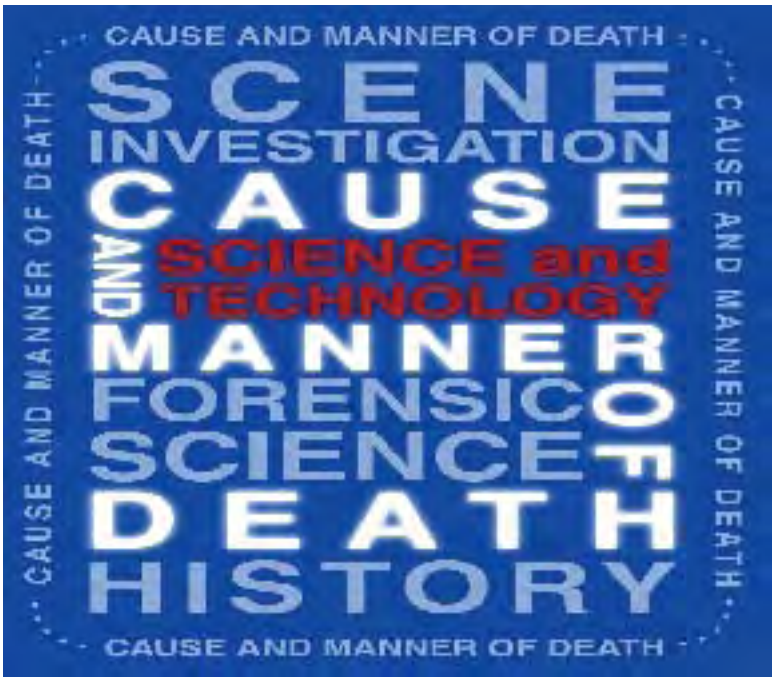
chapter 8



Bruce Levy, M.D.
Jeffrey Jentzen, M.D.
Steven Clark, Ph.D.

The Pre-Autopsy Report

Reporting Scene Findings to the Pathologist

The forensic autopsy begins at the scene. No physician would operate on a patient without first understanding the medical issue under consideration. Simply hoping to discover the problem during the operation is unacceptable in today's medical world. Without critical scene information, the forensic pathologist is forced to make the same professional error. This chapter focuses on those data identified as "critical" to cause and manner of death determinations to be included in the pre-autopsy report to the pathologist.

OVERVIEW

The National Association of Medical Examiners (NAME) includes the scene investigation as part of its forensic autopsy performance standards, and forensic pathologists in general consider a specific set of data critical to the determination of cause and manner of death with regard to SUIDI. This chapter covers the critical data items necessary to collect at the scene and the contents and development of the narrative report. The critical issues, known as the SUIDI Top 25, are covered in order of appearance from the Summary for Pathologist section of the SUIDI Reporting Form. In addition, the basic style of the narrative report is described along with an example report.

SUPPORT MATERIALS

1. SUIDI Top 25 list.
2. SUIDI Reporting Form.
3. Medicolegal Death Investigation Log (SUIDI). http://www.mdilog.net.
4. Forensic Autopsy Performance Standards. Atlanta, Ga: National Association of Medical Examiners. 2005. http://www.thename.org.

CHAPTER OBJECTIVES

By the end of this chapter, students will be able to:

1. Document case information.
2. Document sleeping environment.
3. Document infant history.
4. Document family information.
5. Document external scene examination.
6. Develop narrative report to the pathologist.

unit

23 — Document Case Information

INTRODUCTION

This unit outlines and reviews the general case information documented at each death scene for inclusion in the pre-autopsy report to the pathologist and the general case file. The name and location of the investigating agency, the case investigator's name, investigative case number, and basic information about the decedent including name, date of birth, and date and time that death was pronounced are included, along with the date and time when the investigation was initiated. This "general" case information must be collected and verified at every death scene before reporting to the pathologist.

DOCUMENT GENERAL CASE INFORMATION

Investigator Name

Other investigators, law enforcement officials, or legal personnel may need to obtain and review the information contained in the pre-autopsy report. As such, it is important that the investigator includes his or her full name and contact information on all official documentation.

Agency and Phone Number

While few cases are investigated by multiple agencies, there is a national effort underway to promote the sharing of case information among the various county offices in the United States. By including his or her respective agency and its phone number, the investigator assists in the collection and analysis of all submitted case information.

Date and Time Investigated

The date and time when the investigation took place should be documented as accurately as possible. Investigators should use 24-hour (military) time format and remember that 0000 (midnight) marks the beginning of a new day.

Case Number

Each jurisdiction or agency has its own numbering system for death investigation cases, but it is important that the investigator include the case number for the case in question. Should law enforcement, medical, or legal personnel need to review the case's information or reports, the case number will be a key detail in their inquiry.

Decedent Name (Last, First)

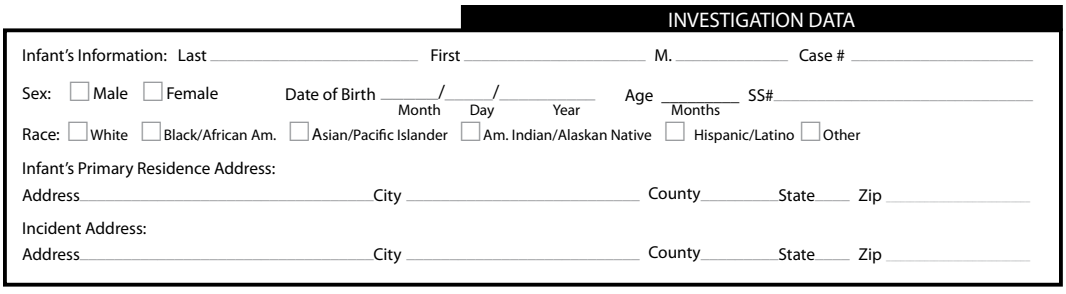
The investigator should carefully verify and document the decedent's full name, placing the surname ("family" or last name) first.

