

Effective Reviews – Natural Deaths to Infants

Facts

- Many child death review teams do not review natural infant deaths because they consider them non-preventable events. However, it is estimated that at least half of natural infant deaths could be prevented if attention is paid to maternal health and socio-economic risk factors to improve birth outcomes.
- Natural deaths to infants comprise the largest group of child deaths. These include deaths due to congenital anomalies, infants born prematurely and of low birth weight, respiratory complications, infections and other medical conditions.
- Infant death rates are calculated differently than other child death rates. They are the number of deaths per 1,000 live births.
- The greatest numbers of natural deaths are infants who die within the first 24 – 48 hours of life.
- In many areas of the country, large disparities exist between infant death rates of white infants and infants of color. Black infants are more than twice as likely to die in their first year as White infants, and Native American Infants are one and a half times more likely to die than their White counterparts.
- Prematurity refers to infants born at less than 37 weeks gestation, and low birth weight refers to infants weighing less than five pounds, five ounces at birth.

Definitions

- Infant Mortality: The death any live born infant prior to his/her first birthday
- Live Birth: Infant who shows evidence of breathing, heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles regardless of weight or gestation
- Perinatal Death: Fetal deaths (stillbirths) plus infant deaths under 7 days

- Neonatal Death: Infant born live dying within the first 28 days
- Post-Neonatal Death: Infant born live dying between 28 days and 1 year

Records Needed

- Public Health full birth records
- Infant health records for newborn/NICU care, well and sick visits, immunizations
- Death certificates
- Maternal health records including prenatal care records (OB/GYN history, past pregnancies) and maternal labor and delivery records (antepartum, delivery, post-partum)
- Emergency Department records
- Any support services utilized, including WIC and Family Planning
- Police reports
- Substance abuse services
- Prior CPS reports on caregivers
- Maternal home interview, if available
- Home visitation service summaries

Risk Factors and Maternal Characteristics

- Previous pre-term or low birth weight birth
- Previous infant or fetal loss
- Maternal age (under 20, over 35)
- First birth as a teen
- Unintended pregnancy
- Short inter-pregnancy interval
- Inadequate prenatal care (late entry, missed appointments)
- Medical conditions of the mother
 - Infections, including sexually transmitted (STI)
 - Hypertension
 - Diabetes
 - Poor nutritional status
 - Obesity

- Poverty
- Substance, alcohol or tobacco use
- Stressors and/or lack of social support
 - Homelessness
 - Lack of transportation
 - Mental illness, depression, anxiety
 - Food instability
- Less than 12th grade education
- Unmarried or lack of male involvement in pregnancy
- Physical and/or emotional abuse of mother

Services to Consider

- Bereavement services
- Specialized burial services for stillborn or fetal deaths
- Preconception and pregnancy planning for families that have lost infants
- Specialized services for surviving siblings
- Genetic counseling for certain congenital anomalies
- Substance abuse treatment services

Recommendations; Effective Prevention Services/Actions

Improving Health Care Services

- Ensure all women have available preconception care (before pregnancy), interconception care (between pregnancies), and counseling
- Improve the quality of pre-natal care to assure that care that is acceptable, accessible, appropriate, and culturally sensitive
- Ensure all women have postpartum care options available that include contraception, pregnancy planning and preconception care
- Improve local provider knowledge of preconception health care issues
- Improve emergency response and transport systems
- Foster maternal and infant support services, including evidence based home visiting, to

improve the social/psychological environment for women and families at risk

- Encourage the comprehensive assessment of and provision of services by all local providers for risks due to STIs, substance abuse including alcohol, smoking, domestic violence, depression, social support, housing, employment, transportation, etc.

Strengthening Families and Communities

- Strengthen father involvement with families
- Enhance service coordination and systems integration
- Create reproductive social capital in communities
- Invest in community building and urban renewal
- Develop and distribute community resource directories to make consumers and providers aware of where to go for help and services
- Provide mentoring, support, outreach and advocacy at the community level utilizing paraprofessionals, indigenous health workers and faith-based initiatives
- Develop systems to provide transportation and childcare to women seeking prenatal care
- Hold forums to raise awareness of consumers, providers, and policy makers of infant mortality issues
- Develop local community/business/health care partnerships to broaden the number of stakeholders
- Enhance community education to include unplanned/unwanted pregnancy prevention, including teen pregnancy prevention services and early detection of signs and symptoms of pre-term labor
- Support building health care facilities in underserved communities
- Provide accessible primary care focused on meeting the needs of marginalized individuals in the community
- Implement strategies to reduce implicit bias in health care settings:

- Stereotype replacement: Recognizing that a response is based on stereotype and consciously adjusting the response
 - Counter-stereotypic imaging: Imagining the individual as the opposite of the stereotype
 - Individuation: Seeing the person as an individual rather than a stereotype (e.g., imaging or learning about their personal history and the context that brought them to the doctor's office or health center)
 - Perspective taking: "Putting yourself in the other person's shoes"
 - Partnership building: Reframing the interaction with the patient as one between collaborating equals, rather than between a high-status person and a low-status person
- Centers for Disease Control and Prevention, Reproductive Health: <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>
 - Preventing Preterm Birth, Mayo Clinic: <http://www.mayoclinic.org/diseases-conditions/premature-birth/basics/prevention/con-20020050>
 - Strategies to Prevent Preterm Birth - NCBI - National Institutes of Health: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4237124/>
 - Centers for Disease Control and Prevention, Birth Defects: <http://www.cdc.gov/ncbddd/birthdefects/prevention.html>
 - National Birth Defects Prevention Network: <http://www.nbdpn.org/>
 - Health Equity Institute: <https://healthequity.sfsu.edu/>
 - March of Dimes: www.modimes.org
 - National Center on Substance Abuse and Child Welfare: <https://ncsacw.samhsa.gov>

For More Information

- Institute of Medicine, Preterm Birth: Causes, Consequences, and Prevention <http://www.nationalacademies.org/hmd/Reports/2006/Preterm-Birth-Causes-Consequences-and-Prevention.aspx>
- ACOG, Preterm (Premature) Labor and Birth: Resource Overview: <http://www.acog.org/Womens-Health/Preterm-Premature-Labor-and-Birth>