

**REPORT TO THE THIRTIETH LEGISLATURE
STATE OF HAWAII
2019**

**PURSUANT TO ACT 203, S.B. 2317, (SLH 2016 § at 621-622)
REQUIRING THE DEPARTMENT OF HEALTH TO PROVIDE AN
ANNUAL REPORT ON CHILD DEATH REVIEW AND MATERNAL
MORTALITY REVIEW ACTIVITIES**

**PREPARED BY:
STATE OF HAWAII
DEPARTMENT OF HEALTH
HEALTH RESOURCES ADMINISTRATION
FAMILY HEALTH SERVICES DIVISION
MATERNAL AND CHILD HEALTH BRANCH
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CHILD DEATH REVIEW

Legislative Approval

In 2016, the legislature passed and Governor Ige signed, Act 203, S.B. 2317 authorizing comprehensive multidisciplinary reviews of child deaths and maternal deaths. The purpose of these reviews is to understand risk factors and prevent future child and maternal deaths in Hawaii. An appropriation of \$150,000 was made for fiscal year 2016-2017 for the DOH to conduct child death reviews and implement a program for the performance of maternal death reviews.

In fiscal year 2017-2018 the DOH, Family Health Services Division, Maternal and Child Health Branch (MCHB) received funding from the legislature for a permanent position to oversee the mortality reviews. The general funds cover both FY 18 and FY 19. The position is being established pending approval of a revised organizational plan for MCHB.

During the interim period, the DOH contracted a registered nurse to facilitate the Child Death Review team meetings and abstract cases. For Maternal Mortality Reviews, an obstetrician-gynecologist conducts the Maternal Mortality Reviews.

Background and Purpose

Child death reviews provide critical information needed to identify strategies to prevent child deaths and to keep children safe and healthy. A child's death impacts the entire community especially when the death was preventable.

In Hawaii, the Child Death Review System was legislatively established in 1997 by Hawaii Revised Statutes §321-341. The responsibility to implement these multidisciplinary and multiagency reviews of child deaths was assigned to the Department of Health, Health Resources Administration, Family Health Services Division, Maternal and Child Health Branch.

During 2016, Act 203, SB2317 was passed requiring the DOH to submit annual reports to the Legislature relating to child and maternal death reviews. Hawaii Revised Statutes §321-343 also requires access to information from all providers of health care, social services and state and county agencies for the use of child death reviews upon written request from the Director of Health. Hawaii Revised Statutes §321-346 provides immunity from liability and states that all agencies and individuals participating in the review of child deaths shall not be held civilly or criminally liable for providing the information required under this part.

Child deaths in Hawaii are reviewed one year after the death occurs. The review process includes the examination of the circumstances surrounding a child's death with public and private members of the community. The reviews serve to collect critical data and information to make recommendations that can prevent future injury or deaths.

Interagency collaboration assists members of the review teams to understand the causes that may lead to child deaths as well as identify and implement prevention strategies.

The Registered Nurse Coordinator and Family Health Services Division Medical Director screens the data received from the DOH Office of Health Status Monitoring to identify deaths for review. The types of child death cases reviewed is determined by national standards and include causes related to child abuse and neglect, homicide, suicide, undetermined, natural, and unintentional injury.

Recommendations from the statewide Child Death Review teams are presented quarterly to the State Child Death Review Council. This Council is a multidisciplinary group organized to identify system problems and make recommendations necessary for policy, programmatic and legislative changes to reduce preventable child deaths.

Program Activities

Child Death Review teams exam cases one year after the death occurs. For calendar year 2017 there were 145 child deaths. Four deaths occurred while in state custody.

