

AMERICAN ACADEMY OF PEDIATRICS

Committee on Child Abuse and Neglect and Committee on Community Health Services

Investigation and Review of Unexpected Infant and Child Deaths

ABSTRACT. Although there is a continuing need for timely review of child deaths, no uniform system exists for investigation in the United States. Investigation of a death that is traumatic, unexpected, obscure, suspicious, or otherwise unexplained in a child younger than 18 years requires a scene investigation and an autopsy. Review of these deaths requires the participation of pediatricians and other professionals, usually as a child death review team. An appropriately constituted team should evaluate the death investigation process, review difficult cases, and compile child death statistics.

ABBREVIATIONS. SIDS, sudden infant death syndrome; AAP, American Academy of Pediatrics.

A substantial proportion of infant and child deaths are preventable. Deaths of children aged 14 years and younger declined from 55 861 in 1989¹ to 42 657 in 1996²; however, the death rates from homicide remained stable. Many deaths of infants and young children are unexpected, including those attributable to sudden infant death syndrome (SIDS) and trauma. Homicide ranks fourth among the leading causes of death in children younger than 4 years and ranks third among children aged 10 to 14 years.² Head injury is the leading cause of death among children who have been abused.³ The need for a careful, timely review of child deaths remains a high priority of health care professionals.

INVESTIGATION OF CHILD DEATHS

There is no uniform system for the investigation of infant and child deaths in the United States, although several reviews and recommended procedures have been published.⁴⁻⁸ The federal government has addressed the issue of recognition and prevention of child fatalities through the Child Abuse Prevention and Treatment Act Amendments of 1996 (PL 104-235). Provisions of this act include the following:

1. Child protection services reports and records shall be made available to child fatality review panels.
2. Findings about a case of child abuse or neglect that has resulted in a fatality (or near fatality) will be made public.
3. States may terminate the parental rights of parents convicted of killing or who "have aided or abet-

ted, attempted, conspired or solicited to commit such murder" for any surviving children.

4. States will report on the number of children known to child protection services who died and the number of cases in which family preservation services or reunification were followed within 5 years by the death of a child.

Many jurisdictions lack appropriately trained pathologists, interagency collaboration that would facilitate sharing of information about the family, and a surveillance system to evaluate data about infant deaths. In 1997, a review of state statutes indicated that many of the states have statewide or local multiagency review teams to examine child deaths, although there are widely disparate levels of functioning among identified teams.⁹

Continually functioning multiagency review teams with consistent membership have the potential to accelerate progress in the understanding of SIDS,¹⁰ reduce the number of fatal cases of child abuse and neglect that are missed, increase the awareness of familial genetic diseases, focus attention on public health threats, and detect and remediate inadequate medical care. Lack of adequate investigations of infant and child deaths allow flawed systems to continue and are an impediment to preventing illness, injury, and the death of other children at risk.

ADEQUATE DEATH INVESTIGATION

Investigation of unexpected deaths requires the participation of numerous persons, including medical examiners, public health officials, physicians, and personnel from agencies involved with child welfare, education, social services, law enforcement, the judicial system, and mental health. Collaboration among agencies enhances the ability to determine accurately the cause and circumstances of death. Information about the death of one child may lead to preventive strategies to protect the life of another.

An adequate death investigation includes a complete autopsy, investigation of the circumstances of death, review of the child's medical and family history, and review of information from relevant agencies and health care professionals. A complete autopsy consists of an external and internal examination of the body, removal and examination of the eyes, microscopic examination, and toxicological, microbiologic, and other appropriate studies. When possible, the autopsy should be performed by a forensic or other knowledgeable pathologist, using a standard infant and child death autopsy protocol.

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

PEDIATRICS (ISSN 0031 4005). Copyright © 1999 by the American Academy of Pediatrics.