Date of Birth

Since many complications in young infants are closely related to age, it is critical that the investigator verifies and documents the date of birth of the infant in question.

Date and Time Pronounced Dead

The date and time when the infant was pronounced dead should be documented as accurately as possible. This information is used along with the date and time of the investigation to create a timeline of important events related to the infant death. Investigators should use 24-hour (military) time format and remember that 0000 (midnight) marks the beginning of a new day.


INVESTIGATION DATA

Infant's Information: Last _____ First _____ M. _____ Case # _____

Sex: ☐ Male ☐ Female Date of Birth ____/____/____ (Month / Day / Year) Age _____ (Months) SS# _____

Race: ☐ White ☐ Black/African Am. ☐ Asian/Pacific Islander ☐ Am. Indian/Alaskan Native ☐ Hispanic/Latino ☐ Other

Infant's Primary Residence Address:

Address _____ City _____ County _____ State _____ Zip _____

Incident Address:

Address _____ City _____ County _____ State _____ Zip _____

Fig 8.1: Demographic section of the SUIDI Reporting Form.

unit

24 — Document Sleeping and Immediate Environment

INTRODUCTION

The purpose of this unit is to detail the known conditions that pose a risk for unnatural infant death. In most cases, these factors have to do with the infant's immediate environment and sleeping surface. This unit reviews the various forms of asphyxia, the sleep surface, and various environmental hazards from the investigator's point-of-view. Each topic is briefly described, followed by suggested documentation methods for reporting to the pathologist.

DOCUMENT ASPHYXIA CONCERNS

Overlaying

Overlaying typically occurs when adults share sleep surfaces with infants and unknowingly "rollover" the infant while asleep, causing the infant to suffocate. The investigator should determine if anyone was sleeping with the infant and document who that person was, including his or her approximate weight, height, and age. The investigator should document the found position of the infant and anyone else who was in bed with the infant using a doll reenactment. Photographs of the reenactment will assist the pathologist in determining cause of death.

Wedging

Wedging typically occurs when an infant gets "stuck" between two objects. This can happen when infants are put to sleep in cribs with a mismatched mattress or on couches with "overstuffed" cushions. As with overlaying, photographs of the doll reenactment are critical to the pathologist. Naturally, photographs of the placed and found positions are important, but possible wedging cases also require photographs of the sleeping surfaces, surrounding objects (pillows, cushions, etc.) as well as measurements documenting distances between objects (mattress and bed frame, gap between cushions, mattress and wall, etc.) to identify a possible cause of death.

Choking

Choking occurs when items lodge in the infant's airway. Anything small enough to fit in the child's mouth is a potential choking hazard. Investigators should ask questions about the child's behavior and activities prior to death and investigate the surrounding area for objects that may pose a choking risk. Answers to interview questions should be documented, and the areas and objects located near the infant should be photographed.

Obstruction of Nose or Mouth

Any object placed or pressed up against an infant's face can be a potential asphyxiation risk. This does not always occur during sleep; infants have asphyxiated while lying on pillows. Photographic documentation of the sleeping environment (including pillows, stuffed animals, blankets, etc.) as well as the placed and found positions can help determine if potential obstruction of the nose or mouth occurred.

Rebreathing

Rebreathing typically occurs when an infant's face (nose and mouth) is tucked into an enclosed space or "pocket" created by bedding or clothing. Photographs of the found position and sleeping environment are critical in such cases.

Neck Compression

Akin to mechanical asphyxiation, neck compression can occur in a variety of ways. Premature infants placed in car seats or "infant" rockers with poor neck support have been known to asphyxiate due to neck compression. The weight of the infant's head is enough to cause this to happen. Photographs of both placed and found positions using the doll reenactment as well as the apparatus the infant was found in will assist the pathologist and aid the investigation.

Immersion in Water

Immersion in water or drowning commonly occurs when infants are left unattended in bathtubs. Interviewing parents and documenting the circumstances of death will provide the pathologist with the information necessary to determine cause of death. Manner of death in these cases typically depends on the scene interviews of those who last knew the infant was alive.

DOCUMENT SLEEP SURFACE SHARING

With Adults

Although the practice is common in many homes, adults (other than parents or caregivers) who sleep with infants may be putting those children at risk. As with overlaying, the doll reenactment is critical. However, interviewing the individual who placed the infant down to sleep and the individual who found the infant dead may be more important to the cause of death. Many adults are reluctant to admit they may have rolled onto their child or simply do not remember falling asleep with their child. Documenting the circumstances of discovery, ages, and weights of the adult(s) sharing the sleep surface is critical in such cases.

With Children

The same issues arise from sleeping with other children as with adults. The investigator should ask questions about the sleeping areas other children in the home use. Count the number of sleeping surfaces in the home, and the number of children. If other children are sleeping with the infant, the investigator should document their ages and weights and photograph the doll reenactment.

With Pets

Although there is little evidence to suggest that pets suffocate infants, the investigator should determine if there are pets in the home and if the pets have access to the infant's sleeping area.

DOCUMENT SLEEPING CONDITION CHANGES

Position Change

Acute changes in sleeping postion are considered a major risk factor in unexplained infant deaths. The investigator should ask the caregiver if the usual sleep position has been modified within the past 24 hours. These findings should be documented and reported.

Location Change

The investigator should ask the caregiver if the infant always sleeps in the found location or is in a new area of the room or home.

Surface Change

The investigator should ask the caregiver if the sleeping surface or bed the infant was discovered on is the one he or she normally sleeps on. For example, the parents may say that the infant usually sleeps in her crib, but the night prior to her death, she was placed down to sleep with her parents because she was unusually fussy.

