the MLDI authority?** If so, describe its composition, state the affiliations of the board members, and describe how they are selected or appointed.

Citation:

Comment:

4. Stakeholder Cooperation

Good Practice: An MLDI system has multiple stakeholders, which at a minimum includes law enforcement, the office of the coroner or medical examiner (depending on type of system), the health sector, the public health agency, the civil registration agency, and the national statistics agency. Law enforcement leads MLDI in a law enforcement-led system. However, even in a coroner or medical examiner system, the police and/or prosecutor have an important role, as they are required to notified the coroner/medical examiner of a death under their jurisdiction and the two entities share evidence with each other.

The health sector engages with MLDI on jurisdiction (e.g., if a death occurs in a health facility, the facility will refer reportable deaths to the MLDI authority for determination of jurisdiction), case transfer, and mass casualty management; and in some countries provide contractual forensic services. The public health agency may engage with MLDI for lab services of notifiable diseases and possibly the notifying of deaths if civil registration is a responsibility of the agency. The civil registration authority must ensure that all MLDI deaths are registered, and the national statistics agency is responsible for compiling MLDI statistics.

Other stakeholders may include the judiciary. For example, in some countries, magistrates are coroners; in other countries magistrates may play a role in directing police investigations.

Strong cooperation is needed among all stakeholder entities to ensure efficient and effective medicolegal death investigation and compilation of quality MLDI statistics. Therefore, some kind of coordination mechanism should be put in place. In some countries, this takes the form of a coordination committee with representation of all stakeholders. In other countries, the MLDI authority establishes MOUs with various stakeholders. For example, a medical examiner office may have an MOU with law enforcement regarding cooperation and responsibilities at a crime scene. These arrangements are not necessarily contained in legislation or regulations but should be put in place in a manner that ensures regular meetings and cooperation among stakeholders.

Guidance: Describe all stakeholders in the MLDI system and any coordination mechanism. You may need to consult with the MLDI authority and other stakeholders to answer the questions below, as coordination mechanisms may not be contained in the legal framework. In the comment sections, note if any key stakeholders are missing from the coordination mechanism, any barriers to stakeholder cooperation and opportunities for improved coordination.

- a. **Describe any stakeholder coordination mechanisms currently in place.** If the mechanism is a committee, describe the affiliation of members of the committee and who chairs the committee. In the comments, note any stakeholders that are missing from this mechanism.

Citation:

Comment:

- b. **Describe the frequency of stakeholder meetings** (including those required by the legal framework or MOUs, and those that take place on an ad hoc basis).

Citation:

Comment:

5. Qualifications of head of MLDI authority and head of subnational offices

Depending on the type of system, the head of the MLDI authority may be a Chief Medical Examiner (or similar term, such as National Forensic Pathologist), a Chief Coroner or, in a law enforcement-led system, the Chief of Police or Chief Prosecutor or the head of the Medicolegal Division with the police or prosecutor's office. Whatever the system, the head of the MLDI authority is responsible for ensuring that medicolegal deaths are investigated and the cause and manner of death are determined in an impartial and professional manner. The head of the MLDI authority holds significant powers and responsibilities and therefore the legal framework should set out the qualifications of the head of the MLDI authority to ensure that they have the necessary knowledge and skills to carry out their duties. Likewise, Medical Examiners, Coroners, and police or prosecutors at the subnational level (who answer to the head of the national system), must also be qualified to carry out their duties. The requisite qualifications differ for the head of a medical examiner system, coroner system, and law enforcement-led system. They are therefore discussed separately below. If your country has a medical examiner system, complete section 5A below. If your country has a coroner system, complete section 5B below. If your country has a hybrid system with both a Chief Medical Examiner and a Chief Coroner, complete sections 5A and 5B. If your country has a law enforcement-led system, complete section 5C.

5.A. Qualifications of Chief Medical Examiner (CME)

Good practice: Ideally, the CME is a trained forensic pathologist. However, given the lack of forensic pathology training programs globally, this may not be possible in many countries. At a minimum, the CME should be a physician certified in pathology, in accordance with your country's medical licensing or certification requirements. In addition to educational and professional licensing requirements, the legal framework should state the minimum numbers of years of experience required. While practices vary, in many jurisdictions 5 years is the minimum required experience. The CME should be a full-time official who is adequately paid. The CME should be selected or appointed or selected based on qualifications, and should enjoy civil service status, contractual agreements, or other similar types of protection, to ensure that they are not subject to political or police pressure or interference and they can only be dismissed or disciplined for appropriate cause.²² The CME should not be an elected official.

²² Melinek, J., et. Al, *National Association of Medical Examiners Position Paper: Medical Examiner, Coroner, and Forensic Pathologist Independence*, NAME Position Papers, Volume 3, Issue 1, p.95.

Depending on the size of the jurisdiction, there may be local offices below the level of the central office, each headed by a Medical Examiner (ME) who reports to the CME. Ideally, each of these MEs is a trained forensic pathologist; however, at a minimum the ME should be a physician certified in pathology, in accordance with your country's medical licensing or certification requirements. The minimum number of years of experience required will be less than that of the CME, and varies by jurisdiction. An ME should be a full-time official, adequately paid, and should enjoy civil service status, contractual agreements, or other similar types of protection, to ensure that they are not subject to political or partisan pressure or interference and they can only be dismissed or disciplined for appropriate cause.²³

Guidance: Describe the required qualifications for the CME and MEs and whether they enjoy civil servant status or similar protections. These qualifications may be contained in the laws establishing your MLDI authority. They may also be contained in your civil service laws, if these positions are civil service positions. In the comment sections, analyze any deficiencies in required qualifications.

- a. **Described any required qualifications for the CME**, including any licensing or certification requirements and years of experience. State whether the CME enjoys civil servant status or similar protections.

Citation:

Comment:

- b. **Describe any required qualifications for Medical Examiners that head local offices below the central level**, including any licensing or certification requirements and years of experience. State whether MEs enjoy civil servant status or similar protections.

Citation:

Comment:

5.B. Qualifications of Chief Coroner

Good Practice: The qualifications required to be Chief Coroner (CC) vary greatly across countries and jurisdictions. In many countries, a CC must be a legal professional (e.g., judge, lawyer or prosecutor), in some the CC must be a medical professional, and in other countries the CC must be either a legal or medical professional.²⁴ In some countries or jurisdictions, including in some parts of the U.S., there are no required qualifications and a coroner may be a layperson and is often an elected official. This is not good practice. Coroners must serve the public interest. If they are elected officials, they may be influenced by political or reelection concerns, which can interfere with the responsibility to render an impartial opinion

²³ Melinek, J., et. Al, *National Association of Medical Examiners Position Paper: Medical Examiner, Coroner, and Forensic Pathologist Independence*, NAME Position Papers, Volume 3, Issue 1, p.95.

²⁴ For example, in Australia, the Coroner is a magistrate with legal training. In Canada, some provinces have an ME systems and others have a coroner system. In those provinces with a coroner system, some by law require the coroner to be physician; others do not require the coroner to be a physician but the coroner generally has a medical, legal or investigative background. In Hong Kong, the Coroner is a judicial officer. In Ireland, the Coroner is appointed by local authorities and is a qualified doctor or lawyer. In New Zealand, coroners are Judges of the Coroners Court. In the United Kingdom the Coroner is an independent judicial office holder, appointed and paid for by the relevant local authority. In Spain, coroners are medical doctors.

on manner and cause of death. In addition, as lay persons, they may lack the knowledge and skills to fulfill the role of coroner.

The CC, whether a legal or medical professional, should be a trained and certified professional. A CC required to have a legal background should be licensed to practice law in their jurisdiction. A CC required to have a medical background should ideally be a forensic pathologist, but at a minimum should be a physician certified in pathology, in accordance with the country's medical licensing or certification requirements. The legal framework should state the minimum numbers of years of experience required to be CC. The CC should be a full-time official who is adequately paid. The CC should be selected or appointed based on qualifications, not a political appointee or elected official, and should enjoy civil service status, contractual agreements, or other similar types of protection, to ensure that they are not subject to political or partisan pressure or influence and they can only be dismissed or disciplined for appropriate cause.

Depending on the size of the country or jurisdiction, there may be local offices below the level of the central office, each headed by a Coroner who reports to the CC. Like the CC, the Coroner at the local level should be a qualified legal or medical professional, with qualifications similar to that of the CC, but with less required years of experience. A Coroner at the subnational level should be a full-time official and adequately paid. A subnational Coroner should be selected or appointed based on qualifications, not a political appointee or elected official, and should enjoy civil service status, contractual agreements, or other similar types of protection, to ensure that they are not subject to political or partisan pressure or influence and they can only be dismissed or disciplined for appropriate cause.

Guidance: Describe required qualifications and selection or appointment process for the Chief Coroner and Coroner. If the Chief Coroner is not a medical professional, describe who is responsible for the medical examination of the body. In the comment sections, analyze whether the qualifications for the Chief Coroner/Coroner and the person responsible for medical examination of the body are such that they ensure high quality information regarding cause and manner of death.

-
- a. Describe any required qualifications for the CC,** including any licensing or certification requirements and years of experience. State whether the CC enjoys civil servant status or similar protections.