Investigation of the circumstances of death should include a scene investigation and interview with caregivers and first responders by trained investigators who are sensitive to issues of family grief yet can objectively attain all necessary information. By current national standards, the diagnosis of SIDS cannot be made without a complete autopsy with appropriate ancillary studies, a review of clinical circumstances, and scene investigation.¹¹

Interagency cooperation and review of all relevant records are necessary parts of a death investigation. Relevant records include, but are not limited to, all medical records from birth on, social services reports including those from child protection services, emergency and paramedic records, child care and school records when applicable, and law enforcement reports.

INFANT AND CHILD DEATH REVIEW

Thorough retrospective review of child deaths is one approach to ensure quality in death investigation. A centralized database could aid in the proper functioning of infant and child death review and would allow for the identification of preventable deaths. Several models have been established and are operational at the state and local levels.¹² The American Academy of Pediatrics (AAP) also has developed model legislation on child death investigation.¹³ Infant and child death review requires the participation of many agencies. An appropriately constituted child death review team should evaluate the death investigation process, examine difficult or controversial cases, and monitor death statistics and certificates. Benefits of such death review include: 1) quality assurance of death investigation at local levels, 2) enhanced interagency cooperation, 3) improved allocation of limited resources, 4) better epidemiologic data on the causes of death, and 5) improved accuracy of death certificates.

RECOMMENDATIONS

The American Academy of Pediatrics recommends that:

1. Pediatricians advocate for proper death certification for children. Such certification is not possible in sudden unexpected deaths in the absence of a comprehensive death investigation, including scene investigation, autopsy, and review of previous medical records.
2. Individual pediatricians and those working through AAP chapters support state legislation that requires autopsies of all deaths of children younger than 18 years that result from trauma; that are unexpected, including SIDS; and that are suspicious, obscure, or otherwise unexplained. These same guidelines about unexplained deaths should apply to all children, even those with chronic diseases.
3. Individual pediatricians and those working through AAP chapters advocate for and support state legislation and other efforts that establish

comprehensive child death investigation and review systems at the local and state levels.

4. Pediatricians accept the responsibility to be involved with the death review process, including serving as a member of a review team, providing information from case files to the medical examiner or other agency investigating the death of a child who was a patient, or by serving as a consultant to the child fatality team on medical issues that need clarification.
5. Pediatricians assist local public health, medical society, and other interested groups to become involved with the child death review process.
6. Pediatricians become involved in the training of death scene investigators so that appropriate knowledge of issues such as SIDS, child abuse, child development, and pediatric disease is used in the determination of the cause of death.
7. Public policy initiatives directed at preventing childhood deaths, based on information acquired at the local and state levels from adequate death investigations, accurate death certifications, and systematic death reviews, be supported at the national and chapter level.
8. The following recommendations pertaining to the investigation and review of child deaths, published by the US Advisory Board on Child Abuse and Neglect should be supported.
 - "The supply of professionals qualified to identify and investigate child abuse and neglect fatalities should be increased.
 - "There must be a major enhancement of joint training by government agencies and professional organizations on the identification and investigation of serious and fatal child abuse and neglect.
 - "States, military branches, and Indian Nations should implement joint criminal investigation teams in cases of fatal child abuse and neglect.
 - "The Secretary of Health and Human Services and the United States Attorney General should work together to assure there is an ongoing national focus on fatal child abuse and neglect and to oversee an ongoing process to support the national system of local, state, and federal child abuse and neglect fatality review efforts.
 - "Child death review teams should be established at the local or regional level within states."

COMMITTEE ON CHILD ABUSE AND NEGLECT, 1999–2000

Steven W. Kairys, MD, MPH, Chairperson
Randell C. Alexander, MD, PhD
Robert W. Block, MD
V. Denise Everett, MD
Lt Col Kent P. Hymel, MD
Charles F. Johnson, MD
Mireille B. Kanda, MD, MPH

LIAISON REPRESENTATIVES

Gene Ann Shelley, PhD
National Center for Injury Prevention and Control
Karen Dineen Wagner, MD, PhD
American Academy of Child and Adolescent Psychiatry