DOCUMENT HYPERTHERMIA/HYPOTHERMIA CONCERNS

Excessive Wrapping/Blanketing/Clothing

Excessive wrapping, blanketing, or clothing of an infant can cause hyperthermia. Investigators should document the amount of material the infant was covered by at the time of discovery. Photographs of the material and documentation of the temperature of the room and relative humidity are important facts to provide the pathologist in cases where overheating may be a factor in the death.

Hot or Cold Environment

Leaving an infant in direct sunlight, in a parked car in hot weather, or placing an infant too close to a fire or heater can cause hyperthermia. Leaving an infant in a parked car in winter weather or outside without proper clothing can cause hypothermia. Photographs of the scene and documentation of the environmental temperature, as well as time spent under these conditions, are critical in these cases.

DOCUMENT ENVIRONMENTAL HAZARDS

Carbon Monoxide

Infants are more susceptible to carbon monoxide exposure than older individuals; therefore, the scene investigation must include checking for devices that produce carbon monoxide gas. Portable heating units, wood burning stoves, and furnaces should all be checked. This is especially important to check in the fall of the year, when these devices are first being started up after being idle for the summer months. Photograph any devices in the immediate area, and document their operational status.

Cleaning Chemicals and Sprays

Investigate the use and location of any dangerous chemicals and/or sprays being used in the house. Document and photograph the location of these items in relationship to the infant's environment.

Electricity and Devices Operating in the Area

Exposed, unsafe wires, extension cords, and any electrical devices operating in the infant's living and sleeping environment should be documented and photographed.

Exposure to Illegal Drugs and Cigarette Smoke

Naturally, infant exposure to illegal drugs should be documented and investigated by law enforcement. In addition, exposure to cigarette smoke is a known risk factor for SIDS and should be documented and reported to the pathologist.

Ligatures (Cords, String, Electrical Cords/Wires)

Anything that an infant could become entangled in should be investigated as a possible ligature. Photograph and document any such items, and ask about the location of the infant in relationship to the observed issues.

DOCUMENT UNSAFE SLEEPING CONDITIONS

Soft/Lumpy/Concave Sleeping Surface

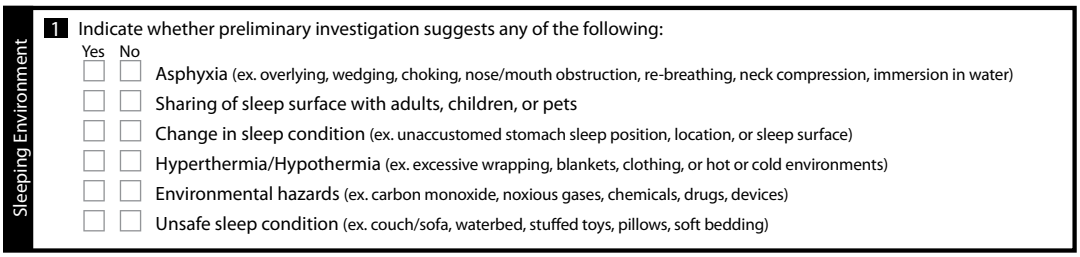
As discussed earlier in the asphyxia section, the infant's sleeping surface must be observed and tested for general surface firmness and condition. Photographs and descriptions should be reported to the pathologist.

Broken or Mismatched Crib/Bed/Mattress

Broken or mismatched sleeping furniture should be investigated for possible wedging and other potential asphyxia issues. Photographs of the furniture and measurements of gaps caused by mismatched or broken parts should be documented and reported to the pathologist.

Worn/Torn/Stained/Unclean/Wet Bedding

The bedding and its condition should be photographed and documented in the scene report to the pathologist.


Sleeping Environment

1 Indicate whether preliminary investigation suggests any of the following:

Yes	No	
☐	☐	Asphyxia (ex. overlying, wedging, choking, nose/mouth obstruction, re-breathing, neck compression, immersion in water)
☐	☐	Sharing of sleep surface with adults, children, or pets
☐	☐	Change in sleep condition (ex. unaccustomed stomach sleep position, location, or sleep surface)
☐	☐	Hyperthermia/Hypothermia (ex. excessive wrapping, blankets, clothing, or hot or cold environments)
☐	☐	Environmental hazards (ex. carbon monoxide, noxious gases, chemicals, drugs, devices)
☐	☐	Unsafe sleep condition (ex. couch/sofa, waterbed, stuffed toys, pillows, soft bedding)

Fig 8.2: Sleeping Environment section of the SUIDI Reporting Form.

unit

25 Document Infant History

INTRODUCTION

This unit reviews the broad range of specific questions that need to be answered by various individuals who cared for and provided healthcare services to the infant. The investigator is attempting to gather all the recent and past history to construct a profile for the pathologist. The possibility of certain unnatural causes of death or specific natural causes of death. Acute life-threatening events in the past suggest possible inflicted asphyxia or a chronic condition. Repeated visits for medical care without diagnosis raises the possibility of Munchausen Syndrome by Proxy. A history of recent falls or injuries may indicate accidental causes of death but also raise suspicion of inflicted injury. Religious, cultural, or ethnic remedies such as white clay ingestion or coin rubbing may cause injuries or even death. It is essential to inform the pathologist if the infant's history points toward a specific disease or condition as a possible cause of death.

DIET

Investigators should determine if the infant has recently (within the past 24 hours) eaten or drunk a new food or liquid. The possibility of food allergies and the use of food that is inappropriate for the age and development of the child should be considered. Documentation should include interview statements and possible collection of food samples from the scene for the pathologist to evaluate.