Citation:

Comment:

- b. Describe any required qualifications for Coroners that head local offices below the central level,** including any licensing or certification requirements and years of experience. State whether Coroners enjoy civil servant status or similar protections.

Citation:

Comment:

5.C. Qualifications of the head of a law enforcement-led system

Good Practice: Some law enforcement-led systems have an internal medicolegal division with medical specialists within the police department or prosecutor's office. For example, the Philippine National Police has a Medicolegal Division headed by the Chief of Medicolegal, who is a pathologist, and each region has

its own medicolegal officer, who is also pathologist. Cases are referred to the medicolegal officers by the investigating officer on a case. Other law enforcement-led systems do not have internal medical experts and contract out for medical and forensic services. We discuss each type of law enforcement-led system separately.

In law enforcement-led systems with an internal medicolegal division, the Chief of the Medicolegal division (CML) (or similar term) ideally is a trained forensic pathologist. However, given the lack of forensic pathology training programs globally, this may not be possible in many countries. At a minimum, the CML should be a physician certified in pathology, in accordance with your country's medical licensing or certification requirements. In addition to educational and professional licensing requirements, the legal framework should state the minimum number of years of experience required. The CML should be a full-time official who is adequately paid. The CML should be selected or appointed based on qualifications, and should enjoy civil service status, contractual agreements, or other similar types of protection, in order to avoid being subject to influence or interference from other police officers or political actors.

Depending on available resources, each local police/prosecutor department at the subnational level may have a Medicolegal Officer. Ideally, each of these Medicolegal Officers is a trained forensic pathologist; however, at a minimum the Medicolegal Officer should be a physician certified in pathology, in accordance with your country's medical licensing or certification requirements. The minimum number of years of experience required will be less than that of the CML. A Medicolegal Officer should be a full-time official and adequately paid. A Medicolegal officer should be selected or appointed based on qualifications, and should enjoy civil service status, contractual agreements, or other similar types of protection, to ensure that they are not subject to outside pressure or interference and they can only be dismissed or disciplined for appropriate cause.

In a law enforcement-led system that contracts for medical forensic services, the chief of police or chief of a criminal investigation division or chief prosecutor will head the system and be responsible for ensuring that a medicolegal investigation is carried out. At the subnational level, the head of the local police department or head of criminal investigations at the local police department, or local prosecutor, will be responsible for medicolegal death investigations in that jurisdiction. Qualifications to be a police investigator vary by country. Seniority, as well as qualifications, is usually a consideration for becoming Chief of Police, chief of criminal investigations, and chief of a local police department or division. Chief Prosecutors must be lawyers with a specified level of experience.

Because the head of this type of system is not a medical professional, the medical examination of the deceased and determination of cause and manner of death should be conducted by an internal or outside forensic pathologist. (See Section 5 – Staffing and Qualifications of Staff).

Guidance: In question a and describe the required qualifications. In question b, describe who is responsible for conducting the medical examination of the body if the head of the system is not a medical professional. In the comment sections, analyze whether the required qualifications for the head of the system and the person responsible for medical examination are such that they ensure high quality information regarding cause and manner of death.

-
- a. Describe any required qualifications for the police officer or prosecutor that is the head of the law enforcement-led MLDI system, including years of experience.**

Citation:

Comment:

- b. If the head of the system is not a medical professional, describe who is responsible for conducting the medical examination of the body, including any required qualifications.**

Citation:

Comment:

6. Power to issue SOPs, practice guidelines

Good Practice: To help to achieve best practice and consistency in practices across the country, the head of the MLDI authority (e.g., Chief Medical Examiner, Chief Coroner, or Chief of Police/Chief of Medicolegal Division of Police or Prosecutor) should have the power to issue rules and standard operating procedures for medicolegal death investigations. These SOPs may be guided by international standards such as those by the International Organization for Standardization (ISO).

Guidance: Describe whether the head of the MLDI authority has the power to issue rules or SOPs. In the comments section note any observations regarding this authority and any opportunity for regulatory reform.

- a. Describe whether the head of the MLDI authority has the power to issue rules or SOPs to help achieve best practice and uniform practice across the country.**

Citation:

Comment:

7. Staffing

Good practice: The head of the MLDI system does not work alone. The determination of cause and manner of death often involves the work of a core team of specialists, which may include medicolegal death investigators, forensic pathologists, forensic anthropologists, forensic odontologists, forensic toxicologists, histologists, radiologists, forensic technicians/autopsy technicians and forensic photographers. (The roles of these specialists are described below). It is important that the CME, CC or head of the law enforcement-led system have access to these specialists, whether in-house or through contractual services.

In a well-resourced system, the office of the Chief Medical Examiner, Chief Coroner, or the police department or prosecutor's office may have a full core team of specialists on staff. Alternatively, some of these core specialists might be housed in a separate central government lab, where the office of the head of the MLDI authority can access these central services. For systems that have these types of professionals as core staff - either in the office of the CME/CC, within the police department/prosecutor's office, or in a separate government lab - the legal framework should describe the roles and responsibilities of each core position, and require that core personnel be appropriately certified. In addition, core forensic staff should enjoy civil service status, contractual agreements, or other similar

types of protection, to ensure that they are not subject to political or police pressure or interference and they can only be dismissed or disciplined for appropriate cause.²⁵

However, in many countries or jurisdictions, funding will be insufficient to support a full core team of forensic and medical professions in-house. Countries or jurisdictions without resources to retain a core team in-house or in a separate government lab often contract for these additional services with trained professionals, who may be located within medical or academic institutions or private entities. The use of non-governmental contractual referral services may be cost-effective but may not ensure an efficient and ready workforce that is available when needed.²⁶ In addition, there may also be quality concerns if oversight mechanisms and qualification requirements are not in place. If contractual services are used, the legal framework should require that all contractors be appropriately certified²⁷ and should also provide a mechanism for oversight of contractors.

Core specialist that the CME, CC, or the police department/prosecutor's office should have access to include:

The Medicolegal Death Investigator (MDI) investigates any death that falls under the jurisdiction of the medical examiner or coroner. The MDI is responsible for the body of the deceased and investigates the direct circumstances surrounding the death, whereas law enforcement is responsible for the crime scene and leads the broader criminal investigation. The MDI performs scene investigations with a focus on collecting evidence and developing information from the decedent and determines the extent to which further investigation by the ME/CC is necessary. MDIs should have a combination of education and skills encompassing areas of medicine and law.²⁸ In a law enforcement-led system, this role is usually performed by the police investigator.

The *forensic pathologist* is a subspecialist in pathology whose area of special competence is the examination of persons who die due to unnatural causes, or suddenly, unexpectedly, suspiciously, or violently. 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 reconstruct how a person received injuries. Forensic pathologists are trained in multiple forensic sciences as well as medicine. Other areas of science that the forensic pathologist must have a working knowledge of include: 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.²⁹

The primary task of a *forensic anthropologist* is to gather and interpret evidence to assist in the identification of human remains. They assess the age, sex, stature, ancestry and unique features of a skeleton, which may include documenting trauma to the skeleton and the time that has elapsed since death.

Forensic odontologists are highly experienced, specially trained dentists who use their expertise to help identify unknown remains and trace bite marks to a specific individual through dental comparison.

Forensic toxicologists perform scientific tests on bodily fluids and tissue samples to determine the presence or absence of any drugs or chemicals in the body. Working in a lab, the forensic toxicologist

²⁵ Melinek, J., et. Al, *National Association of Medical Examiners Position Paper: Medical Examiner, Coroner, and Forensic Pathologist Independence*, NAME Position Papers, Volume 3, Issue 1, p.95.

²⁶ Weedn, V.W., Model Medical Examiner Legislation, *Academic Forensic Pathology* 2015 5(4), pps 618-620, available at: <https://journals.sagepub.com/doi/10.23907/2015.065>

²⁷ Id., p 622.

²⁸ American Board of Medicolegal Death Investigators, FAQ website page, available at: <https://abMLDI.org/fag>.

²⁹ New Mexico Office of the Medical Investigator website, "About OMI", available at: <https://omi.unm.edu/about/fag/forensic-pathologist.html>

performs tests on samples collected by forensic pathologists during an autopsy or by crime scene investigators.

Histologists prepare and stain the tissue sections that are collected by the forensic pathologist during autopsy for microscopic examination. This field of study is a diagnostic tool for forensic pathologists to help determine the cause of death.³⁰

Radiologists are medical doctors that specialize in diagnosing and treating injuries and diseases using medical imaging (radiology) procedures such as X-rays, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, positron emission tomography (PET) and ultrasound.³¹ *Forensic radiology* is a specialized area of medical imaging using radiological techniques to assist pathologists in determining cause and manner of death.

Forensic technician/Autopsy technicians provide the pathologist support in conducting the postmortem examination and are responsible for cleaning, stocking, morgue management, body pick-up and release, and maintaining records. Forensic technician/autopsy technicians are not licensed clinicians and build capacity in these duties through on the job training and educational programs.

