Alaska Maternal-Infant Mortality Review and Child Death Review
Annual Report 2010
Reviews of child deaths 2004-2006

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1. Executive Summary

This report summarizes findings of the Alaska Maternal Infant Mortality Review and Child Death Review (MIMR-CDR), based on committee reviews of 97% of all deaths of children ages 1-14 years during 2004-2006. During these three years, the average mortality rate for this age group in Alaska was 29 per 100,000 population. Child mortality rates were highest in the Southwest region and lowest in the Southeast, higher among Alaska Native children compared to non-Native children, and lower among children ages 5-9 years compared to older and younger age groups.

The most common causes of death noted by the committee were injuries due to motor vehicle collisions (21%), medical conditions (18%), and drowning (17%). Drug or alcohol use either directly or indirectly contributed to 12%.

Many Child Death Review committees find it helpful to present summary information on causes of death categorized by the manner of death, due to differences in preventability and types of prevention messages. Therefore we have used this structure in Section 6 of this report. During case reviews, the MIMR-CDR committee classified deaths into the following categories of manner of death:

- Unintentional injury
- Natural – related to a chronic, acute, or congenital medical condition or process
- Maltreatment – injury caused by the actions or inaction of another person, with or without the intention to cause death, including homicide, abuse and neglect
- Suicide – intentional self injury
- Could not be determined – the evidence was not sufficient to positively determine manner of death

The most common manner of death by committee consensus determination was unintentional injury (46%), followed by natural (21%), assault or neglect (11%), and suicide (4%). The committee could not determine a manner of death for 17% of deaths reviewed.

The review committee determined that 80% of all child deaths were possibly or probably preventable, including 100% of deaths due to neglect or abuse and suicide, 95% of unintentional injury deaths, and 40% of natural deaths. For each death reviewed, the committee noted actions or behaviors that may have prevented specific deaths and identified priorities for future actions, policies, or programs to keep children safe. These priorities are in Section 7 of this report.

2. History and objectives of MIMR-CDR

The Alaska MIMR was established by the Commissioner of the Department of Health and Social Services in 1989 and initially reviewed selected fetal and infant (<1 year of age) deaths. After an initial pilot period, the program started comprehensive reviews of all infant deaths during 1992. Comprehensive review of maternal deaths (deaths from any cause within one year of pregnancy) began in 1999. Case reviews of deaths of children ages 1 to 18 years (the Child Death Review) began with deaths during 2004. Both MIMR and CDR are modeled on national evidence-based programs.

MIMR-CDR conducts ongoing and systematic collection, review, analysis, and interpretation of information surrounding maternal, infant and child deaths. The ultimate goal of the program is to develop recommendations for public health interventions, changes in legislation, policy and practices to
prevent deaths and reduce mortality in infants, children and mothers. MIMR-CDR has the following objectives:

- Collect accurate and complete data on medical, social, behavioral and environmental causes of and contributors to death.
- Identify disparities, risk factors, and trends in deaths.
- Identify preventable causes of and contributors to death (including barriers and system issues).
- Educate members of the review committee and improve quality of care, delivery of services and communication among agencies and providers.
- Increase public awareness by presenting recommendations and findings to various state, local, and community partners.

MIMR-CDR operates under Alaska Statute Section 18.15.360b regarding acquisition of data for conditions of public health importance. Identifiable information provided to MIMR-CDR is protected under 18.15.355-18.15.395.

At the time this Annual Report was being prepared, the MIMR-CDR Review committee had completed reviews of 97% of child deaths ages 1-14 years occurring during 2004-2006. The MIMR-CDR committee generally completes retrospective reviews of deaths 3-4 years after they occurred. See Appendix A for a table comparing numbers of cases reviewed as of July 2010 and number reported by the Alaska Bureau of Vital Statistics, by year.

3. Methods: review process, criteria for review, and sources of information

The MIMR-CDR Committee is a multidisciplinary group of professionals and child advocates who possess knowledge and experience relating to infant and child health and welfare. Members have expertise in a variety of areas relevant to infant and child health including neonatology and perinatology, family practice, obstetrics/gynecology, pediatrics, pathology and social work. While State of Alaska employees may assist with case reviews and provide relevant information on services provided by the State, voting on recommendations is completed only by non-State employees. See Appendix B for a list of current committee members.

MIMR-CDR maintains case files for all deaths in Alaska of children ages 1-17 years, both residents and non-residents. The committee has only currently completed reviews of case files for children ages 1-14 years, but plans to review deaths of older children at a future date.

Sources of information
MIMR-CDR attempts to obtain copies of the following types of original records and information. It generally takes about two years for the MIMR-CDR Manager to gather all of the associated reports and documents and create a complete case file.