RECENT HOSPITALIZATION

The pathologist is interested to know if the infant has been evaluated for illness recently. This may indicate a natural cause of death. Documentation should include any recent (within the past 24 hours) trauma or illnesses, elective or emergency surgeries, as well as the number of times the infant has been hospitalized and for what reasons. Contact phone numbers should be collected and reported to the pathologist for follow-up if necessary.

PREVIOUS MEDICAL DIAGNOSIS

Any chronic diseases such as birth defects, cerebral palsy, reactive airway disease (asthma), growth failure, recent trauma, cystic fibrosis, or cancer should be investigated, documented, and reported to the pathologist before autopsy.

ACUTE LIFE-THREATENING EVENTS (ALTE)

There are a few different types of apnea that the investigator should attempt to determine. Medical apnea typically involves some type of airway obstruction. Environmental apnea can occur when an infant becomes entrapped between two objects, such as a bed and the wall, or between a mattress and a bed frame. Each should be investigated, documented, and reported to the pathologist before autopsy.

If the infant has had a medical workup for seizures, there will be a clinical history to collect from a healthcare provider or hospital emergency department. The medical workup includes a physical examination, CT scan/MRI, and retinal examination. The investigator should attempt to collect copies of the medical records for review by the pathologist.

MEDICAL CARE WITHOUT DIAGNOSIS

If the infant has had an event that precipitated his or her caregivers to seek medical care that resulted in nonspecific findings or illness, the investigator should document these findings.

RECENT FALL OR OTHER INJURY

Adult Fall while Holding Infant

The investigator should ask the parents if anyone fell while attempting to carry the infant and determine if the infant hit anything with his or her head during the fall. Documentation should include photographs and description of any and all surfaces the infant may have impacted during the event. If appropriate, measurements describing distance of fall may be helpful to the pathologist.

Infant Falling onto Surface

If the infant may have fallen onto any surface, hard or soft, these findings should also be documented, photographed, and measured. The investigator should note when the fall occurred.

Infant Activities after Fall or Injury

The investigator should ask the caregiver to describe any changes in the infant's behavior or activity level after the fall or injury occurred and determine whether medical treatment was

sought. The fall and any medical reports should be reported to the pathologist and documented in the case report.

RELIGIOUS, CULTURAL, OR ETHNIC REMEDIES

Investigators should attempt to determine if the infant was exposed to or given herbal remedies of any type. Documentation should include interview statements describing the type of remedy and administration procedures, dosage, and frequency of administration. In addition, collection of herbal remedy "samples" may be necessary for the pathologist to evaluate. As some remedies actually result in physical findings, the investigator should document and photograph any unusual external artifacts for the pathologist to evaluate.

DEATH DUE TO NATURAL CAUSES OTHER THAN SIDS

The investigator should document any congenital abnormalities in an infant or the infant's family as inheritable or congenital abnormality may have had a direct or indirect effect on the death of the infant. Reporting this information to the pathologist before autopsy will alert him or her to be aware of the condition, evaluate it during the autopsy, order testing to specifically diagnose the condition, and conclude whether the condition caused the death.

The investigator should attempt to determine if the infant suffered from any errors of metabolism MCAD, PKU, G6PD, etc. In addition to interview documentation, the infant's primary healthcare provider's contact information should be provided to the pathologist before autopsy.

Complications of Prematurity

Infants born before term are at risk for a number of health-related issues. The investigator should attempt to determine if the child was born prematurely and report this information to the pathologist. Documentation should include the birth mother's and infant's primary healthcare provider's contact information if necessary. Prematurity is also a risk factor for SIDS.

Infectious Diseases

The investigator should document any bacterial or viral infections (such as bronchiolitis) the infant may have had or been exposed to, recording any signs and symptoms in the case file and reporting the results to the pathologist before autopsy.

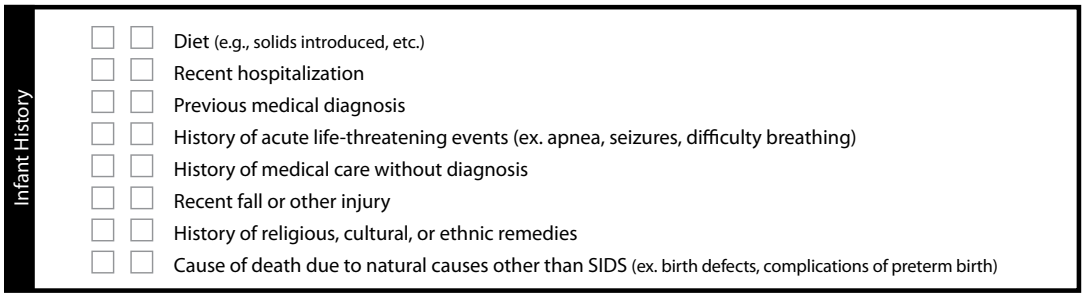


Fig. 8.3: Infant History section of the SUIDI Reporting Form.

unit

26 Document Family Information

INTRODUCTION

This unit details the data identified as critical to pre-autopsy decisions regarding current family information and history. Specific issues around organ donation and objections to autopsy need to be communicated to the pathologist before the autopsy procedure begins. Documentation and reporting strategies are also described.

PRIOR SIBLING DEATHS

Any prior deaths of siblings (biological or not) should be documented along with their cause. Some hereditary diseases, such as long QT syndrome, can cause sudden death. Any family history of such diseases or sudden deaths caused by these diseases should be documented. Other prior sibling deaths may be homicides and should also be documented.

ENCOUNTERS WITH POLICE OR SOCIAL SERVICES

Law Enforcement

The investigator should determine whether the law enforcement officer at the scene knows the family from recent visits to the address. Most police agencies assign officers to a specific location. If there have been reported problems at this house in the past, it is likely the officer at the scene knows the details of the encounter or was involved him/herself. Documentation should include the involved law enforcement officer's name, contact information, dates, and reason for contact.