SECTION LIAISON

Robert M. Reece, MD

Section on Child Abuse and Neglect

COMMITTEE ON COMMUNITY HEALTH SERVICES,
1999–2000

Paul Melinkovich, MD, Chairperson

Wyndolyn C. Bell, MD

Denice Cora-Bramble, MD

Helen M. DuPlessis, MD, MPH

Gilbert A. Handal, MD

Robert E. Holmberg, Jr, MD

Arthur Lavin, MD

David T. Tayloe, Jr, MD

Denia A. Varrasso, MD

David L. Wood, MD, MPH

LIAISON REPRESENTATIVES

Arthur Jaffe, MD

Ambulatory Pediatric Association

O. Marion Burton, MD

AAP District CATCH Facilitators

Latricia Robertson, MSN, MPH

Federal Maternal and Child Health Bureau

SECTION LIAISON

Elisa A. Nicholas, MD, MSPH

Section on Community Pediatrics

CONSULTANTS

Stanley I. Fisch, MD

Carolyn J. McKay, MD, MPH

Donna O'Hare, MD

REFERENCES

1. National Center for Health Statistics. Advance report of final mortality statistics, 1989. *Monthly Vital Stat Rep.* 1992;40(suppl 2)
2. Guyer B, Martin JA, MacDorman MF, Anderson RN, Strobino DM. Annual summary of vital statistics, 1996. *Pediatrics.* 1997;100:905–918
3. Smith WL. Abusive head injury. *APSAC Advisor.* 1994;7:16–19
4. Kaplan SR, Granik LA, ed. *Child Fatality Investigative Procedures Manual.* Chicago, IL: American Bar Association; 1991
5. Granik LA, Durfee M, Wells SJ. *Child Death Review Teams: A Manual for Design and Implementation.* Chicago, IL: American Bar Association; 1991
6. Anderson TL, Wells SJ. *Data Collection for Child Fatalities: Existing Efforts and Proposed Guidelines.* Chicago, IL: American Bar Association; 1991
7. US Advisory Board on Child Abuse and Neglect. *A Nation's Shame: Fatal Child Abuse and Neglect in the United States.* Washington, DC: US Advisory Board on Child Abuse and Neglect; 1995
8. Alexander RC, ed. *The APSAC Advisor.* Special issue on child fatalities. 1994;7(4)
9. American Academy of Pediatrics, Division of State Government and Chapter Affairs. *Review of Child Death Investigations: State Statutes, 1997.* Elk Grove Village, IL: American Academy of Pediatrics; 1997
10. Centers for Disease Control and Prevention. Guidelines for death scene investigation of sudden, unexplained infant deaths: recommendation of the interagency panel on sudden infant death syndrome. *MMWR Morb Mortal Wkly Rep.* 1996;45(RR-10):1–22
11. Reece RM. Fatal child abuse and sudden infant death syndrome. In: Reece RM, ed. *Child Abuse.* Philadelphia, PA: Lea & Febiger; 1994: 107–137
12. Thigpen SM, Bonner BL. Child death review teams in action. *APSAC Advisor.* 1994;7:5–8
13. American Academy of Pediatrics, Division of State Government Affairs. *Child Death Investigation Act: Model Bill.* Elk Grove Village, IL: American Academy of Pediatrics; 1999

Investigation and Review of Unexpected Infant and Child Deaths
Committee on Child Abuse and Neglect and Committee on Community Health
Services
Pediatrics 1999;104;1158
DOI: 10.1542/peds.104.5.1158

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/104/5/1158>

References

This article cites 3 articles, 1 of which you can access for free at:
<http://pediatrics.aappublications.org/content/104/5/1158#BIBL>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):
Community Pediatrics
http://www.aappublications.org/cgi/collection/community_pediatrics_sub
In Memoriam
http://www.aappublications.org/cgi/collection/in_memoriam
Child Abuse and Neglect
http://www.aappublications.org/cgi/collection/child_abuse_neglect_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Investigation and Review of Unexpected Infant and Child Deaths
Committee on Child Abuse and Neglect and Committee on Community Health
Services

Pediatrics 1999;104;1158
DOI: 10.1542/peds.104.5.1158

The online version of this article, along with updated information and services, is
located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/104/5/1158>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 1999 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