- **Death Certificate.** Death certificates are required to open a new case in the MIMR-CDR files. Death certificates provide information concerning the death, including date and place of death, and the cause and manner of death as determined at the time of death or autopsy.

- **Birth Certificate.** The full birth certificate record provides clinical and demographic information about the mother, child, and certain pregnancy risk factors. Birth certificates also direct the
MIMR-CDR program manager to other sources of information about the child, such as place of birth and physicians and providers involved at the time of birth. Birth certificates are always requested for infant deaths and are requested for child deaths on a case-by-case basis.

- **Medical Records.** These include all relevant hospital, private physician, village clinic and health aide records. Records requested for infant deaths are: maternal prenatal, admission, and labor and delivery; and child delivery (including intensive care unit), additional hospitalizations, emergency room, and outpatient visits (including well child check-ups). Medical records for child deaths are requested based on the circumstances surrounding the death.

- **Autopsy Reports.** Other specialized reports conducted in conjunction with an autopsy, such as pathology reports on tissues and cultures, are also requested separately from the autopsy.

- **Investigative Reports.** First responder reports and Police/State Trooper/Village Public Safety Officer investigative reports are requested for all out-of-hospital deaths.

- **Medicaid.** The state Medicaid database is searched for relevant ICD-9 billing codes for health care visits or medications for the deceased child.

- **Office of Children’s Services Reports.** Information is collected for the deceased child and siblings.

- **Other potential data sources when appropriate and/or available:** Child Fatality Review Team reports, MIMR-CDR files of related children, court records, Alaska Pregnancy Risk Assessment Monitoring System and Childhood Understanding Behaviors Survey, newborn screening reports, genetic clinic reports, social network searches, news articles, obituaries, and any other records/reports which would add value to the review process are also included.
4. Trends and demographics

We present here trends in child mortality rates for 2001 through 2008, the most recently available year for vital records and population data, so that readers can visually compare rates for the years of review (2004-2006) with years before and after. The data source for these trends is the Alaska Bureau of Vital Statistics for death certificate information and the Alaska Department of Labor and Workforce Development Vintage 2009 estimates for the population denominators.

The Alaska mortality rate for children ages 1-14 years has been consistently higher than the rate for the United States (Figure 1). During 2004-2006, the average mortality rate of children ages 1-14 in Alaska was 29 per 100,000 population. The most recently available US rate, in 2006, was 19 per 100,000 children.

Data source for US rate: online Kids Count Data Center (http://datacenter.kidscount.org/)

During 2004-2006, children ages 5-9 years had a lower mortality rate (average 18.1 per 100,000 population) compared to children ages 1-4 years (29.5/100,000) and children ages 10-14 years (38.3/100,000) (Figure 2).
Alaska Native children had an average mortality rate almost twice the rate for non-Native children during 2004-2006 (43.2 per 100,000 population and 24.0 per 100,000 respectively), and the Alaska Native rate was higher during all single years examined (Figure 3).

Male children had a higher average mortality rate compared to females during 2004-2006 (33.3 per 100,000 population and 24.2 per 100,000 respectively) (Figure 4).

During 2004-2006, 41% of children ages 1-14 years who died resided in the Anchorage or Mat-Su region. The remainder lived in the Interior (16%), Southwest (16%), Gulf Coast (10%), Northern (9%), and Southeast (7%) regions, while less than 1% lived in another state. Child mortality rates were highest for the Southwest and Northern regions and lowest for Anchorage/Mat-Su and Southeast (Figure 5).

Residence was determined from the child’s region of residence as indicated on the death certificate. The region of residence does not necessarily indicate the region where the death occurred. We used the six regions defined by the Alaska Department of Labor in our analysis.
Figure 5. Child (ages 1-14 years) mortality rates by region; Alaska 2004-2006
5. Review Findings: overview of causes and contributors to death

During 2004-2006, there were 130 deaths among children ages 1-14 years. Among these, 126 (97%) have been reviewed by the MIMR-CDR committee. The four deaths that were not reviewed at the time of this report included two associated with firearm injuries, one child who was run over by a motor vehicle while sledding, and one with chronic and acute medical conditions.