Social Services

The investigator should also determine whether any of the local social service caseworkers has interacted with the family. Investigators should check with the law enforcement officer, as he/she may know if a caseworker has been called to the residence. Why they were called, what actions they took, and if any follow-up was scheduled should all be documented. Any findings should be reported to the pathologist.

REQUEST FOR TISSUE OR ORGAN DONATION

Investigators should have standard operating procedures for interacting with both families and local organ and tissue agencies. Investigators should make sure families know about the services and inform the pathologist of any requests or questions they may have before the autopsy begins.

OBJECTION TO AUTOPSY

The investigator should document any objections to an autopsy raised by the family, including the family's reason(s) for their objection to an autopsy. Communicating this information to the pathologist in the pre-autopsy report will warn the pathologist of the family's wishes and prevent him or her from violating any state or local laws. Naturally, the pathologist needs this information before the autopsy begins.

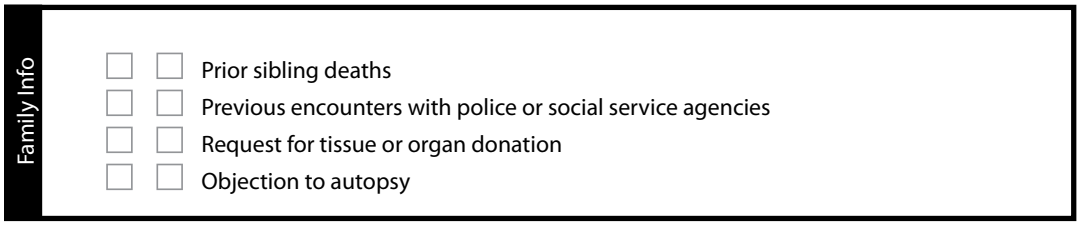


Fig 8.4: Family Information section of the SUIDI Reporting Form.

unit

27 Document External Examination

INTRODUCTION

The purpose of this unit is to alert the pathologist to the presence of injuries observed on the infant's body during the initial scene investigation. This includes any and all resuscitative efforts by trained and untrained personnel that may have cause injury or left artifacts on the body that need to be reported to the pathologist.

PRE-TERMINAL RESUSCITATIVE TREATMENT

EMS, Fire Personnel, and Law Enforcement Officers

All attempts at resuscitation need to be documented by the investigator and reported to the pathologist as resuscitative treatments often cause external and/or internal injuries to infants. These resuscitative artifacts and any associated equipment visible on the infant should be documented in the investigative report and photographed. The agency and contact name and number of the individual who attempted resuscitation should also be documented in the report for follow-up as necessary.

Relatives, Neighbors, Good Samaritans

As with professional responders, the investigator needs to document resuscitative efforts by photographing any artifacts or injury visible on the infant. Other documentaion should include the name and contact information of the individual who attempted resuscitation and their relationship to the infant.

DEATH DUE TO TRAUMA, POISONING, OR INTOXICATION

Trauma

Any visible trauma or injury to the infant should be documented by the investigator and photographed for the pre-autopsy report to the pathologist. The body diagram form found in the SUIDI Reporting Form is an excellent tool for documenting and reporting these scene findings.

Poisoning or Intoxication

Any suspected blockage of the infant's respiratory tract from poisoning or intoxication should be investigated, collected, documented, and reported to the pathologist before autopsy. Any suspected poison or toxicant, including medication bottles with pills, cleaning agent bottles (even if they are now empty), and so on should be collected.

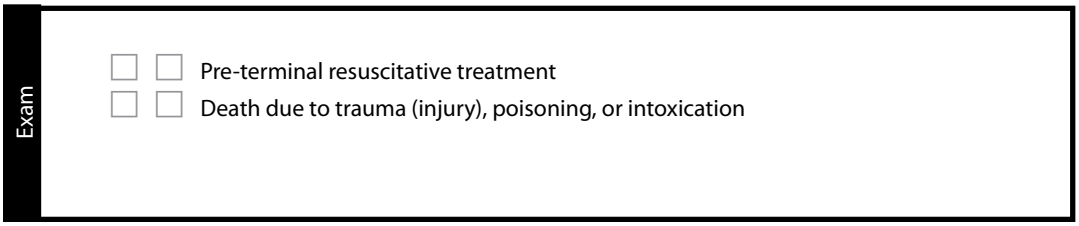


Fig 8.5: External Exam section of the SUIDI Reporting Form.

unit

28 Develop Narrative Report to the Pathologist

INTRODUCTION

This unit outlines the narrative report. The narrative allows the investigator to describe the basic facts of the investigation in conversational form, as well as indicate if there is something that arouses suspicion for unnatural death, whether accidental or inflicted. It is the part of the investigation that most investigators tend to avoid because it is time consuming; however, a well-constructed and detailed narrative allows pathologists and support agency representatives to visualize the scene in detail as if they were there.

DEVELOP CONCISE OVERVIEW OF INVESTIGATION

Who Was Directly Involved in the Incident

You should include in the summary the names and relationships of the individuals involved in the incident. This includes the persons who last placed the child down to sleep, who last saw the child alive, and who found the child unresponsive. The names of other persons at the location should also be noted in your report.

What Happened to Cause the Incident

Describe the major events leading up to the death. Such factors would include the details of the last feeding of the infant, details of how the infant was placed down, how the person who last saw the infant alive knows this (e.g., saw the infant breathing, heard the infant on a monitor), and how the infant was found. The description might also include other relevant factors such as illnesses noted or how an injury was sustained.

Where the Incident Occurred

This includes the general location (e.g., home, day care center) as well as the specific location where the infant was found (e.g., crib in the bedroom next to the adult bed).

When the Incident Occurred

The date and times of the major incidents related to the death should be included in the narrative. This includes the last time placed down, time last seen alive, and time found unresponsive.

