

Conducting effective reviews of natural deaths

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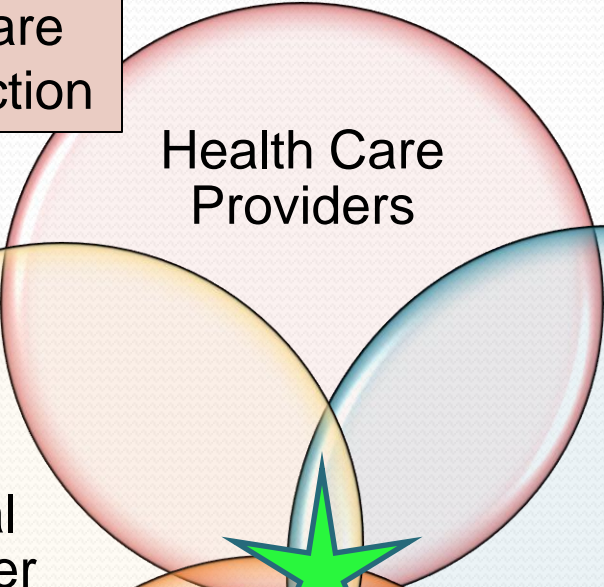
11/4/11

Keeping Kids Alive: 2011 CDR Summit

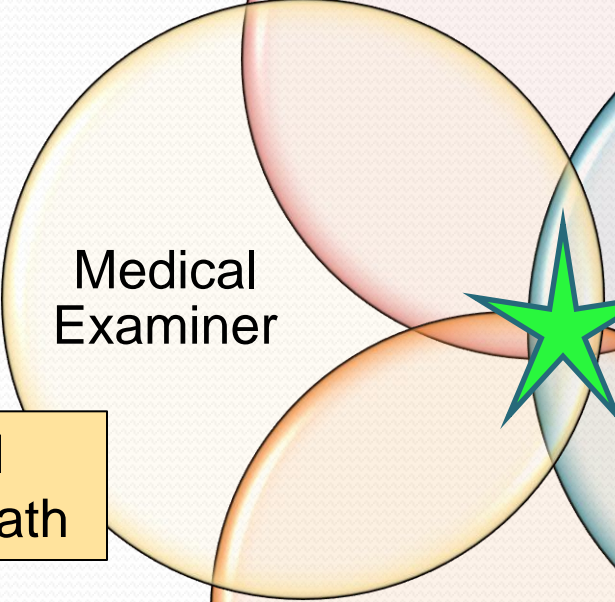
Investigation of child/infant deaths

- Optimal: Coordinated and concerted efforts by involved agencies/departments:
 - Child Protective Services
 - Health Care Providers
 - Law Enforcement
 - Medical Examiners/Coroners
 - Family and care providers

Patient care
and Protection



Cause and
manner of death

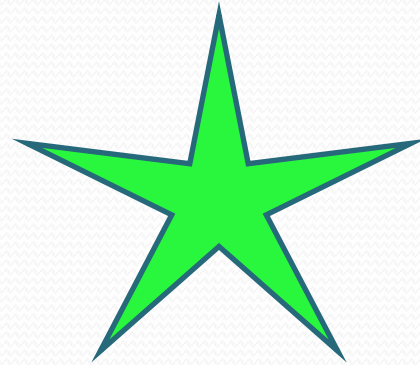


Risk factors
and
Prevention

Circumstances
and Justice

Investigation of child/infant deaths

- Agendas of involved agencies may be slightly different
- Universal focus: Understanding of events associated with death
 - Who was there?
 - What happened?
 - When did death occur?
 - Where was this?
 - How did death happen?
 -and **Why**? – How can similar deaths be prevented?



