



H171 Pediatric Accidental Deaths in Cook County, Illinois

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Learning Overview: After attending this presentation, attendees will have a better understanding of the incidence and circumstances surrounding pediatric accidental deaths in a busy, urban medical examiner's office during the past five years.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an overview of pediatric accidental deaths in Chicago, IL, which may be useful in determining risk factors and prevention strategies for the pediatric population.

Accidental injuries are among the most frequent causes of death in children. According to the Centers for Disease Control and Prevention, unintentional injuries represent the fifth-leading cause of death in children <1 year of age and the first cause of death in children between the ages of 1–10 years.

A search of the database of the Cook County Medical Examiner's Office over the past five years (August 2014–July 2019) identified 131 accidental deaths that occurred in subjects between 0 and 10 years old. This represented 15.3% of all deaths occurring in the same period among children of the same age range (131 out of 852 cases).

The mean age was 2 years, and the median age was 1 year. The youngest (two infants) were five days old. The age distribution was as follows: <1 year old (58 subjects), 1 year old (16), 2 years old (13), 3 years old (7), 4 years old (6), 5 years old (13), 6 years old (5), 7 years old (2), 8 years old (2), 9 years old (7), and 10 years old (2). There was a male predominance, with 75 (57%) of the subjects being males and 56 (43%) females. By race, 66 (50%) of the subjects were African American, 58 (45%) were Caucasian, and 7 (5%) were other. Over the period analyzed, the peak incidences occurred in 2015 (35 cases) and 2018 (31 cases).

The cohort was divided into infants (less than 1 year of age) and children (1–10 years of age). The most common cause of accidental death in infants was asphyxia due to an unsafe sleeping environment (45 cases out of 58), followed by motor vehicle collisions, house fires, and drowning. In subjects over 1 year old, motor vehicle collisions, house fires, and drowning represented the vast majority of deaths (53 out of 73), followed by a number of events related to the size of the children and their cognitive and motor development. In particular, deaths associated with the ingestion of solid foods (choking on food bolus) and the capacity to walk autonomously (falls from height, entanglements in window shade cords, etc.) were observed in this age range.

Accidental injury in the pediatric population is frequent, and often a preventable cause of mortality. Prevention strategies rely on a correct evaluation of the causes of death and injury. Forensic pathology can help to identify risk factors and ways to reduce childhood mortality from injuries. This study has the intent to offer information for future intervention plans and a basis for future research.

Pediatric, Accidental Deaths, Unintentional Injury