On the case review form, the committee assigns contributing causes (both primary and underlying) to each death, identifying multiple causes per death as appropriate. The predefined causes on the form were modified from the National Center for Child Death Review CDR Case Reporting System. Some causes are broad categories, such as medical conditions, due to the rarity of most individual diseases, while others are more specific, primarily for external causes such as motor vehicle collisions. (See Appendix C for the Case Review Form, question 6.) Among the 126 cases reviewed, the most common causes of death were motor vehicle collisions (21% of deaths; mortality rate 18.0 per 100,000 population), drowning (17%; 14.6 per 100,000 population), medical conditions (18%; 15.3 per 100,000 population), and asphyxiation (13%; 10.7 per 100,000 population). Drug or alcohol use caused or contributed to 12% of deaths and infections contributed to 10%. Figure 6 includes all of the available cause of death and contributing factor categories that were assigned by the review committee for child deaths during 2004-2006. The distribution of child age groups varied within categories.

![Figure 6. Number of child deaths by MIMR-CDR determined cause or contributor, by age group; Alaska 2004-2006](image_url)
We calculated Alaska Native-specific mortality rates for cause and contributor categories with more than 5 deaths. Among all categories meeting this criterion, Alaska Native children had higher mortality rates compared to non-Native children (Figure 7). Among Alaska Native children, the highest mortality rates were due to drowning (11.5 per 100,000), asphyxiati0n (7.9 per 100,000), and medical conditions (7.9 per 100,000). Among non-Native children, the highest mortality rates were due to motor vehicle crashes (5.9 per 100,000), medical conditions (4.1 per 100,000), drowning (2.7 per 100,000), and drug or alcohol use (2.7 per 100,000). During the three year study period, less than five child deaths occurred due to poisoning, perinatal events, preterm birth, and fire, burn or electrocution. Alaska Native children had less than 5 deaths in three categories (fall or crush, mental health disease, and use of weapons), while non-Native children had less than 5 deaths due to exposure.

![Figure 7. Child mortality rates for cause and contributor categories, by race; Alaska 2004-2006](image_url)
6. Review findings by manner of death

During case reviews, the MIMR-CDR committee classified deaths into the following categories of manner of death:

- Maltreatment – harm caused by the actions or inaction of another person, with or without the intention to cause death, including homicide, abuse and neglect
- Suicide – intentional self harm
- Unintentional injury
- Natural – related to a chronic, acute, or congenital medical condition or process
- Could not be determined – evidence was not sufficient to positively determine manner of death

Manner of death is typically determined at the time of death or autopsy and is indicated on the death certificate. The options for manner of death on the Alaska death certificate are “homicide”, “suicide”, “accident”, “natural”, and “could not be determined”. Upon reviewing all of the available records for individual cases, some which included information that may not have been available at the time of death, the committee did not always agree with the death certificate manner of death. The committee was less likely to mark natural, only agreeing that the manner was natural for 27 of 43 deaths - 63% - with natural on the death certificate; for 14 other cases with a natural manner on the death certificate the committee was uncertain and indicated that they could not determine a manner of death. The committee’s assault or neglect manner of death category had a broader definition than the death certificate use of “homicide”; specifically, the committee was not limited to assigning this particular manner to deaths for which there existed sufficient evidence for the case to be prosecuted in court. The committee agreed for most cases that were assigned homicide as the manner of death on the death certificate; however in one case the committee believed the manner of death was unintentional injury because there was no intent to cause harm.

The most common manner of death assigned by the committee for children ages 1-14 years was unintentional injury (58 cases, or 46%) (Figure 8). This was followed by natural (21%), assault or neglect (11%), and suicide (4%). The committee could not determine a manner of death for 17%.

![Figure 8. Manner of death for child deaths (ages 1-14 years), by source of determination; Alaska 2004-2006](image-url)
a. Unintentional injury

Among 58 child deaths with an unintentional injury manner of death, 23 (40%) were related to a motor vehicle crash and 21 (36%) were related to drowning. Five cases were included in both categories as they involved a combination of a motor vehicle crash and drowning (airplane, ATV, or snowmachine falls into water). Three additional children were crushed by uncontrolled motor vehicles that had no driver. Four children died from poisoning related to drug overdoses (such as inhalants and methadone). Three died from gunshot wounds. Two died from asphyxiation (hanging and choking on a foreign body). Two died from crashes while sledding. Two children died from falls, one fell from a window and another fell from a tree. One child died in a residential structure fire, one died from infection that was related to a medical procedure, and one died of hypothermia after the boat he was in swamped. In this final case, the review committee felt the evidence indicated the child died of exposure rather than drowning.

Among the 23 motor vehicle collisions, five involved airplanes, five involved snow machines or all terrain vehicles, and one involved a boat. Among the remaining 12 deaths involving a car or truck collision, in 4 cases the child was a pedestrian or was riding a bike and was hit by the vehicle.

**Contributing factors to motor vehicle collision deaths**
- The child was not wearing a helmet in any of the three ATV crashes which occurred on land.
- The child was not properly restrained by a seat belt or age-appropriate booster seat in 3 of the 8 motor vehicle crashes in which the child was riding in a car or truck.
- The driver was impaired or possibly impaired by alcohol or other drugs in 5 of the 23 motor vehicle deaths.