The activities listed below were completed in 2018:

- 1) Oahu –Nine (9) Child Death Review team meetings completed.
- 2) Kauai –Two (2) Child Death Review team meetings completed.
- 3) Maui – No child death review team meeting completed, to be scheduled.
- 4) Hawaii Island – Three (3) Child Death Review team meetings completed.
- 5) Collaborative Fatality Review Meetings - Three (3) forums for State fatality review members (Child Death Review, Maternal Mortality Review and Domestic Violence Fatality Reviews) and others interested in developing strategies to improve systems and infrastructure to reduce preventative deaths.
- 6) State Child Death Review Council meetings - Three (3)
- 7) Policy and procedures updated for child and maternal mortality reviews.
- 8) Case information abstracted, data compiled and prepared for child death review teams.
- 9) Planning initiated for a Summit in 2019 to provide training and information on preventative practices for fatality review committee members, families, and both public and private partners.
- 10) Statewide technical assistance provided to support neighbor island child death review teams; Kauai, Maui, and Hawaii Islands.
- 11) Program staff, Child Death Review stakeholders, and families attended the 2018 annual Association of Maternal & Child Health Programs Conference (Arlington, VA). This was an opportunity for stakeholders to attend workshops addressing evidence based, and promising practices in the areas of adolescent health, child health, women and infant health, public health systems building, and public health workforce development and leadership.

Collaborative Efforts

Collaborations at the local and national level are important to improve the effectiveness of review process, share the key findings from the reviews, and engage partners to implement prevention strategies. Collaborative efforts in FY2018 are described below.

- 1) The Family Health Services Division, Maternal and Child Health Branch contracted with:
 - a) The Early Childhood Action Strategy, Collaborative Leaders Network to assist with the facilitation of the Hawaii Maternal & Infant Health Collaborative a group of public and private partners committed to improving birth outcomes and reducing infant mortality;
 - b) The Kapiolani Medical Center for Women and Children for a pediatric registered nurse to convene Safe Sleep Hawaii meetings as well as for a Safe Sleep Annual Summit. Meetings and the annual summit promote preventive measures for infant safe sleep and strengthens medical, family and community partnerships;
 - c) The University of Hawaii, Center on Disability Studies and partnered with community providers and DOH staff to distribute and provide statewide trainings to families for 80 Play yards promoting safe sleep practices for infants;
 - d) The Child and Family Services to develop and maintain a resource directory; The Parent Line, a comprehensive resource on child behavior, child development, parenting support, and community resources.

- 2) National Collaboration
 - a) National Center for Fatality Review and Prevention-provided best practices information/training on infant and fetal deaths to program members.
 - b) American Academy of Pediatrics, Section on Child Death Review- program members on CDR teams engaged in discussions of sharing roles and advocacy.

- 3) Regional Collaboration
 - a) CDR programs from Western States gathered and discussed the challenges facing programs related to engaging with native populations.
 - b) Pacific Islands Emergency Medical Services for Children Region-discussions of establishing CDR programs.

- 4) State Collaboration
 - a) American Academy of Pediatrics, Hawaii Chapter – Local Chapter leaders/members assisted with promoting and implementing birthing facility policies and Safe Sleep training initiatives.
 - b) University of Hawaii John A. Burns School of Medicine, Department of Pediatrics – Sponsored a Grand Rounds training session on pediatric autopsy to help increase awareness this specific part of the Child Death Review process.
 - c) DOH Kauai District Health Office - Sponsored a Grand Rounds training session for parents on water safety and supervision of children when in and out of the water.

Implementation of CDR Recommendations

Follow up on the recommendations from the 2018 Legislative report:

- a) **Safe Sleep - parents are educated about safe sleep practices prior to hospital discharge with a newborn.** Safe sleep policies were reviewed at 92% of all birthing hospitals in the state. Findings helped to identify workforce training needs and resources as well as information needed to inform parents and families of safe sleep practices. A partnership with DOH, Safe Sleep community advocates, and coalitions continues with the state Department of Human Services (DHS) which administers state funded child care programs. The DHS implemented a new policy requiring all licensed childcare providers to undergo mandated safe sleep training.
- b) **Reinforce the importance of safe sleep with agencies providing services to infants, such as Women Infant and Children (WIC), home visiting, and child care.** Over 10,000 Safe Sleep brochures and posters were distributed to public and private agencies in 2018 with over 3,000 distributed at the 2018 Safe Sleep Summit attended by over 100 programs, agencies, and consumers. Training and informational sessions were conducted through WIC, the home visiting program and child care providers. Emphasis was placed on promoting safe sleep environments: ensuring all infants have their own bed, discouraging bed sharing with parents and siblings; ensuring that the sleep area is free from pillows, blankets, stuffed animals or toys; identifying appropriate safe beds, cradles, bassinets, etc.; and recommending breastfeeding of infants.