Forensic Photographers (also known as crime scene photographer or evidence photographer) is a professional photographer who is skilled in the art of producing detailed photographs that record the crime scene and the physical evidence within the crime scene as objectively and accurately as possible. A forensic photographer may also be responsible for taking photos of autopsy. A forensic photographer provides context images (showing evidence in context), close-up images (showing fine details), and overall images (showing the general layout of a crime scene) or produce a permanent, visual record of the scene. In some jurisdictions, forensic photography may not be a separate position but instead be included as a responsibility within the role of the forensic technician and/or medicolegal death investigator.

Guidance: Answer the questions regarding staffing. Note that this might be found in laws, office manuals, or terms of reference (TOR). For question d regarding contractual services: these requirements may be contained in SOPs or TORs, rather than legislation or regulations. In the comment sections, analyze whether the legal framework ensures that staffing is adequate, and whether additional needs are adequately met by properly trained contracted professionals. Note any gaps in the system and opportunities for regulatory reform.

- a. Describe the core team of specialists on staff in the office of the CME, CC, or within the police department/prosecutor's office .**

Citation:

Comment:

- b. Describe any core specialists on staff in any separate government laboratory facility.**

Citation:

Comment:

- c. If additional needs are met through contractual services:**

³⁰ Cuyahoga County Medical Examiner website, Histology, available at: <http://medicalexaminer.cuyahogacounty.us/en-US/Histology-Department.aspx>

³¹ American College of Radiology website, available at: <https://www.acr.org/Practice-Management-Quality-Informatics/Practice-Toolkit/Patient-Resources/About-Radiology>

- i. To whom are these services are contracted?
- ii. Describe the required qualifications for those to whom services are contracted.
- iii. Describe any oversight mechanisms of contractors established in the legal framework.

Citation:

Comment:

8. Accessibility of forensic services throughout the country and transportation

Good practice: Every person and every region of the country should have access to quality MLDI services. This is important for all system stakeholders, as well as for family members of the deceased.

The accessibility of medicolegal services depends partly on the location of MLDI authority offices throughout the country. Depending on the size of the country and available resources, there may be only one MLDI office in the country, located at the central level, or there may also be local offices at the sub-national level. Multiple offices have the advantage of local contact, ensuring that all deaths that should be referred to the MLDI system can be reviewed by the local medical examiner, coroner or police personnel.

However, even if there is a local office of the MLDI authority, that does not necessarily ensure that trained forensic pathologists and other forensic specialists are available at that level. The core staff in subnational offices may vary and the availability of contractual services for core forensic functions may be limited in some areas. For example, a district may have a local coroner office but the nearest accredited pathologist may be located in the regional capital or national capital. Or, a district may have medical examiner office, staffed by a trained pathologist, but may lack specialized equipment – such as CT and X-ray equipment - that is only available at the regional or national level office. Similarly, in a law enforcement-led system, the necessary personnel and/or equipment may not be available locally, either in-house or through contractual services.

Bodies must be transported from the scene of the death to an MLDI office with the necessary personnel and equipment. That MLDI office may be nearby, or may be in a distant city with the needed resources. Either way, transportation must be provided through a reliable formal service - such as MLDI morgue service or a medical transportation service -that follows set protocols for chain of custody, prevention of tampering, and maintenance of the body and other evidence. The family of the deceased should never be responsible for transporting the body, as this can result in loss of evidence.

Some countries use videoconferencing to overcome distribution of resource issues. This allows forensic pathologists or other medical/forensic professionals in regional offices to seek the advice of medical examiners in the central office and, if deemed necessary, a body can be transported to the central office.

Guidance: Describe accessibility of medicolegal services throughout the country. You may need to consult with the head of the MLDI authority to answer this question. In the comment section describe challenges faced, if any, due to availability and/or accessibility of medicolegal services.

Describe requirements regarding transportation of dead bodies. These may be found in law or SOPs. In the comment section analyze whether the legal framework adequately protects the integrity of the dead bodies and other evidence.

- a. Describe, as best as possible, what types of forensic experts and equipment are available at the national, regional and district level, whether through in-house services, government lab, or contractual services. Note any specific areas or regions of the country that lack forensic experts or equipment.

Citation:

Comment:

- b. Describe requirements in the legal framework regarding transportation of dead bodies.** State if protocols are in place for chain of custody and maintenance of the body and evidence.

Citation:

Comment:

9. Scope of Jurisdiction - Cases that must be referred to MLDI for investigation

Good practice: The legal framework should clearly state what types of cases must be referred to the MLDI authority (i.e., coroner, medical examiner, police) and who must report those cases.

Types of cases that fall within MLDI jurisdiction: Deaths due to known or suspected unnatural or external causes should be referred to the MLDI authority. This includes deaths due to violence, injury, self-harm, suspicious causes, and sudden or unexpected or unexplained deaths.³²

Under the Minnesota Protocol on the Investigation of Potentially Unlawful Death, all potentially unlawful deaths at the hands of the state must be investigated, and therefore should be referred to the MLDI authority. All deaths in custody should be viewed as a potentially unlawful death at the hands of the state, and therefore under the jurisdiction of the MLDI authority. "Deaths in custody" refers to those deaths in which the circumstances of the death place the decedent in either direct or indirect contact with law enforcement such as incarceration, apprehension, and pursuit. Deaths in custody include, but are not limited to, police shootings, arrest-related deaths, apprehension deaths, legal intervention deaths, and in-custody deaths.³³

Under the Minnesota Protocol, a "death at the hands of the state" includes not only deaths in custody, but also deaths linked to a possible state failure "to exercise due diligence to protect an individual or individuals from foreseeable external threats or violence by non-State actors". For example, the death of a prisoner killed by another inmate should be view as a potential state failure to protect the prisoner and should be referred to the MLDI authority. Deaths in state institutions other than prisons – such as publicly run psychiatric hospitals, elder facilities, and facilities for minors – should also to be referred to the MLDI authority. A prompt, impartial and effective investigation of these deaths is key to ensuring accountability.

Some countries or jurisdictions, including New Zealand, the State of California and the District of Columbia in the U.S., require deaths due medical or surgical intervention to be referred to the MLDI system. This is sometimes referred to as "therapeutic misadventure," which is defined as an injury or an adverse event caused by medical management rather than by an underlying disease.³⁴

³² The (U.S.) National Association of Medical Examiners Forensic Autopsy Performance Standards require the following types of cases to be referred to the CME/C for investigation: 1) deaths due to violence, 2) known or suspected non-natural deaths, 3) unexpected or unexplained deaths when in apparent good health, 4) unexpected or unexplained deaths of infants and children, 5) deaths occurring under unusual or suspicious circumstances, 6) deaths of persons in custody, 7) deaths known or suspected to be caused by diseases constituting a threat to public health, 8) deaths of persons not under the care of a physician.

³³ Mitchell, Roger A., et al., *National Association of Medical Examiners Position Paper: Recommendations for the Definition, Investigation, Postmortem Examination, and Reporting of Deaths in Custody*, Academic Forensic Pathology Journal, 2017, p. 606.

³⁴ Langford, N.J., Therapeutic Misadventure, Med. Sci. Law, 2010, Volume 50(4), pp. 179-182.

In addition, in many countries the death of a person not under the care of a physician must be reported to the MLDI authority in order for the MLDI authority to determine whether the death was due to natural or unnatural causes. This is often a requirement in countries where most people die in a health facility or under medical supervision. However, in countries where many or most people die at home, while not under the care of a physician, this could overwhelm the MLDI authority. In countries with these circumstances, the police, or a physician or other healthcare worker, may be responsible for making the decision on whether to refer the case to the MLDI authority. Thus, the police or healthcare worker would be responsible for determining whether the death was due to natural or unnatural causes. If they cannot make such a determination, the case should be referred to the MLDI authority.

There is often confusion as to how to treat cases of persons brought into a health facility dead on arrival (DOA) (also referred to as “brought in dead”). In these cases, if the deceased was under the care of physician who is able to determine cause of death and does not believe the death to be due to unnatural or suspicious causes, that physician should be responsible for certifying cause of death. This type of case is not referred to the MLDI authority. If the deceased was not under the care of a physician, this is a medically-unattended death and should be treated in the manner discussed in the above paragraph. Thus, in some countries all medically unattended DOA would be referred to the MLDI authority. However, in countries where this is not practical because it would overwhelm the MLDI authority, the attending physician at the health facility (or head of health facility) should be responsible for making the determination on whether to refer the case to the MLDI authority. If the attending physician believes the death is due to unnatural or suspicious causes or for any other reason cannot determine cause of death, the death should be referred to the MLDI authority.

In some countries or jurisdictions - for example, the District of Columbia in the U.S.³⁵ - deaths known or suspected to be caused by diseases constituting a threat to public health are referred to the MLDI authority in order to gain a better understanding of disease pathology. Types of diseases may include infectious diseases, highly contagious diseases or rare diseases. Medical examiner systems are more likely to include these types of cases within the jurisdiction of the MLDI authority than coroner or law enforcement-led systems, as law enforcement-led systems tend to focus more on deaths with a suspected criminal or negligence component.