Why the Incident Occurred

At the time of the initial investigation, it is unlikely that you will be able to determine why this death occurred. However, the scene might give you clues that will allow you to speculate on the reasons for this death.

How the Incident Occurred

The specific events leading to the death should be described in detail. This information would be most relevant in the instance of an injury to the infant, for which the person(s) who observed the incident would describe exactly how it happened.

Unusual Burial Practices

Burial practices vary greatly. Common current practices, which include burial (with and without embalming), cremation, and burial at sea, are not the only burial practices. There is great variety even within a common burial method. For example, some religious groups believe that burial should occur by sundown on the day of death.

It is important to document any unconventional burial practices and communicate that information to the pathologist in the narrative. This information will help the pathologist in his or her examination of the body and preparation of the body for release to the family for final disposition.

SUSPICIOUS CIRCUMSTANCES

The investigator needs to take the opportunity to reflect on the scene and describe any suspicious circumstances that he or she feels need further investigative follow-up. With infant deaths, these suspicions typically focus on placed and found position issues as described earlier in this chapter. Often, investigators will wonder about a statement given by a witness that is questionable because the story they told “just doesn’t make sense” or some observation of their body language or tone of voice. All of these “suspicions” need to be recorded and shared with another investigator or the pathologist.

Suspicion of Inflicted Injury or Poisoning

It is important for the investigator to document potential abuse of an infant. Making a final determination of abuse will involve many facts obtained from the scene investigation, medical history of the infant, and results of the autopsy. The information provided to the pathologist in the narrative will assist him or her in the final determination of abuse. It is not your role as the scene investigator to make the diagnosis of abuse.

One common observation in cases of abused infants is the inconsistency between the injuries observed and the provided explanation. Changing explanations for the suspicious injuries over time is another common finding in child abuse.

It is important for the investigator to document the presence of any injuries described in the section on documenting injuries. It is just as important to document any explanation provided by the caregiver as to the cause of the injury. A thorough narrative should be provided, using direct quotations from the caregiver whenever possible. The location where the injury was sustained should also be described and photographed. If practical, explanation given for the injury should be reenacted using a doll or other appropriate prop.

DOCUMENT ALERTS TO PATHOLOGIST

Welfare/Safety Issues of Other Children in Environment

One of the ultimate goals of infant death investigation is the prevention of similar, preventable deaths in the future. This is the major goal of child fatality review teams throughout the country. Whereas determining the cause of death of the deceased infant is the primary goal of the death investigation, protection of the health and safety of other children in the home is an important additional benefit. If the scene investigation identifies a potential environmental hazard that caused the death of one child, removal of the hazard could save the life of another child.

Also, the condition of the other children in the same environment can give important clues as to the cause of death of the infant in question. For example, documenting poor nutrition and hygiene of the other children can provide clues to the pathologist regarding the proper care of the infant in question. If a deceased infant has a severe case of diaper rash, knowing whether the other children are well cared for will help the pathologist evaluate whether neglect was involved in the death in question.

The investigator should document the condition of other children in the home in the narrative report. If the children are old enough to be competent witnesses, they can also be interviewed with regard to the death of their sibling.

Concerns of Domestic Violence

The existence of domestic violence in the home might or might not play a role in the death of an infant. Domestic violence against another member of the household raises the possibility that the infant's death is related to violence. In addition to the direct risk of violence against the infant, a home with domestic violence also can increase the likelihood of neglect of the infant. The pathologist needs to know about these concerns from the narrative report in order to place the autopsy findings in the proper context.

There may be visible injuries to other members of the household. Such injuries should be noted in your report to the pathologist. Local law enforcement also will be a valuable source of information regarding previous calls to the house for domestic violence. You should obtain any known history from law enforcement and communicate it to the pathologist.

Concerns of Drug/Alcohol Abuse

The presence of substance abuse in the home can be both directly and indirectly relevant to the cause of death of an infant. Substance abuse is not limited to the abuse of alcohol or illegal drugs, but includes the increasing incidence of abuse of prescription medications.

It is not unusual for inappropriate medications, alcohol, or even illegal drugs to be given to an infant in a home with a substance abuse problem. In addition, infants in a home with substance abuse are at increased risk for physical abuse and neglect.

Any evidence of substance abuse should be documented in the report to the pathologist. The substance(s) abused should be included in the report. A toxicology screen does not include every possible substance of abuse. Knowing what drugs are at the scene will help the pathologist and toxicologist ensure that the infant is tested appropriately.

History of Problems with Caregivers

A history of family problems is a vital part of your investigation. The pathologist will use this information during his or her examination of the infant. The final conclusions as to cause and manner of death may be influenced by this history. Previous official contact with the family is not uncommon in an infant death that is suspicious for abuse or neglect. In some cases, a parent of the deceased infant might have been the victim of abuse or neglect as a child. Your local law enforcement and child protective service (or social service) agencies will be the source of this information. Any previous family contact with law enforcement should be documented in your report to the pathologist. Reports to child protective/social service and the results of their investigation should also be provided to the pathologist.

Previous Deaths in Family

It is important to document any previous deaths in the family, especially infant deaths. The presence of fatal violence in the household is a risk factor to the infant. Multiple infant deaths in the same family are a red flag to the pathologist.

Much attention has been given to the increased likelihood of foul play when there are repeated infant deaths in the family. This is based on the low probability of multiple SIDS deaths in one family and the fact that it is possible to smother an infant and not leave any physical findings that will be detected in an autopsy.

Repeated infant deaths also are significant for the increased possibility of a previously undetected inheritable defect. Autopsies cannot determine every possible cause of death. However, new tests are being developed to diagnose conditions that were previously undetectable. For example, researchers have begun to identify inheritable genetic defects that can cause fatal cardiac arrhythmias in infants during sleep.