The Department of Health, Emergency Medical Services and Injury Prevention System Branch is partnering with the Keiki Injury Prevention Coalition (KIPC) to revise, expand, and evaluate an evidence-based toddler injury prevention curriculum, and the updated on-line developmentally based safety guidance from birth to age 18 for the Home Visiting Network "Your Ohana." Suffocation and safe sleep prevention are among one of the seven modules in the safety guidance.

- c) **Following the birth of a first child, all families should have a home visit to assure the safety of the environment.** More research is needed in this area. Previous home-visiting efforts prior to 2009 included universal screening of every birth in the state's birthing hospitals, however, funds are no longer available for universal screening.
- d) **Public Awareness Campaign be initiated and sustained to increase public awareness of safe sleep.** Safe sleep brochures and posters were developed and distributed at community functions; fairs and public and private events. Over 10,000 Safe Sleep brochures and posters were distributed to public and private agencies. For the past three (3) years, there has been an Annual Safe Sleep Summit with over 100 public and private partners in attendance. The Summit provides Safe Sleep evidence-based and best practice information, input from families, and identifies statewide Safe Sleep resources that are available.

- e) **Consider establishing a fund for the provision of safe sleep practices at home by providing hospitals with baby boxes, bassinets, cribs or playpens.** Funds through the Maternal Child and Health Branch were utilized in 2018 to provide statewide distribution of play yards to promote safe sleep practices for families who were unable to purchase a bed for their infant.
- f) **Review the occurrences of infant suffocation deaths associated with parental incapacity due to alcohol or substance abuse:** The DOH Family Health Services Division epidemiologist is reviewing the infant death data.
- g) **Drownings:** There were four (4) drowning cases reviewed for 2017 on Oahu. There was one pool drowning death on Kauai reviewed for 2017 for a child under the age of 5. Following the recommendations of the Kauai CDR, additional work group meetings were convened to coordinate water safety prevention efforts including:
 - 1) increase support among community partners to implement water safety recommendations ;
 - 2) Coordinate with existing water safety prevention programs and campaigns supported by the DOH Emergency Medical Services Injury and Prevention System Branch;
 - 3) Prevention efforts will be expanded to include general water safety (rather than a specific focus on Ocean Safety) to include safety in bathtubs, lakes, pools, streams as well as the ocean- any areas where there is water;
 - 4) Primary focus for prevention strategies include information to parents, guardians, caregivers, etc. on the importance of adult supervision of children in or near water.

The DOH Maternal and Child Health Branch in conjunction with the DOH Emergency Medical Services and Injury Prevention System Branch programs will continue to work collaboratively in providing water safety information to hotels and pool supply companies. The Emergency Medical Services and Injury Prevention System Branch provides preventative health information to the general public and community partners. Community inquiries from partners are also referred to the SafeKids website (<https://www.safekids.org/>).

Other water safety efforts through the DOH Emergency Medical Services and Injury Prevention System Branch includes partnership with the City and County of Honolulu officials regarding ongoing inspections of hotel and commercial swimming pools to ensure conforming signage about child safety in multiple languages by facility management.

All Hawaii airports are encouraged to adopt the Kauai Ocean Safety Education Program where a video on ocean safety is played in all airport baggage claim areas. Due to the collaboration of state and county agencies funding is available for the

Ocean Safety Public Service Announcements. Future goals are to have ocean safety videos available on the airplane for passengers arriving in Hawaii.