Determination of Jurisdiction: While all of the above types of deaths should be referred to the MLDI authority, the head of the MLDI authority should have the power to conduct a preliminary investigation to determine whether the death is due to causes that fall within the jurisdiction of the MLDI authority, and therefore requires further investigation, or whether the death is due to natural causes and therefore jurisdiction may be declined. The legal framework should be clear in granting the head of the MLDI authority, or their designee, the power to determine whether jurisdiction exists based on information provided through reported information and the preliminary investigation process, which may include investigative work by a medicolegal death investigator, a forensic pathologist and/or other professional staff or contracted specialists. For deaths in custody in law enforcement-led systems, it is important that procedures are put in place to insulate the medicolegal officer/forensic pathologist from police department pressure or influence, in order to ensure an impartial evaluation of the cause and manner of death.³⁶

Guidance: Answer the questions below. In comment section, compare the law to best practice. Note whether the law is clear and comprehensive in scope regarding deaths that must be referred to the MLDI authority and whether the types of cases are appropriate for country context. Analyze whether the MLDI authority is protected from outside influence or pressure when investigating deaths in custody. Note any observations regarding the power to make a preliminary assessment and any gaps in the legal framework.

³⁵ Code of the District of Columbia, Title 5, Chapter 14, §5-1405 (requiring investigation of “Deaths related to disease which might constitute a threat to public health”).

³⁶ See Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, United Nations, 2004, at paragraphs 66 – 73, available at: <https://phr.org/issues/istanbul-protocol/>

a. Describe the types of cases that must be referred to the MLDI authority:

Citation:

Comment:

b. Describe whether the head of the MLDI authority has the authority to conduct an initial assessment to determine whether to accept jurisdiction over a referred case, and what factors (if enumerated in the law) go into that assessment. In a law enforcement-led system, pay particular attention to who (specifically) makes this initial assessment on whether the case is referred for MLDI.

Citation:

Comment:

c. Are deaths in custody referred to the MLDI authority? Is "deaths in custody" defined?

Citation:

Comments:

d. Describe how are dead on arrival cases are handled and if some or all are referred to the MLDI system.

Citation:

Comment:

10. Cases requiring autopsy

Good practice: An autopsy is a surgical procedure that consists of an examination of a corpse by dissection to determine the cause and manner of death and to evaluate any disease or injury that may be present. An autopsy should be conducted by a medical examiner, pathologist, or other physician trained in this type of examination.³⁷ In some jurisdictions, the term “autopsy” is used synonymously with the term “post-mortem examination”; in other jurisdictions, “post-mortem examination” is a broader term that encompasses both an external examination of the body and an internal examination by dissection. We use the term “autopsy” in this toolkit to refer to an internal examination of the body by dissection, and “post-mortem” to refer to the broader term.

Not all cases referred to the MLDI authority require an autopsy. In some cases, external examination, toxicology, tissue sampling (histology), radiographic imaging (x-ray, CT scan) or other examination methods may be sufficient. The law should authorize the head of the MLDI authority (chief coroner, chief

³⁷ Dolinak D., Matshes E.W., & Lew, E.O, Forensic Pathology: Principles and practice, Elsevier Academic Press, 2005

medical examiner, chief medicolegal officer/chief investigator) to determine whether an autopsy is needed. It is important that the head of the MLDI authority has the discretion to make this determination, as this conserves resources for the cases that are most in need of autopsy, which is especially important if a system has limited capacity for autopsies.³⁸ In systems where the head of the MLDI authority is not a medical professional, the head of the MLDI authority should make this determination in consultation with a forensic pathologist. For deaths in custody in a law enforcement-led system, it is important that procedures are put in place to insulate the medicolegal officer/forensic pathologist from police department pressure or influence in making a determination on whether an autopsy is needed.³⁹

The head of the MLDI authority should be authorized to issue guidelines for other coroners/medical examiners/medicolegal officers on when to perform an autopsy. These guidelines should reflect and be appropriate for the country context and available resources.⁴⁰

In cases where the head of the MLDI authority determines an autopsy is necessary, consent of next of kin should not be required. Some jurisdictions allow the next of kin to object to an autopsy on religious grounds and request an exemption. However, the head of the MLDI authority should have authority to deny the request for an exemption if the death is a suspected homicide or there is a public health reason to conduct the autopsy.⁴¹ The law should allow next of kin to challenge in court a denial of such a request for an exemption.

There has been a focus in recent years on “minimally invasive autopsy” and “virtual autopsy”, particularly in places where there is a cultural objection to autopsy. A minimally invasive autopsy is a systematic methodology targeting various organs and bodily fluids, that aims to provide sufficiently good quality samples for pathological and microbiological investigations to serve as a substitute for a complete dissection autopsy.⁴² A virtual autopsy is a non-invasive autopsy that uses various techniques including 3D surface scanning, CAT scans and MRIs as an alternative to a dissection autopsy.⁴³ Do not be confused by these terms. “Autopsy” has the meaning stated above (in the first paragraph of this section). “Minimally invasive autopsy” and “virtual autopsy” are alternative methods of examination that may be available to a pathologist to determine cause and manner of death. The important point is, the law should empower the medical examiner/forensic pathologist to determine the appropriate method to use to determine cause and manner of death; be that a full autopsy, or some other less invasive method. The head of the MLDI authority may issue guidelines or SOPs on when these methods are appropriate; however, the law should not dictate any particular method.

In the event the head of the MLDI authority determines an autopsy is *not* necessary, but police believe it is necessary, the Solicitor General/Chief Prosecutor should be able to appeal the decision to a court to order an autopsy.

Guidance: *In questions a and b*, describe who is authorized to conduct an autopsy and under what circumstances an autopsy is conducted. In the comment sections, analyze whether the law sufficiently empowers the head of the MLDI authority and associated medical professionals to make decisions appropriate for the country and medical context. *In questions c, d and e*, describe the circumstances and process for next of kin to object to an autopsy. In the comment section, state any observations about whether provisions for objection to autopsy ensure or hinder complete and accurate MLDI information. *In*

³⁸ See, e.g., Code of District of Columbia, §5-1409.

³⁹ See *Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*, United Nations, 2004, at paragraphs 66 – 73, available at: <https://phr.org/issues/istanbul-protocol/>

⁴⁰ The (U.S.) National Association of Medical Examiners (NAME) recommendations on when to conduct an autopsy can be found in the NAME Forensic Autopsy Performance Standards, available at: <https://www.thename.org/assets/docs/2016%20NAME%20Forensic%20Autopsy%20Standards%209-25-2020.pdf>

⁴¹ Weedn, V.W., Model Medical Examiner Legislation, *Academic Forensic Pathology* 2015 5(4), pps 621-622; See also New Zealand Coroners Act 2006, Sec. 33.

⁴² Basset, Q., *Minimally Invasive Autopsy: Welcoming a New Tool for Cause of Death Investigation in Children in Resource-constrained Countries*, *Journal of Tropical Pediatrics*, Volume 63, Issue 4, August 2017, Pages 249–252,

⁴³ Tejaswi, K.B, and Periya, E.A.H, *Virtopsy (virtual autopsy): A new phase in forensic investigation*, *Journal of Forensic Dental Sciences*, 2013 Jul-Dec; 5(2): 146–148.

question f, describe how requests for an autopsy by next of kin are handled. In the comment section, state any observations on appropriateness for context.

- a. **Describe who is authorized to conduct an autopsy** (pay attention to what credentials are required).

Citation:

Comment:

- b. **Describe the legal framework regarding when an autopsy is conducted** (which may be addressed in SOPs). Specifically address whether the head of the MLDI authority has the power to make this decision, and address whether a non-medical professional (coroner or investigating officer) must consult with a pathologist when making this decision.

Citation:

Comment:

- c. **Describe the legal framework regarding who may object to an autopsy, on what grounds such an objection can be made, and any process to challenge in court the decision to autopsy:**

Citation:

Comment:

11. Autopsy/External Examination Report and Case File

Good Practice: A medicolegal death investigation is not merely a matter of autopsy performance (or external examination) and determination of cause and manner of death. A series of steps comprises the totality of the investigation. Fulfillment of these steps strengthens - whereas omission weakens - the investigation and conclusions of the forensic pathologist, the medical examiner, or the coroner. The *case file* of a proper forensic death investigation consists of documentation of the scene and circumstances and autopsy (if one was done) using photography diagram and text.⁴⁴ The case file includes the investigation report, autopsy report (if one was conducted) and may include any or all of the following reports: toxicology, criminalist, gunshot residue, and a variety of other specialist reports. A case file also includes correspondence, medical records and any other documents related to the pathologist's investigation. (See section 21 for Archiving of Records and Access to Records).

An *autopsy or external examination report* (also called "post-mortem report" or pathologist report" or similar term) is part of the case file. At the conclusion of a case, the head of the MLDI authority (or their designee) should ensure that an Autopsy Report, or an External Examination Report if no autopsy was conducted, is completed. SOPs should set out the contents of this report, which should concisely present the following components:

⁴⁴ Dolinak, Matshes, & Lew. *Forensic Pathology: Principles and Practice*, Elsevier Academic Press, 2005, p.1.