A history of previous infant deaths in the family will alert the pathologist to investigate further for both natural and violent causes of the infant's death. This information should be included in the narrative report to the pathologist.

Concerns from Caregivers or Other Investigations/Witnesses

Any perceived health concerns or issues, whether raised by a caregiver or through the death investigation, need to be reported to the pathologist in the narrative, even if the concern does not appear to be related to the cause of death. Many of these concerns can be addressed by the pathologist during the autopsy, but only if the pathologist is aware of the issue. For example, a caregiver might provide the information that the infant was spitting up excessively in the days before death, guiding the pathologist to focus on issues regarding causes of excessive regurgitation.

If a caregiver or other individual has raised an issue, include that in the narrative using the exact language used by the individual in quotation marks and crediting the reporter. If it is an issue raised through the investigation, report it as such with your reasons for concern. For example, the hospital might report that the infant had an elevated temperature on presentation, even if the caregiver reported no recent illnesses.

DESCRIBE PHYSICAL EVIDENCE AND GATHERED INFORMATION

Inconsistencies between Scene and Verbal Description of Events

There also can be inconsistencies between the injury you observe on the infant and the caregiver's explanation of how the injury was sustained. This is a common finding in cases of child abuse. Although it ultimately will be the pathologist's responsibility to make the final determination about the explanation of injury, it is important for you to indicate specifically these inconsistencies in your narrative report to the pathologist.

In your report, you should indicate the caregiver's explanation of the injury, using direct quotations whenever possible. The scene investigation should be conducted to explore the provided explanation. It might be valuable to have the caregiver reenact the mechanism of injury. This information should be provided to the pathologist in the narrative report. You can refer the pathologist to the specific sections of the SUIDI Reporting Form that contain the details of the inconsistency. This information will have a significant effect on the performance of the autopsy and interpretation of its findings.

Inconsistencies between Observed Injury and Explanation of Injury

If there are discrepancies between the description of the physical evidence and the gathered information, they should be specifically pointed out to the pathologist in the narrative report. An example is a description of the sleeping surface that does not match the sleeping surface observed.

You do not need to repeat the detailed description that will be included in the SUIDI Reporting Form or the jurisdictionally approved equivalent, but you can indicate the inconsistency and refer the pathologist to the specific descriptions in the report. It is important for the pathologist to be aware of these discrepancies so that the autopsy can be conducted with those issues in mind and the pathologist can draw the appropriate conclusions.

Note Changes in "Story" Based on Investigator's Suggestions

Changes in the explanation of an injury are another common finding in cases of child abuse. However, the investigator must be careful in his or her interview with the caregiver. At the time of your interview, these people are in an emotionally charged state and could be influenced by suggestions as to how an injury might have occurred. As such, the investigator should be careful not to cross the line between an interview and an interrogation.

If you have documentation that the caregiver changed his or her story, include this in your report and draw the pathologist's attention to this in the narrative report. This information will affect the performance of the autopsy and interpretation of its findings.

Note Explanations of Events that Defy Logic and Common Sense

Despite the public misperception that everything we do involves highly complicated objective scientific tests, much of the investigation of unexpected infant death is based on observation at the scene and interviews with the caregivers. As a result, the investigator needs to use his or her common sense and logic in the investigation.

When a caregiver provides an explanation for an injury, the explanation needs to be documented objectively. Use direct quotations whenever possible. Care must be taken not to allow impressions to influence what witnesses have said. The principles mentioned above should be used when the investigator is attempting to compare the caregiver's explanation to his or her own observations.

SAMPLE INVESTIGATIVE NARRATIVE REPORT

NATURAL DEATH - INFANT
11/21/2005

OnFriday11/21/2006atapproximately9:50am,ourofficewascontactedbytheCherawFireDepartmentinreferencetoan infantdeathlocatedat1121ThirdSt.,Martin,TD12123.Uponmyarrival,IwasmetbyPOStevenStevenswholedmeupstairsto thesecondfloorapartmentwheretheinfantwaslocated.Insidetheapartmentthereweresevera lFireDepartmentpersonnelstill onscenewiththemotherandfatherofthedeceasedinfant.Themother,TammyBaskins,awhitefemaleDOB:06/20/1969(AGE 37)residesatthisaddresswiththedeceasedinfant,andthefather,JohnTyroneMartin,ablackmaleDOB:08/15/1963(AGE 43)residesatanotherresidence.AlsoarrivinglaterwerePOJeffHanksandLt.Quick,TravisJohns,andLarryJamesoftheMartin PoliceDepartment.Informationobtainedwasthatthedeceasedinfantwas KellyK.Martin,aCaucasian/AfricanAmericanfemale (age7weeksold)DOB:10/05/2006,SocialSecurityNumberRRK-AB-5471.Furtherinformationobtainedwasthatthedeceased wasbornprematurelyat33weeksgestationon10/05/2006withtheduedatebeingon11/30/2006.Thedeceasedatbirth weighed3lbs.8oz.andwas17.5inchesinlengthandremainedinMcLeod'sHospitalforfourweeksafterbirth.Thedeceasedwas initiallyintheNICUandlatertransferredtothepediatricunit,whereshedevelopedsevereanemiaandstoppedbreathingdueto this.ThedeceasedwasgivenseveralbloodtransfusionsandsentbacktotheNICU.Thedeceasedwasalsofoundtohaveaheart murmur.On11/02/2006,anECGwasdoneandthedeceasedwasclearedtogohomewithoutanymedicationsormonitors,with the mother being retrained in infant CPR.