The DOH Emergency Medical Services and Injury Prevention System Branch continues to encourage an increase in the availability of swimming classes for children ages 2 and above by the City and County Parks and Recreation and continues to partner with the County Ocean Safety, Hawaiian Lifeguard Association and Hawaii Tourism Authority to ensure sustainable Junior Lifeguard Programs statewide.

- h) **Suicide:** There were 6 suicide cases reviewed on Oahu in 2016 and in 2017. There were no reviews on suicide as of November 2018.
- 1) The Maternal and Child Health Branch met with the DOH Emergency Medical Services and Injury and Prevention System Branch to integrate program initiatives on suicide prevention with the Maternal and Child Health Branch. The Emergency Medical Services Injury and Prevention System Branch provides quantitative national and local data to Hawaii schools to inform school officials on the magnitude of the problem.

A recently completed 2018-2025 Suicide Prevention Strategic Plan included participation from members of the Prevent Suicide Youth Leadership Council. The Council is administered through the DOH Emergency Medical Services Injury and Prevention System Branch and Mental Health America. Data collected from youth surveys included recommendations for the training of teachers, counselors and staff to recognize at risk students and ensure an immediate and long term response is considered a top priority. The Emergency Medical Services Injury and Prevention System Branch continues to work with the Department of Education and the University of Hawaii School of Psychiatry to provide best practices suicide prevention trainings such as safeTAlk (Suicide Alertness for Everyone) and Suicide and Bullying Prevention.

- 2) The National Suicide Prevention Organization provides links to local crisis centers providing free and confidential emotional support to people in crisis suicidal or emotional distress.
- 3) The Adolescent Unit of the Maternal and Child Health Branch created a list of suicide prevention resources available to public and private agencies that serve children, youth and teens.

New 2018 Recommendation

- 1) The Child Death Review teams and State Child Death Review Council to develop a plan of action identifying private and public partners to assist in the implementation of recommendations from the statewide CDR teams. Recommendations will be prioritized by county-specific CDR teams.

Population Based Data: Summary of trends for 2012-2017

There was an overall decline in the number of infant and child deaths since 2009. There were 164 deaths in 2009 compared to 145 in 2017. Nearly two-thirds of all infant and child deaths occurred among infants and the remaining are children 1-17 years of age.

Infant Deaths: 2017

In the 2017 provisional data, there were 90 infant deaths identified to Hawaii residents in the following descending order:

- Preterm-related (n=26),
- Other Perinatal (n=17),
- Congenital malformations (n=13),
- Maternal complications (n=13), and
- Sudden Unexpected Infant Death (SUID) (n=8).

This pattern is similar to that seen in recent years and there were no significant changes other than some small declines in the “other perinatal” and SUID categories. These classifications are based on the National Center for Health Statistics standards for leading cause of infant death.

Infant Deaths: 2012-2017

For the 2012-2017 data, the five leading causes of infant death accounted for 84% of all infant deaths:

- Preterm-related (30.9%),
- Other Perinatal (14.0%),
- Congenital Malformations (13.6%)
- Sudden Unexpected Infant Death (SUID, 12.6%), and
- Maternal Complications (12.2%).

Child Deaths 2017

In the 2017 provisional data, there were 55 child deaths identified to Hawaii residents. The leading causes of death in descending order:

- Malignant neoplasm (n=11)
- Transport related (n=7),
- Cardiovascular disease (n=5),
- Suicide (n=4), and
- Drowning (n=3).

This pattern is similar to that seen in recent years and there were no significant changes when compared to previous years. These classifications are based on the National Center for Health Statistics standards for leading cause of infant death.

Child Deaths 2012-2017

For the 2012-2017 aggregated data, the four leading causes of child death accounted for 50% of all child deaths:

- Malignant Neoplasm (15.5%);
- Transport related (14.7%; 3)
- Suicide (10.9%); and
- Drowning (8.8%).

The Child Death Review Program screens all deaths identified through vital statistics death certificate information. Those cases with likely elements of preventability— identified by the Family Health Services Medical Director and CDR Registered Nurse are then further reviewed.