Manners of Death (5)

- **Natural**
 - Deaths due exclusively to disease
- **Violent**
 - Deaths attributable solely or in part to injury
 - Subclassified:
 - Homicide
 - Suicide
 - Accident
 - Undetermined

Forensic Autopsy: Primary Purpose

- To assist in the determination of:
 - Cause of death
 - Manner of death
- **Cause** of death = disease or injury which culminates in death: the *why*
- **Manner** of death = description of the circumstances of death: *how* the cause arose

Medical Autopsy

- Generally – “hospital” death = natural manner
- Medical autopsy:
 - Performed with next-of-kin authorization
 - Used for determining or clarifying cause of death
 - Very helpful for purposes of child death review
 - Often no CPS or law enforcement involvement
 - Circumstances therefore may be vague
- Low autopsy rates

Tools in Reviews of Natural Deaths

- Pertinent information:
 - Any trauma
 - Past medical history
 - Birth history
 - Medications
 - Circumstances immediately surrounding death
 - Autopsy findings
 - Placental examination (neonates/infants)

Medical Records Review

- How to ask/whom to ask: HIPAA
 - Health Insurance Portability and Accountability Act
- Continuity of care – does not end at death
- For patients, responsibility to understand:
 - Reasons for death
 - Communication with family, law enforcement
 - Prevention of future similar deaths

WI State Statutes: 146.82

- **Health care provider:** The individual, agency or organization to which disclosure may be made;
- any person licensed, registered, permitted, or certified by department agency to provide health care services in WI.
- Disclosure is made for purposes of health care operations...
- Authorized representatives of various agencies...
- If the treatment records involve or relate to the subject of the evaluation.

Medical Records Review

- Telephone: identify self, explain role and purpose
 - Cite 146.82 if necessary
 - Speak with respective Risk Management
- Fax Request for Information to medical records/clinic
 - “Continuity of care”
- Specify records needed
- Utilize local pathologists/other physicians of record

Important Questions

- Cause of death?
- Was there any trauma?
- Circumstances surrounding death
- Medical conditions
- Medications
- Newborn screening results

Records Needed for Case Review

- Birth records
 - Pediatric records for well and sick visits
 - Hospital birth records
 - Admission history and physical
 - Laboratory studies and radiological reports
 - Emergency Department records
 - EMS run sheet
 - Death certificates
 - Autopsy report
-
- Prenatal care records – different issue, Mom's consent

Case Example (SIDS)

- 2-month-old infant found unresponsive
 - By mother
 - In morning
 - In crib on back
 - Bedding at bottom of crib (not covering at all)
 - 911 – EMS transport to hospital
- Recent congestion, cold symptoms (in day care)
- No medications; otherwise no PMH
- Term gestation, unremarkable pregnancy
- Maternal tobacco use: ½ ppd

Case Example (SIDS)

- Autopsy findings (coroner/ME autopsy)
 - No external injuries
 - Normal skeletal survey
 - No signs of infectious disease (negative cultures)
 - No congenital organ abnormalities (no heart defects)
 - No organ trauma or disease (microscopy, metabolic tests)
 - Negative toxicology
- Pulmonary congestion/edema
- Asphyxia due to smothering: difficult to diagnosis at autopsy in infants

“SIDS”

- SIDS is NOT a DIAGNOSIS
- SIDS is a category of infant deaths
- Technically, SIDS = unknown cause of death
- Using SIDS category means:
 - No identified disease or condition to account for death
 - No toxicological insult
 - No evidence of injury
 - No contributing environmental factors (sleep environs)
- Usually forensic autopsy

SIDS


- Sudden death of an infant under one year of age which remains unexplained after completion of a complete autopsy, examination of the death scene and review of the infant's medical history
 - Sudden infant death syndrome
 - Sudden unexplained death in infancy
- SIDS/SUID = unexplained death
- Historically: natural manner for SIDS
 - Probable disease/condition - unidentified
- SUID: often undetermined manner

Risk Factors for SIDS

- Highest risk for SIDS: 3 converging risk variables
 - 1) a physiological defect
 - 2) the critical development period (2 – 4 mos.)
 - 3) environmental stressors:
 - Prone sleep position
 - Exposure to second-hand smoke
 - Overheating due to swaddling with heavy blankets

Risk Factors for SIDS

- AA and Native Americans have significantly higher rates of SIDS
- ? Back to Sleep message not reaching these populations?