- External examination
- Evidence of injury
- Evidence of medical therapy or treatment
- Internal examination (if autopsy conducted)
- Toxicology
- Summary of findings
- Cause and manner of death⁴⁵

This report should clearly and factually present findings for all completed components since it may be read by other physicians, law enforcement, attorneys, and family members. The law should require the medical professional that conducted the autopsy/external examination to complete and sign the report. Here again, for deaths in custody in a law enforcement-led system, it is important that the medicolegal officer/forensic pathologist have independence and autonomy to include all relevant evidence in an autopsy report without pressure or influence from others in the police department.⁴⁶ After the autopsy report is completed and signed it should be submitted to the head of the MLDI authority.

Peer Review of autopsy findings is an important tool to ensure quality reports and provide a vehicle for peer education. Peer review may involve both informal peer review in the mortuary and formal auditing of a set number of cases. Informal peer review involves a daily meeting of pathologists to discuss cases before a report is finalized and signed-out. Informal peer review is particularly important for criminal or criminally suspicious cases, deaths in custody, pediatric and high-profile cases,⁴⁷ as this helps ensure there is general agreement on the provisional cause of death.⁴⁸ Formal peer review involves a retrospective review by a second pathologist on a randomly selected, set proportion of all completed routine medicolegal cases. The reviewing pathologist does not necessarily have to completely agree with the conclusions, but must accept that they are reasonable with no obvious errors of fact.⁴⁹ Formal and informal review are important for continuous quality improvement.

Guidance: Describe any requirements in the legal framework regarding completion of an autopsy/external examination report, and any peer review process. In the comment section, analyze whether the legal framework helps ensure complete and high-quality information regarding the cause and manner of death and whether opportunity for regulatory reform exists.

-
- a. Describe any requirements in the legal framework regarding completion of an autopsy/external examination report.** Specifically note who is required to complete and sign the report (i.e., the medical professional who conducted the examination or the head of the office or both). Describe the contents of the report (this is usually contained in SOPs).

Citation:

Comment:

- b. Describe any process for peer review of autopsy/external exam findings.** (Note: You may need to discuss this with the head of the MLDI authority, as peer review procedures likely will be found in SOPs or office manuals, rather than law).

⁴⁵ Dolinak, Matshes, & Lew. *Forensic Pathology: Principles and Practice*, Elsevier Academic Press, 2005, p.69

⁴⁶ See *Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*, United Nations, 2004, at paragraphs 66 – 73, available at: <https://phr.org/issues/istanbul-protocol/>

⁴⁷ Obenson, K., *The value of 100% retrospective peer review in a forensic pathology practice*, Journal of Forensic and Legal Medicine, Volume 20, Issue 8, November 2013, Pages 1066-1068.

⁴⁸ Sims, D.N. et. al, *An approach to peer review in forensic pathology*, Journal of Forensic and Legal Medicine 20 (2013), pp. 402-403.

⁴⁹ Sims, D.N. et. al, *An approach to peer review in forensic pathology*, Journal of Forensic and Legal Medicine 20 (2013), pp. 402-403.

Citation:

Comment:

12. Powers of medical examiner/coroner to investigate

Good Practice: As stated above, a medicolegal death investigation is not merely a matter of autopsy performance (or external examination) and determination of cause and manner of death. A proper medicolegal death investigation includes documentation of the scene and circumstances,⁵⁰ because the ability of forensic pathologists to interpret autopsy findings depends on the context of the investigation. Therefore, it is important that the law mandate cooperation between the police and coroners, medical examiners, and other forensic pathologists investigating a death. The law should also provide coroners and medical examiners (and their designees) certain powers to investigate.

In a medical examiner or coroner system, the law should define the roles of law enforcement and the coroner/medical examiner with regard to the death scene. Law enforcement should have jurisdiction over the crime scene; while the coroner/medical examiner (or their designee) should have jurisdiction over the body itself. In coroner and medical examiner systems, the law should, at a minimum: 1) require the police to give timely notice of a death to the coroner/medical examiner,⁵¹ and 2) make clear that the coroner/medical examiner (or their designee) has the unquestioned authority to enter crime scenes secured by law enforcement for purposes of their death investigation.⁵² The law should also specify that the body of the decedent shall not be disturbed unless the medical examiner/coroner (or their designee) gives permission to do so⁵³, and permit the medical examiner/coroner to take pictures and other evidence relevant to the body. Because both the coroner/medical examiner (or their designee) and the police may both collect evidence at the death scene, there should be a duty between these entities to share relevant evidence. For example, the New Zealand Coroners Act requires the Commissioner of Police to “cause to be made all investigations . . . directed by the responsible coroner.”⁵⁴

In addition, medical examiners and coroners should have subpoena power in defined circumstances, including the power to subpoena medical records and other relevant information from healthcare workers, and the power to administer oaths and take affidavits. These powers are inherent in the common law power of coroners and the judicial powers of magistrates, and should also be afforded to medical examiners, as this helps provide the coroner/medical examiner a complete picture of the circumstances surrounding the death.⁵⁵

In a law enforcement-led system with an internal medicolegal division, there should be a similar mandate to cooperation with forensic pathologists working with the police and prosecutor – whether located within government or contracted from an outside entity - so that the forensic pathologist has access to the necessary evidence and information.

Finally, not all death scenes are crime scenes. For example, in cases of death due to suicide, accidental overdose, or injury, there may be a police officer on the scene, but not a homicide or criminal

⁵⁰ Dolinak, Matshes, & Lew. *Forensic Pathology: Principles and Practice*, Elsevier Academic Press, 2005, p.1.

⁵¹ See New Zealand Coroners Act, 2006, Section 18(2) (requiring police to notify coroner “as soon as practicable”).

⁵² Weedn, V.W., Model Medical Examiner Legislation, *Academic Forensic Pathology* 2015 5(4), p. 622. See also Code of the District of Columbia, Title 5, Chapter 14, §5-1406 (giving the Chief Medical Examiner authority to respond to the scene of the death); Fatalities Investigation Act (Alberta, Canada), Chapter F-6.1, Section 9.

⁵³ See Code of the District of Columbia, Title 5, Chapter 14, §5-1406 (providing that body shall not be disturbed unless CME grants permission to do so); Fatalities Investigation Act (Alberta, Canada), Chapter F-6.1, Section 12.

⁵⁴ New Zealand Coroners Act, 2006, Section 17(1).

⁵⁵ Weedn, V.W., Model Medical Examiner Legislation, *Academic Forensic Pathology* 2015 5(4), p. 622.

investigator. In these circumstances, in a coroner or medical examiner system, the medical examiner or coroner might lead the investigation rather than police.

Guidance: The questions below address required cooperation between entities and powers to investigate. These requirements and powers may be found in law and regulations, with more specifics in MOUs. In the comment sections, note any barriers to cooperation and any provisions that may prevent the medical examiner/coroner or medicolegal officer/outside pathologist from gathering necessary scene information or understanding the full circumstances.

- a. Describe any general duty of cooperation between investigative law enforcement and the medical examiner/coroner (or their designee), or the forensic pathologist working with law enforcement (whether internal or external to the system).**

Citation:

Comment:

- b. Describe the powers to investigate of medical examiners, coroners or the forensic pathologist working with law enforcement (whether internal or external to the system) at the crime scene.**

Address:

- i. power to enter a crime scene
- ii. authority to take custody of the body
- iii. power to prevent tampering with the body and related evidence
- iv. power to collect evidence, including taking pictures

Citation:

Comment:

- c. Describe the subpoena powers of the medical examiner or coroner.**

Citation:

Comment:

- d. Describe the powers of the medical examiner/coroner (or their designee) at a death scene that is not a crime scene (e.g., suicide, accidental overdose or injury).**

Citation:

Comments:

13. Medical Certificate of Cause of Death (MCCD)

Best Practice: As a component of the medicolegal death investigation, the medical examiner or other authorized physician (e.g., physician authorized by the coroner or police/prosecutor) conducting the forensic evaluation must certify the cause of death and manner of death. The WHO International Medical Certificate of Cause of Death form (MCCD), which includes structured sections for reporting immediate, antecedent and underlying causes of death and manner of death, should be used. Because certification of cause and manner of death is the practice of medicine, the MCCD must be completed by a qualified physician. The MCCD may be a separate document from the autopsy report or a component of it.

Cause of death (COD) is “all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced such injuries.”⁵⁶ Medical examiners/authorized physicians should follow the WHO MCCD reporting guidelines, presenting etiologically specific causes of death in the appropriate chronological and pathological sequence. This information is pertinent in the medicolegal death investigation and to inform policy for public health purposes.

The WHO recommended international MCCD form includes both COD and MOD sections for completion by a physician certifier. It is important that the manner of death, and not just the cause of death, be completed on the MCCD form. “Manner of death” (MOD) explains the circumstances in which a death arose. The International Classification of Diseases (ICD) classifies manner of death as disease, accident, intentional self-harm, assault, legal intervention, war, pending investigation, unknown, or “manner undetermined.” The WHO allows countries to modify the MCCD form and, in the case of the US, the classification of manner of death is simplified to only six categories which reflect the nine categories proposed in the WHO recommended form. The standard form recommended for use in the US classify manner as natural, accident, suicide, homicide, pending investigation, or “could not be determined.” Manner of death should be determined by the medical examiner/authorized physician to the best of their ability, even if the manner is “undetermined”. The WHO MCCD form and the modified US standard form are attached as Annex A to this module).