MATERNAL MORTALITY REVIEW

Background and Purpose

There has been increasing focus on Maternal Mortality in the United States during the last few years. According to a recent US maternal mortality report, approximately 700 women in the US die each year because of pregnancy or pregnancy-related complications.¹ In Hawaii, the death of a mother in childbirth receives front-page and prime time news coverage. Due to heightened national and media attention, efforts by the State of Hawaii to address maternal death are increasingly important.

Although maternal mortality is a relatively rare event, these deaths are devastating for families and communities. According to the Centers for Disease Control and Prevention, about half of maternal deaths are believed to be preventable. The purpose of the maternal mortality review process is to determine the causes of maternal mortality in Hawaii and identify public health and clinical interventions to improve systems of care and prevent maternal deaths. State-level maternal mortality review programs are considered the gold standard for understanding why preventable deaths continue to occur and to identify and prioritize ways to reduce these deaths.¹

The Hawaii Maternal Mortality Review Committee (HMMRC) reviews all maternal deaths in Hawaii. A maternal death is defined as a death that occur during pregnancy or within one year of giving birth. The contributing factors to a maternal death are often complex and a review of all deaths ensures that the evaluation of preventable risks is complete. At the review, a determination is made as to whether the death is pregnancy-related or pregnancy-associated. Pregnancy-related deaths are those that result from complications of pregnancy, the chain of events initiated by the pregnancy, or aggravation of an unrelated

condition by the pregnancy. Recommendations are made by the committee as to changes that could be made to address the factors which contributed to the death.

Program Activities

The activities listed below were completed in 2018:

- 1) The HMMRC held two review meetings in March and November to review 2016 maternal deaths and discuss prevention strategies based on the findings. Deaths occurring throughout the State are reviewed and representatives from all islands attend the meetings.
- 2) The Family Health Services Division, Maternal and Child Health Branch contracted with an abstractor and coordinator to organize, gather data and prepare for committee review of maternal mortality data.
- 3) Program staff participated in the Collaborative Fatality Review meetings to facilitate and optimize communication between State agencies, health care providers and other parties interested in prevention efforts.
- 4) Program staff and members of the committee attended the Centers for Disease Control and Prevention (CDC) Maternal Mortality Review Information Application (MMRIA) User Meeting and the 2018 CityMatCH Leadership and MCH Epidemiology conference (Portland, OR) to ensure that the Hawaii committee is utilizing best practices and generating quality data and recommendations for maternal mortality prevention.

Collaborative Efforts

- 1) The Hawaii Maternal Mortality review engages a multi-disciplinary team to address the complicated dynamics which may surround maternal deaths. The committee members include:
 - a) Physicians with specialties in Maternal and Fetal Medicine, Obstetrics and Gynecology, Critical Care, Anesthesiology, Pediatrics, Family Practice, Mental Health and Substance Abuse, and Emergency medicine. Additional specialists may also be included in the committee as needed.
 - b) Major health care systems in Hawaii including Kapiolani Medical Center, Queen's Medical Center, Straub Medical Center, Kaiser Permanente, Kokua Kalihi Valley Clinic, Malama Ike Ola Health Center (Maui), Wilcox Medical Center (Kauai), and the Healthcare Association of Hawaii.
 - c) John A Burns School of Medicine, University of Hawaii and the American Congress of Obstetricians and Gynecologists (ACOG)
 - d) March of Dimes, Hawaii Maternal and Infant Health Collaborative, and Healthy Mothers, Healthy Babies Coalition of Hawaii.
- 2) Representatives from many Department of Health programs are included in the committee meetings to facilitate programmatic integration and future prevention efforts. These include representatives from the Office of Health Status Monitoring, nurses from the neighbor island District Health Offices, Domestic Violence Prevention Program, and the Office of Planning, Policy and Program Development. The maternal

mortality review program staff participated in the Collaborative Fatality Review meetings to increase interagency collaboration.