Back to Sleep


Each week, 3 babies die of SIDS in Canada. According to the latest research, there are things you can do to reduce the risk of Sudden Infant Death Syndrome (SIDS):


1. Put your baby on his or her back to sleep.
2. Make sure no one smokes around your baby.
3. Avoid putting too many clothes and covers on your baby.
4. Breastfeed your baby, it may give some protection against SIDS.

For more information call 1-800-END-SIDS (1-800-363-7437).

 Health Canada / Santé Canada

 The Canadian Foundation for the Study of Sudden Death

 Canadian Institute of Child Health

 Canadian Pediatric Society

Additional copies of the SIDS promotional material can be ordered from (613) 954-5995.

Natural Deaths in Children and Infants

- Natural deaths excluding SIDS:
 - 2/3 of these infants are neonates (under 1 mo)
 - Most premature (born prior to 37 weeks gestation)
 - Frequently low birth-weight (under five pounds)
- Prematurity and low birth weight are the greatest predictors of infant mortality.

Natural Deaths Excluding SIDS

- Rate of pre-term birth has increased significantly in the U.S. since 1980s
- Rate of low birth weight has risen
- AA mothers have 2x risk of preterm labor

Case Example (Non-SIDS)

- 1-month-old infant found unresponsive at home in crib
 - By grandmother
 - Blankets appropriately placed
 - Fussy, irritable prior to nap
 - 911 – EMS transport to hospital
- Past medical history: home from hospital x 2 days
- Birth records: Preterm, born at 30 weeks
- Maternal history unknown

Case Example (Non-SIDS)

- In ED, resuscitated and placed on ventilator
- Physical exam: abdominal distention
- Labs: increased WBC, acidotic, cultures pending
- Abdominal Xray: free air in abdomen
- Cranial ultrasound: small intraventricular hemorrhage
- Infant died prior to additional intervention

- Coroner declined jurisdiction; Parents declined autopsy

Case Example (Non-SIDS)

- Need to know:
 - Culture results
 - Presumed reason for preterm birth
 - Placental examination helpful
 - Diagnosis of attending physician
 - Cause of death
 - Cause of brain hemorrhage (any signs of trauma)
 - Compliance with home feeding regimen
 - Involvement with CPS
 - History of other infant deaths in family

Risk Factors for Preterm Labor

- Maternal age (under 20, over 35)
- Adequacy of prenatal care
- Medical conditions of the mother
 - Hypertension
 - Diabetes
 - Poor nutritional status
 - Obesity
 - Infections, including sexually transmitted
- Short inter-pregnancy interval
- Prior pre-term delivery
- Previous infant or fetal loss

Risk Factors for Preterm Labor

- Poverty
- Substance, alcohol and tobacco use
- Stressors and lack of social support
- Less than 12th grade education
- Unintended unplanned pregnancy
- Unmarried or lack of male involvement in pregnancy
- Physical and emotional abuse of mother

- Adequate prenatal care improves pregnancy outcomes

Natural Deaths Over One Year of Age

- Natural deaths: 2nd leading cause of death
- (Leading cause: unintended injuries)
 - Congenital anomalies
 - Genetic disorders (cystic fibrosis)
 - Cancer
 - Infectious disease
 - Respiratory disorders (asthma)
 - Infectious diseases
 - Screenable genetic disorders

Major Risk Factors for Natural Death (> 1 yr)

- Congenital anomalies and other genetic disorders
- Chronic health issues

- Lack of preventive medical care (vaccinations)
- Impoverished living conditions
- Exposure to environmental hazards
- Non-compliance with prescribed treatment regimens
- Caregiver failure to seek adequate medical attention

Caveats in Reviewing Natural Deaths

- Paint a portrait of events: answer questions
- Medical records review: difficult!
 - Getting records
 - Incomplete
 - Illegible
 - Indecipherable
- Discuss autopsy findings, medical examiner reports, test results, and/or other pertinent information that may shed light on a child's illness or death.
- Ask for help: pathologist, treating physician

Effective Reviews of (Natural) Deaths



Questions?

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