Iobservedthedeceasedlyingonthecouchonherrightsidelayingontopoftwoblanketsandwearingaonepiece,button-frontpajamaswithaonepieceundershirtanddiaper.Ialsoobservedsomebloodontheblanketattheendofthecouchwhere thedeceasedwasoriginallylaying.Uponexaminationofthedeceased'sbody,Iobservedrigormortiswithbodybeingcool.Lividity wasalsoobservedpurpleincolorandblanchingwhentouched.Lividitywasconsistentwithpositionfound.Blood-tingedfrothwas notedfromhernosewithdriedbloodfromthesideofhermouthdownhercheek.Theabdomenwasdistendedandhard.Alarge bowelmovementwasnotedinthediaper.Duringtheexternalexamination,therewerenoobvioussignsorsymptomsoftrauma noted to the deceased.

Themother,Tammy,statedthatshelastsawthechildthismorningaround5:30amwhenshechangedaurinesoakeddiaper andfedherafreshbottle.Themotherstatedthattheinfantatelittle,whichwasunusual,butdidnotactabnormally.Theinfant waslaiddowntosleeponthecouchwhereshenormallyslept,placedonherrightside.Themothersleptnexttothecouchonthe floorclosetotheinfant.Themother'sboyfriend,thefatherofthedeceased,hadspentthenightwiththemotherandhisdaughter anddrandownstairstoanapartmenttocall9-1-1.NoCPRhadbeeninitiatedbyfamilyorfiredepartmentpersonnel.TheMFD hadrespondedtothis9-1-1callat9:16am,arrivingatthedeceasedat9:19am,findingthedeceasedinhermother'sarmswith noheartt ones,respiratoryeffort,orpulses.FDpersonnelnotedlividitytotherightsideoftheheadwithbloodtingedsputum comingfromhernose.Bloodwasalsonotedonthepillowwherethedeceasedslept.Thedeceasedwaspronouncedat9:50am by Investigator Sarah Ann Buckner.

Afterthescenewasphotographedandinterviewscompletedby POStevenStevensandmyself,thedeceasedwastransported bytheInvestigatorSquad#201totheMCMEOtoawaitautopsy.Themotherunderstoodthatanautopsywouldbeperformedand due to her not having a phone, she would call from her sister's home for the results.

ContactwaslatermadewithDr.Taylorwholastsawthedeceasedon Monday11/14/2006.Dr.Taylorstatedthatthedeceased wasborn33weekspremature withanepisodeofanemiawithseveralbloodtransfusions.Therewasnoreasonfoundforthisanemia. On10/19/2006,anECGshowedalargePDA,and on11/02/2006,itwastestedtobemoderatelysizedandsafeforthedeceased togohome.On11/14/2006,thedeceasedlookedpinkandhealthywithnoneglectorabusesuspected.Thedeceasedalsohad hertwovaccinationsandhadgainedweightfrom2,040gramsatbirthto2,400grams.Thelastbottlethatthedeceasedwasknown todrinkfromwastakenfromthehomeandplacedinthespecimenbagin thecoolerwiththebodyofthedeceased.

Duringtheautopsyon11/22/2006at9:15am,photographswereta kenpriortoandatthetimeofpostmortemexaminationby Dr.TerryK.PatrickandAssistantMedicalExaminer.Therewere19HistolyticSectionstakenforanalysisaswell.Thefollowingitems ofclothingaccompanythebody.Onebabyblueonesies.Oneterrycl othpajamajumperwhiteincolorwithmulticoloreddesign ofkittens,lions,andgiraffes.Onedisposable Pampersbranddiaperwithalargeamountofgreen-yellowstoolandurinesoaking. Onewhite,blue,pink,andyellowbabyblanketwiththreesmallareasofblood-tingedfluidonit.Onewhiteclothblanketwithpink andgreenroses,andsmallareasofblood-tingedstaining.Therewasnoevidenceoftraumaticinjurynoted.Uponcompletionof the autopsy, the deceased was released on 11/23/2006 at 4:12 pm to S.S.

Robins with the Davis Funeral Home 3553 N. Second St., TD 12123, phone 555.5555.

Summary

DISCUSSION QUESTIONS

1. Discuss in general why it is important to report relevant information to the pathologist before the autopsy. Include examples of information that would be useful and the potential effect such information would have on the autopsy examination of the infant.
2. Explain how you would document an injury to an infant in your report to the pathologist. Include details.
3. Explain the importance of reporting the family's social history to the pathologist performing the autopsy. Include such aspects as substance abuse, previous official intervention, and domestic violence.
4. Describe the importance of relating a history of medical illness in the infant or family members to the pathologist performing the autopsy. What effect might this information have on the death investigation? On the health of the surviving family members?

SAMPLE QUESTIONS

1. Petechiae are
    A. Splotchy lesions of the skin.
    B. Pinpoint hemorrhages of the skin, eyes, and mucosal surfaces.
    C. Diagnostic of asphyxia.
    D. IIrrelevant to the death investigation.

2. It is important to identify and report infectious disease in the infant or family so that
    A. The pathologist can begin a course of antibiotics.
    B. The investigation will end.
    C. Proper testing can be performed to make an appropriate diagnosis.
    D. Others affected individuals can be informed.

3. Signs of child abuse or neglect include
    A. Inconsistencies between the observed injury and the explanation of injury.
    B. Mongolian hyperpigmentation spots.
    C. Caput succendaneum.
    D. Osteogenesis imperfecta.

4. The investigator's documentation of injuries should include
    A. Size of the injury and location on the body.
    B. Specific age of injury.
    C. Cause of the injury.
    D. Individual responsible for the injury.

5. Why is it important to get scene data to the pathologist before the autopsy procedure?
    A. So the investigator can get on to the next case.
    B. So the pathologist can complete the autopsy report and move on to the next autopsy.
    C. So the pathologist has all available data to make accurate cause-of-death determinations.
    D. So the District Attorney can begin putting his/her case together and put those involved in the death behind bars.