- 3) Consultation and assistance from the CDC, Building U.S. Capacity for Maternal Mortality Review program, continues to be important to ensure that the Hawaii committee is utilizing best practices and generating quality data and recommendations for maternal mortality prevention.
 - a) The HMMRC is using the CDC's Maternal Mortality Review Information Application (MMRIA) data system to compile and collect case information.
 - b) De-identified maternal mortality data from Hawaii was included in the CDC's 2018 Multi-State report on maternal mortality - Report from Nine Maternal Mortality Review Committees <http://reviewtoaction.org/rsc-ra/term/70> ¹

Population Based Data

The Report from Nine Maternal Mortality Review Committees¹, of which Hawaii was one, identified the following maternal mortality trends:

- 1) Nearly 50% of all pregnancy-related deaths were caused by hemorrhage, cardiovascular and coronary conditions, cardiomyopathy, or infection.
- 2) The nine committees estimated that over 60% of pregnancy-related deaths were preventable.

Hawaii Review Committee Data

During 2018, the committee reviewed calendar year 2016 maternal mortality cases. There were 13 cases identified for 2016 by the Office of Health Status Monitoring for potential review:

- 1) 10 cases were scheduled for review at the November 2018 meeting. The determination of Pregnancy-Related or Pregnancy-Associated will be made at the review.
- 2) 1 case was found to be Pregnancy-Related at the March 2018 review.
- 3) 2 cases were found to not meet the criteria for committee review.

Hawaii maternal mortality cases from calendar years 2015 and 2016 reviewed by the HMMRC:

- 1) Number of Cases: 20 (9 cases from calendar year 2015 and 11 cases from calendar year 2016).
- 2) Manner of Death: Natural Causes (10), Accident (6), Suicide/Undetermined (4)
- 3) Timing of Death: Pregnant at time of death (6), Pregnant within 42 days of death (4), Pregnant 43 days-1 year of death (10)

The reviewed cases are not sufficient to generalize trends.

Recommendations and Action

The committee review of calendar year 2015 of maternal mortality cases generated 40 separate recommendations for system improvements and changes. Some of these recommendations included ensuring that hospitals have in place medical policies and procedures for delivery hospitals on sepsis and hemorrhage, developing resources available to physicians on referrals for drug use and depression while pregnant, developing a data warehouse for maternal mortality in Hawaii, creating summaries of report findings, and preparing preventative maternal mortality information to be disseminated to the public.

Upon completion of the review of calendar year 2016 cases, the recommendations will be revised, and a recommendation subcommittee will be formed for consolidation and dissemination of recommendations. Some of the contributing factors identified include: continuity of care/care coordination, clinical skills/quality of care, pregnancy prevention, pharmaceutical guidelines during pregnancy, access to care/financial barriers, mental health, homelessness, language barriers, tobacco use, seat belt safety.

The identification of risk factors observed in the maternal mortality review committee and in their obstetric practices led two physician members of the committee to create a training for Hawaii hospitals which will be provided to birthing hospitals across the state in 2018 and 2019. The training, Sepsis and Hemorrhage in Pregnancy, by Dr. Scott Harvey and Dr. Janet Burlingame will address major risk factors for maternal morbidity and mortality. The training is being offered to Wilcox Hospital, Kauai Veterans, Maui Memorial, Kaiser Moanalua, Tripler Hospital, Queens Medical Center, Castle Adventist Health, North Hawaii, Kona Community Hospital and Hilo Medical Center, and other institutions as requested.

The project team for the Building U.S. Capacity to Review and Prevent Maternal Deaths project developed a logic model that outlines the requirements for a fully functional maternal mortality review committee. One of the assumptions of the model is that the State has a Perinatal Quality Collaborative (PQC) to support the implementation of the maternal mortality review's recommendations. The HMMRC recommends that the State of Hawaii engage with private and public partners to support and implement a Hawaii Perinatal Quality Collaborative.

References

- ¹ Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from nine maternal mortality review committees. Retrieved from <http://reviewtoaction.org/rsc-ra/term/70>