In some countries, the physician conducting the forensic examination is limited to only reporting COD and the police or prosecutor are responsible for reporting manner of death. This is not good practice for two reasons. First, the manner of death determined by the forensic investigation and certified on the MCCD serves purposes beyond those of just law enforcement; the MOD assists in clarifying the circumstances of death for public health and public safety purposes. Second, the manner of death determined by the medical examiner (e.g., homicide) has a different standard from MOD determined in legal proceedings (e.g., murder), and the two should not be confused. *Homicide, as a manner of death on the MCCD, is a statistical category for this public health document. For purposes of the forensic examination, a homicide is defined as death “at the hand of another”. It is not synonymous with “murder,” which is a legal term that involves intent. It is ultimately up to the legal system to determine how a death is criminally classified under law.*⁵⁷ While the MCCD (and autopsy findings) may be submitted as evidence in a legal proceeding, the MOD on the MCCD is a medical opinion, not a legally binding opinion. Accordingly, the MOD determined by the medical examiner is *not* changed based on the MOD determined in subsequent legal proceedings.

Guidance: Answer the questions below regarding certification of cause and manner of death. In the comment sections, note any gaps in the laws and opportunities for regulatory reform.

-
- a. **Describe who is authorized or required to certify cause of death in a MLDI case** (we are not concerned with natural deaths in this module). Pay attention to whether the certifier must be a qualified physician.

⁵⁶ World Health Organization, *International Classification of Diseases, 2016, volume 2*; See also *Health Topics*, World Health Organization website, available at: https://www.who.int/bulletin/volumes/84/3/mortality_glossary/en/

⁵⁷ NOLO website, Legal Articles, *What is Murder? Is Murder Different from Homicide?*, available at: <https://www.nolo.com/legal-encyclopedia/homicide-murder-manslaughter-32637.html>

Citation:

Comment:

- b. Is the certifier in a medicolegal death case required to complete the *manner of death*, as well as cause of death?**

Citation:

Comment:

- c. Is the WHO MCCD, or variation of it, the required form for certification of cause and manner of death in an MLDI case?** If the WHO MCCD form has been modified, does the form used by the MLDI system include the cause of death standard table (with parts I & II) and list manners of death that align with those on the WHO MCCD form?

Citation:

Comment:

14. Connection to the CRVS system: Death Registration and Statistics

Good Practice: As with other deaths, deaths that go to the MLDI system must be registered with the civil registration authority. In addition, the cause and manner of death information (from the MCCD) must be coded in accordance with the ICD and submitted to the national statistics authority. In general, the following steps happen to accomplish death registration and vital statistics generation, but the order of the steps may vary from country to country:

Submission to Civil Registrar: In most countries, the MLDI authority is responsible for submitting the MCCD form, and any other required information, to the civil registration authority. This serves to notify the death for registration purposes and provide legal COD information.⁵⁸ Some countries, such as Morocco, use a bifurcated form containing a section for personal information and a section for cause and manner of death information. With this type of form, the MLDI authority submits the personal information section of the form to the Registrar to notify the death, and submits the cause and manner of death information section of the form to the national statistics agency.⁵⁹ Timeframes for submission to the civil registrar are usually around 3 days, but vary from country to country.

Coding: After completion of the MCCD by the MLDI authority, the MCCD is shared with a mortality coding unit, which will code the MCCD according to the ICD. The location of the coding unit varies across countries; however, it is usually part of the civil registration authority, health authority, or statistics authority. Because timeframes for MCCD submission are usually short (around 3 days) and autopsies may take longer than this, it is acceptable and not unusual for an MCCD to be submitted to the coding authority with a “pending” cause and/or manner of death. The coding unit will follow up with the medical

⁵⁸ United Nations, *Guidelines on the Legislative Framework for Civil Registration, Vital Statistics and Identity Management*, January 2019, paragraph 352.

⁵⁹ United Nations, *Guidelines for the Legislative Framework for Civil Registration, Vital Statistics and Identity Management Systems*, New York, 2019, Para. 327.

examiner/authorized physician to resolve pending cases and other data quality issues limiting final coding of the MCCD form.

Submission to National Statistics Authority: Cause and manner of death information from medicolegal death investigations is essential for public health policy and planning. Therefore, anonymized MCCD information must be shared with the national authority responsible for compiling cause of death statistics. The pathway by which the MCCD information reaches the national statistics authority varies across countries. For example, in countries where the MLDI authority submits the MCCD to the civil registration authority, the civil registration authority is responsible for submitting anonymized MCCD information to the national statistics authority. In countries that use a bifurcated form, the MLDI authority is responsible for submitting the cause and manner of death section of the form to the national statistics agency.

Cause and manner of death data may also be shared with other agencies responsible for compilation of statistics on medicolegal deaths, such as law enforcement or the public health authority, which use this data for their own purposes and health interventions. However, reporting to other agencies should not replace reporting to the agency responsible for generating national cause of death statistics.

Process: The pathway by which the MCCD information reaches the coding authority, civil registration authority and national statistics authority varies across countries, depending on whether a single (non-bifurcated) form or bifurcated form is used and where the coding authority sits. Countries that are reviewing their MLDI laws are encouraged to undertake a business process mapping exercise in order to determine whether there is opportunity to improve the process.⁶⁰

Timeframes: The legal framework should clearly state required time frames within which: 1) the MLDI authority must submit MCCD information to the civil registrar, and 2) the civil registrar must submit MCCD information to the national statistics authority. For countries that use a bifurcated form, the legal framework should clearly state the timeframe within which the MLDI authority must submit the top portion of the form to the civil registrar and the timeframe in which the bottom portion must be submitted to the national statistics agency.

Amendments and corrections: The law should permit and have a process for the MLDI authority to amend COD and/or MOD information with the Registrar's office after an original MCCD has been submitted.⁶¹ Amendment would be needed if an MCCD was submitted to the Registrar with a "pending" cause of death, manner of death, or both. Amendment may also be needed to change a COD/MOD if further investigation reveals new facts. In addition, in some instances, there may be a need to update name and demographic information; for instance, in the case of a previously unidentified or misidentified person.

Guidance: Answer the questions below regarding submission of the MCCD to the civil registration, national statistics and coding authorities, and any amendment process. In the comments section, analyze whether there are any gaps in the system and whether all medicolegal deaths reach the registrar and national statistics agency or whether some might fail to be reported and captured in official MLDI statistics.

-
- a. Describe the process by which the MLDI authority submits an MCCD to the civil registration authority, including any time requirement for reporting.**

Citation:

Comment:

⁶⁰ For more information on business process mapping, see: Cobos Muñoz et al., *Better data for better outcomes: the importance of process mapping and management in CRVS systems*, BMC Medicine, 18:67, 2020.

⁶¹ See *Medical Examiners and Coroners' Handbook on Death Registration and Foetal Death Reporting*, page 6 (requiring medical examiner/coroner to deliver a supplemental report of cause of death to the State vital statistics office when autopsy findings or further investigation reveals the cause of death to be different from what was originally reported.)

- b. Is there a process for a medical examiner/coroner/medicolegal officer to amend a MCCD after submission of an original MCCD to the civil registration authority? If yes,**
- i. Describe the process.
 - ii. Can COD and MOD be amended?
 - iii. Can name and demographic information be amended?

Citation:

Comment:

- c. Describe the process by which MCCD information is shared with the national statistics authority,** including any time requirements for reporting and requirements to anonymize. Note whether there is a process to submit amended cause and manner of death information to the national statistics authority after the official deadline, and whether this amended information is included in updated national statistics.

Citation:

Comment:

15. Time Limits on Investigation

Good Practice: MLDI authorities should strive to complete medicolegal death investigations within a reasonable timeframe. Standard timeframes for completion of investigation vary by country. The National Association of Medical Examiners (U.S) encourages medical examiners to strive to complete 90% of autopsies within 90 days. However, complex cases may take more time and the medical examiner/pathologist should have the right to revise a cause or manner of death if additional information becomes available.

Some laws define a timeline for completion of the investigation and/or mechanisms to foster timely completion. For example, in the United Kingdom and New Zealand, investigations must generally be completed within one year. If a coroner has not completed an investigation within one year, the Chief Coroner must monitor the case.⁶²

Guidance: Answer the questions below regarding time limits on medicolegal death investigations. Time limits may be found in law or SOPs. In the comments section, state any observations about the time required to complete an investigation, by law and in practice.

- a. Describe whether the legal framework requires a medicolegal death investigation to be completed within a certain amount of time.**

Citation:

Comment:

⁶² U.K. Coroners and Justice Act 2009, Sec. 16; New Zealand Coroners Act 2006, Sec. 94A.

b. If time limits exist, are there exceptions to the time limits?

