



### G31 Differences in Scene Reenactment of Pediatric Death: Homicide Versus Others

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After attending this presentation, attendees will be able to critically apply information gathered from the experience of the City of St. Louis Medical Examiner's office. The main goal is to help differentiate homicide from other manners of death such as accident and undetermined when dealing with pediatric death. Scene reenactment as part of the investigation is an invaluable tool in assessing these difficult cases.

This presentation will impact the forensic science community by discussing key differences observed while investigating pediatric deaths with the aid of scene reenactment.

Pediatric deaths can be complicated cases for the medicolegal system, not to mention the families involved. Determination of cause and manner of death is the driving principle behind the investigation. Key parts of the investigation consist of scene investigation, postmortem studies including autopsy, radiographs, ancillary studies such as toxicology, and if pertinent, microbiology testing. Thorough photographic documentation during the initial visit to the scene as well as at the time of the autopsy is vital to assessing pediatric deaths. Scene investigation is usually performed by medicolegal death investigators who may conduct their inquiry either via telephone or actual visit to the scene.

All pediatric cases (ages 0-5) referred to the St. Louis City Medical Examiner's office during a five-year period, from January 2003 to December 2008 were analyzed. The cases were stratified according to the manner of death of either homicide, accident, or undetermined. The differences in cases that underwent scene reenactments and correlated them with the postmortem studies were compared. Some of the cases were investigated with phone interviews, usually due to traveling or jurisdictional constraints. Telephone interview investigation findings will also be discussed.

One of the most difficult aspects of pediatric deaths for the family is that the event is generally unexpected, unless there is history of natural disease. SIDS (Sudden Infant Death Syndrome) is a diagnosis of exclusion, reserved for cases for which no cause of death is found after a thorough investigation. The scene reenactments conducted in our office frequently demonstrate bed sharing or positional asphyxia as a cause of the child's death. These cases are no longer classified as SIDS as a result of this investigative tool. Additionally, our investigators use a standardized questionnaire published by Missouri Department of

Social Services titled Death Scene Investigative Checklist for Child Fatalities. The form covers minimum necessary information which maybe used later on in the death certification process. It covers key points such as prenatal history, events surrounding death, condition and position of the child, as well as social and environmental conditions.

While natural, accidental and undetermined manner of death is distressing to the family, homicide has its own caveats. The perpetrator is frequently known to the family and is usually not biologically related to the deceased. Most pediatric homicides are crimes of spontaneous impulsive behavior. The killing is not usually premeditated, but rather a reaction to the child's behavior such as loud crying or poor feeding. Most frequently the assailant uses their own body (i.e., hands, feet, torso) to inflict the fatal injuries onto the child. The troubling aspect of pediatric death for medicolegal investigators, law enforcement and forensic pathologists is that homicide within this population does not always exhibit overt trauma. In instances of mechanical asphyxia and unusual poisoning, even a diligent postmortem examination and standard toxicology panel may not reveal the cause and manner of death. Therefore, we must rely on either keen investigative techniques or await perpetrator's confession. While in most sudden infant deaths, the parents or caretakers appear distressed, the stories and reenactments of in cases of homicide frequently shift during the investigation. Investigations in these deaths often reveal an inconsistency or improbability during the scene reenactment.

**Scene Reenactment, Pediatric Death Investigation, Manner of Death**