Citation:

Comment:

c. Describe any actions that must be taken if an investigation is not completed within prescribed time limits:

Citation:

Comments:

16. Mass Fatality Management

Good Practice: Traditionally, a mass fatality has been defined as any incident resulting in more decedents to be recovered and examined than can be managed in the local Medical Examiner/Coroner/police jurisdiction. More recently, the definition has been shifting to include any incident that results in or has the potential to result in the death of a certain number of individuals.⁶³ A mass fatality may be due to a natural event (e.g., cyclone, earthquake, flood) or a man-made event (e.g. terrorism, stampede). A mass fatality might also be due to natural causes, such as a pandemic.

In a mass fatality, as with other medicolegal deaths, the MLDI authority is responsible for the medicolegal investigation of the incident. A mass fatality incident does not diminish this responsibility. The identification of the deceased and the official certification of cause and manner of death are the sole responsibility of the MLDI authority in the jurisdiction in which the disaster occurs.⁶⁴ However, additional assistance from other organizations and agencies may be needed during a mass fatality incident.

To balance the need to maintain data quality but also meet the overwhelming demand, the law should authorize or mandate the head of the MLDI authority to develop a mass fatality management response plan in close collaboration with the health authority, disaster management authority, and other relevant government authorities.⁶⁵ Such a plan is usually set out in SOPs, rather than law. The law should also authorize the Chief Medical Examiner/Chief Coroner to enter into agreements with, or request additional assistance from, other entities in the event of a mass fatality.⁶⁶ The District of Columbia law establishing the medical examiner office provides a good example of legal provisions that enable the head of the MLDI authority to respond effectively to disasters. The provisions in the D.C. law covering mass fatality management can be found here: <https://code.dccouncil.us/dc/council/code/sections/5-1406.01.html>

Guidance: Answer the questions below regarding procedures in the event of a mass fatality. In the comments section, analyze whether the law enables an effective response to mass fatalities.

a. Describe any specific provisions in the legal framework that address procedures in the event of a mass fatality.

⁶³ National Association of Medical Examiners, *Standard Operating Procedures for Mass Fatality Management*, 2010, p.3.

⁶⁴ National Association of Medical Examiners, *Standard Operating Procedures for Mass Fatality Management*, 2010, p.33.

⁶⁵ See, e.g., Code of District of Colombia, Title 5, Chapter 14, Chief Medical Examiner, §5-1406.1.

⁶⁶ National Association of Medical Examiners, *Standard Operating Procedures for Mass Fatality Management*, 2010, p.3; see, e.g., Code of District of Colombia, Title 5, Chapter 14, Chief Medical Examiner, §5-1406.1.

Citation:

Comments:

- b. Does the law authorize or mandate the head of the MLDI authority to develop a mass fatality response plan, or to take part in another agency's planning process?**

Citation:

Comment:

- c. Does the head of the MLDI authority have power to enter into agreements with, or request additional assistance from, other agencies in the event of a mass fatality?**

Citation:

Comments:

17. Resources

Good practice: Adequate financial resources, facilities and equipment are necessary to ensure that findings and results of medicolegal death investigations are accurate, complete and timely. Therefore, the legal framework should include provisions to ensure sustainable funding of the MLDI authority through national or sub-national budgets. In addition, any revenue generated from MLDI authority services should be retained to fund the authority rather than going to the central treasury (if permitted under the country's legal frameworks and governance structure).

Resources include more than just funding and different legal frameworks ensure adequate resources in different ways. For example, the UK Coroners and Justice Act 2009 requires local public health authorities to "make available enough funds and other resources, to enable those [medical examiner] functions to be discharged in its area", and requires "relevant authorities" to "secure the provision of whatever officers and other staff are needed by the coroners for that area to carry out their functions" as well as providing or ensuring accommodation.⁶⁷ The Code for the District of Columbia (in the U.S) requires the Mayor to "provide such facilities and equipment, as the OCME (Office of the Chief Medical Examiner) shall require".⁶⁸

Guidance: Answer the questions regarding committed funding and other resources for MLDI functions and services. In the comments section, analyze whether the law guarantees sufficient financial and other resources to ensure high quality results and findings from the MLDI authority.

- a. Describe any legal provisions regarding committed funding and/or other resources (e.g. staff, facilities, equipment) for the MLDI authority.**

Citation:

Comments:

⁶⁷ UK Coroner's and Justice Act 2009, §§ 19(2), 24

⁶⁸ Code of the District of Columbia, Title 5, Chapter 14, §5-1403

18. Training

Good Practice: All staff within the MDLI authority – including medical examiners, coroners, forensic pathologists, other forensic specialists, and medicolegal death investigators - must be trained and periodically retrained in their specific area of practice and the relevant technical skills and methods necessary to conduct a quality medicolegal death investigation. To this end, continuing medical education courses in forensic pathology and other areas of forensics should be required, or at a minimum available, to medical professionals in the MLDI system; and continuing education courses on investigation techniques and forensics should be available to medicolegal death investigators.

To improve the quality of cause of death of information, medical examiners and forensic pathologists must also be trained in medical certification of cause of death and correct completion of the WHO MCCD standard form. To this end, medical certification of cause of death should be included in mandatory curricula for all medical students and in post-graduate medical education and professional in-service trainings.⁶⁹ In addition, well-trained coders applying ICD coding rules and principles are essential to the production of high-quality mortality data. Therefore, it is recommended that a dedicated ICD-coder cadre be created, funded, and adequately trained and re-trained.⁷⁰

Guidance: Answer the questions below regarding education and training of medical students, physicians, forensic pathologists and other forensic specialists, and coders. Note that requirements related to training for medical students are likely to be contained in the rules related to the curricula of medical schools. Requirements related to post-graduate continuing medical education requirements might be found in the rules of the country's medical association or other professional associations that accredits and licenses medical or forensic professionals). In the comment section, describe whether the law aligns with best practice and note any recommendations for regulatory reform.

-
- a. Describe the legal framework related to continuing medical education for medical examiners, forensic pathologists and other forensic medical professionals in the MLDI system.** Indicate whether continuing medical education is required for licensure, optional, or available.

Citation:

Comment:

- b. Describe the legal framework related to training for other staff within the MDLI authority (such as medicolegal death investigators and forensic technicians).**

Citation:

Comments:

- c. Is training during medical school in medical certification of cause of death required? optional? available?**

⁶⁹ World Health Organization, Strengthening Civil Registration and Vital Statistics for Births, Deaths, and Causes of Death, Resource Kit, 2012, Module 4.

⁷⁰ World Health Organization, Strengthening Civil Registration and Vital Statistics for Births, Deaths, and Causes of Death, Resource Kit, 2012, Modules 4, 5.

Citation:

Comments:

- d. Is continuing medical education in medical certification of COD for medical examiners and other medical professionals in the MLDI system required? optional? available?**

Citation:

Comments:

- e. Is a training program established for ICD coders?**

Citation:

Comments:

19. Supervision and Enforcement

Best Practice: High-quality cause and manner of death of information in MLDI cases can only be achieved if medicolegal professionals comply with laws, SOPs and other guidance. A system of supportive supervision by the head of the MLDI authority -with reporting, monitoring, and feedback – should be in place to ensure that staff within the medicolegal authority perform their jobs to the best of their ability.

However, for those that intentionally or negligently fail to comply with their duties, the law should contain mechanisms to enforce compliance, including warnings, sanctions, and civil or criminal penalties. Medical examiners, coroners, medicolegal police officers and contractual medicolegal experts should be subject to penalties for failure or refusal, without reasonable excuse, to submit a post-mortem report or investigation report in compliance with law. Members of the public should be subject to penalties for failure or refusal to comply with requests for information, warrants or subpoenas; intentionally providing false or misleading information; and interference with an investigation or crime scene. There should also be penalties for dissemination of information that was restricted due to an ongoing investigation.⁷¹

In addition, civil servants, medical examiners, coroners, and police may be subject to disciplinary action under civil service laws for failure to carry out duties. Medical professionals may be subject to sanctions or license suspension or revocation for failure to comply with professional standards.

Guidance: Answer the questions below regarding supervision of MLDI authority staff, and penalties for lack of compliance. For medical examiners, coroners, and police be sure to analyze civil service laws and rules of professional associations, in addition to penalties contained in civil and criminal laws. State clearly who is subject to each kind of penalty. In the comments sections, analyze whether there are any gaps in the enforcement scheme; i.e. does the law adequately compel compliance?

- a. Describe any provisions in the legal framework regarding supportive supervision of staff in the medicolegal authority.**

Citation:

Comment:

⁷¹ See, e.g., New Zealand Coroners Act 2006, Sections 134- 139A.

b. Describe provisions in the legal framework that enforce compliance by:

- i. Medical examiners, coroners, and police/medicolegal officers (and their staff and contractors):

Citation:

Comment:

- ii. Members of the public:

Citation:

Comment:



Annex A – WHO MCCD Form & US Standard MCCD Form

International form of medical certificate of cause of death (WHO 2016)

<i>Administrative Data</i> (can be further specified by country)																	
Sex	<input type="checkbox"/> Female			<input type="checkbox"/> Male			<input type="checkbox"/> Unknown										
Date of birth	D	D	M	M	Y	Y	Y	Y	Date of death	D	D	M	M	Y	Y	Y	Y
Frame A: Medical data: Part 1 and 2																	
<p>1 Report disease or condition directly leading to death on line a</p> <p>Report chain of events in due to order (if applicable)</p> <p>State the underlying cause on the lowest used line</p>			Cause of death		Time interval from onset to death												
		a															
		b	Due to:														
		c	Due to:														
d	Due to:																
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)																	
Frame B: Other medical data																	
Was surgery performed within the last 4 weeks?	<input type="checkbox"/> Yes			<input type="checkbox"/> No			<input type="checkbox"/> Unknown										
If yes please specify date of surgery	D	D	M	M	Y	Y	Y	Y									

If yes please specify reason for surgery (disease or condition)													
Was an autopsy requested?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown									
If yes were the findings used in the certification?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown									
Manner of death:													
<input type="checkbox"/> Disease		<input type="checkbox"/> Assault			<input type="checkbox"/> Could not be determined								
<input type="checkbox"/> Accident		<input type="checkbox"/> Legal intervention			<input type="checkbox"/> Pending investigation								
<input type="checkbox"/> Intentional self harm		<input type="checkbox"/> War			<input type="checkbox"/> Unknown								
If external cause or poisoning:				Date of injury		D	D	M	M	Y	Y	Y	Y
Please describe how external cause occurred (If poisoning please specify poisoning agent)													
Place of occurrence of the external cause:													
<input type="checkbox"/> At home		<input type="checkbox"/> Residential institution		<input type="checkbox"/> School, other institution, public administrative area				<input type="checkbox"/> Sports and athletics area					
<input type="checkbox"/> Street and highway		<input type="checkbox"/> Trade and service area		<input type="checkbox"/> Industrial and construction area				<input type="checkbox"/> Farm					
<input type="checkbox"/> Other place (please specify):								<input type="checkbox"/> Unknown					
Fetal or infant Death													
Multiple pregnancy				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown							
Stillborn?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown							
If death within 24h specify number of hours survived						Birth weight (in grams)							
Number of completed weeks of pregnancy						Age of mother (years)							
If death was perinatal, please state conditions of mother that affected the fetus and newborn													
For women, was the deceased pregnant?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown							
<input type="checkbox"/> At time of death				<input type="checkbox"/> Within 42 days before the death									
<input type="checkbox"/> Between 43 days up to 1 year before death				<input type="checkbox"/> Unknown									
Did the pregnancy contribute to the death?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown							

U.S. STANDARD CERTIFICATE OF DEATH

LOCAL FILE NO.

STATE FILE NO.

NAME OF DECEDENT
For use by physician or institution

1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)		2. SEX	3. SOCIAL SECURITY NUMBER	
4a. AGE-Last Birthday (Years)	4b. UNDER 1 YEAR	4c. UNDER 1 DAY		5. DATE OF BIRTH (Mo/Day/Yr)
	Months	Days	Hours	
6. BIRTHPLACE (City and State or Foreign Country)		7a. RESIDENCE-STATE		
7b. COUNTY		7c. CITY OR TOWN		
7d. STREET AND NUMBER		7e. APT. NO.	7f. ZIP CODE	7g. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input type="checkbox"/> No
8. EVER IN US ARMED FORCES? <input type="checkbox"/> Yes <input type="checkbox"/> No		9. MARITAL STATUS AT TIME OF DEATH <input type="checkbox"/> Married <input type="checkbox"/> Married, but separated <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Never Married <input type="checkbox"/> Unknown		10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)
11. FATHER'S NAME (First, Middle, Last)			12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)	
13a. INFORMANT'S NAME		13b. RELATIONSHIP TO DECEDENT		13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)
14. PLACE OF DEATH (Check only one: see instructions)				
IF DEATH OCCURRED IN A HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival		IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Decedent's home <input type="checkbox"/> Other (Specify):		
15. FACILITY NAME (if not institution, give street & number)		16. CITY OR TOWN, STATE, AND ZIP CODE		17. COUNTY OF DEATH
18. METHOD OF DISPOSITION: <input type="checkbox"/> Burial <input type="checkbox"/> Cremation <input type="checkbox"/> Donation <input type="checkbox"/> Entombment <input type="checkbox"/> Removal from State <input type="checkbox"/> Other (Specify):		19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)		
20. LOCATION-CITY, TOWN, AND STATE		21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY		
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT				23. LICENSE NUMBER (Of Licensee)

ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH		24. DATE PRONOUNCED DEAD (Mo/Day/Yr)	25. TIME PRONOUNCED DEAD
26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)		27. LICENSE NUMBER	28. DATE SIGNED (Mo/Day/Yr)
29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)		30. ACTUAL OR PRESUMED TIME OF DEATH	31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? <input type="checkbox"/> Yes <input type="checkbox"/> No

CAUSE OF DEATH (See instructions and examples)			Approximate interval: Onset to death
32. PART I. Enter the <u>chain of events</u> --diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.			
IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)	a. _____	Due to (or as a consequence of):	
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	b. _____	Due to (or as a consequence of):	
	c. _____	Due to (or as a consequence of):	
	d. _____	Due to (or as a consequence of):	

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I		33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input type="checkbox"/> No
		34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown	36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	37. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined
--	--	--

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No
--	--------------------	---	---

42. LOCATION OF INJURY: State: _____ City or Town: _____			
Street & Number: _____		Apartment No.: _____ Zip Code: _____	
43. DESCRIBE HOW INJURY OCCURRED:			44. IF TRANSPORTATION INJURY, SPECIFY: <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify)

45. CERTIFIER (Check only one):

Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated.

Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated.

Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated.

Signature of certifier: _____

Annex B – Resources

Suggested Reading

General MLDI information

Dr. Judy Melinek, *A Forensic Primer for Journalists*, Forensic Pathology Forum, January 9, 2015, available at: <http://pathologyexpert.blogspot.com/2015/01/a-forensic-primer-for-journalists.html?m=1>

National Academy of Sciences, *Medicolegal Death Investigation System: Workshop Summary*, 2003, available at: <https://www.nap.edu/catalog/10792/medicolegal-death-investigation-system-workshop-summary>

Weedn, V.W., *Model Medical Examiner Legislation*, *Academic Forensic Pathology* 2015 5(4), pps 618-620, available at: <https://journals.sagepub.com/doi/10.23907/2015.065>

Ethics and Independence

Melinek, J., et. al, *National Association of Medical Examiners Position Paper: Medical Examiner, Coroner, and Forensic Pathologist Independence*, NAME Position Papers, Volume 3, Issue 1, pp. 93- 98.

International Association of Coroners and Medical Examiners Code of Ethics, available at: <https://theiacme.com/page/Ethics>.

Deaths in Custody

Minnesota Protocol on the Investigation of Potentially Unlawful Death, United Nations, Office of the High Commissioner on Human Rights (2016), available at: <https://www.ohchr.org/EN/Issues/Executions/Pages/RevisionoftheUNManualPreventionExtraLegalArbitrarily.aspx>

Mitchell, R. et. al, *National Association of Medical Examiners Position Paper: Recommendations for the Definition, Investigation, Postmortem Examination, and Reporting of Deaths in Custody*, *Academic Forensic Pathology*, 2017 7(4): 604-618

Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, United Nations, 2004, available at: <https://phr.org/issues/istanbul-protocol/>

Inquests

Paul, MacMahon, *The Inquest and the Virtues of Soft Adjudication*, 33 *Yale Law & Policy Review* 275 (2015) available at: <https://ylpr.yale.edu/inquest-and-virtues-soft-adjudication>

Peer Review Process

Obenson, K., *The value of 100% retrospective peer review in a forensic pathology practice*, *Journal of Forensic and Legal Medicine*, Volume 20, Issue 8, November 2013, Pages 1066-1068, available at: <https://pubmed.ncbi.nlm.nih.gov/24237821/>

Sims, D.N. et. al, *An approach to peer review in forensic pathology*, *Journal of Forensic and Legal Medicine*, 20 (2013), pp. 402-403, available at: <https://pubmed.ncbi.nlm.nih.gov/23756506/>

Business Process Mapping

Cobos Muñoz et al., *Better data for better outcomes: the importance of process mapping and management in CRVS systems*, *BMC Medicine*, 18:67, 2020.

Example Laws

Coroner Laws

New Zealand Coroners Act 2006: <http://www.legislation.govt.nz/act/public/2006/0038/latest/whole.html>

U.K. Coroners and Justice Act 2009:

<http://www.legislation.gov.uk/ukpga/2009/25/contents>

Medical Examiner Laws

Code of the District of Columbia, Title 5, Chapter 14, Chief Medical Examiner:

<https://code.dccouncil.us/dc/council/code/titles/5/chapters/14/>

Alberta Canada, Fatalities Investigations Act, Chapter F-6.1, available at:

<https://www.assembly.nl.ca/legislation/sr/statutes/f06-1.htm>

Model MLDI legislation

National Commission on Forensic Science, *Recommendation to the Attorney General Model Legislation for Medicolegal Death Investigation Systems*, January, 2017, available at:

<https://search.justice.gov/search?query=Recommendation+to+the+Attorney+General+Model+Legislation+for+Medicolegal+Death+Investigation+Systems&op=Search&affiliate=justice-archive>