Among the 21 drowning deaths, six fell out of a boat or raft and five fell through ice. All of the deaths were in open water (rivers or lakes).

**Contributing factors to drowning deaths (among the 16 not involving a motor vehicle crash)**
- Twelve children who died were not wearing a personal flotation device.
- Inappropriate supervision was noted by the review committee in 11 deaths.
- Water temperature contributed to 11 deaths.
- The child’s inability to swim contributed to five deaths.
- Strong current contributed to nine deaths.
- Substance use by the child’s parent possibly contributed to one death.

After starting reviews of child deaths, the committee became interested in collecting information on the contribution of behaviors or actions that led to unintentional injury deaths, and a category termed “risky behaviors” was added to the review consensus form. These questions were answered for 50 of the 58 unintentional injury deaths. “Risky behavior” was defined as a behavior or action which is likely to lead to a negative outcome if repeated and for which an individual of similar age with sound mind would understand the risk. The purpose of this category was to identify deaths that could have potentially been prevented if behaviors known to increase risk had been avoided (such as drinking and driving), as compared to deaths that were associated with behaviors or actions that would not commonly be seen as high risk (such as flying in a plane).

- For 25 of the 50 (50%) deaths, the committee found that risky behavior contributed to or led directly to the death. Some risky behaviors mentioned included sledding on a road, reckless driving, improperly crossing a major highway, playing with a shotgun, and experimenting with drugs.
• The risky behavior was the behavior of the child who died in 10 cases, the behavior of someone else in 11 cases, and the behavior of both the child and someone else in 4 cases.
• Among the 14 deaths in which the child demonstrated risky behavior, in 11 cases the committee believed the behavior was typical for the child’s age.
• Among the 15 deaths in which someone else demonstrated risky behavior, that person was a parent or other caregiver in 9 cases.

Demographics
One-third of children with an unintentional injury manner of death were residents of Anchorage/Mat-Su (33%). Almost a quarter were residents of the Southwest (24%) region, while others were residents of the Northern (16%), Gulf Coast (12%), Southeast (9%), and Interior (7%) regions. The Southwest and Northern regions had the highest unintentional injury mortality rates (41.7 per 100,000 in both regions). Unintentional injury mortality rates for the Gulf Coast, Southeast region, and Anchorage/Mat-Su were 14.8, 12.2 and 8.0 per 100,000 respectively. A rate was not calculated for the Interior region due to less than five deaths occurring in this region during the study period.

Preventability
Among deaths with unintentional injury manner of death, the committee believed that 79% were preventable, and 16% were possibly or probably preventable. For three cases, the committee could not determine preventability.

b. Natural

During 2004-2006, there were 27 child deaths with a natural manner of death related to a disease process which directly caused or indirectly contributed to the death. Among the children that died, 15 had a medical condition, including leukemia, brain tumors and other neoplasms, kernicterus induced encephalopathy with developmental delay, spastic quadriaparesis, and neuromuscular disease. Eight had a congenital anomaly, which included hydrocephalus, colloid cyst, moebius syndrome, cerebral palsy, and cardiomyopathy. Nine deaths were related to infections, including acute meningitis-encephalopathy due to rhinovirus, pneumococcal meningitis, and peritonitis and colitis. In one case, the
committee found that preterm birth contributed to the death in addition to infection, and in another a perinatal event contributed.

Demographics
The majority of children with a natural manner of death were residents of Anchorage/Mat-Su (56%). The remainder were residents of the Southwest (19%), Interior (15%), Northern (7%), and Southeast (4%) regions. None of the children with a natural manner of death were residents of the Gulf Coast. The mortality rate associated with natural deaths for residents of the Southwest and Anchorage/Mat-Su regions were 14.9 and 6.3 per 100,000 population, respectively. Rates were not calculated for the remaining regions due to small numbers.

Preventability
In 21 cases (78%), the committee indicated that death was expected or possibly expected as a result of the child’s medical condition. The members believed that six children were not receiving adequate health care for their condition.

Among deaths with a natural manner of death, two (7%) were probably preventable and nine (33%) were possibly preventable. Among these, the committee believed delays in receiving appropriate and adequate diagnosis and treatment were associated with 7 deaths, while a lack of appropriate parental recognition of the illness or delay in seeking appropriate care was related to 4 deaths. (2 overlap, 2 cases had no discussion of how they could have been prevented)

c. Maltreatment

Among the 14 deaths which the committee found had abuse or neglect as the manner of death, causes of death included:

- Motor vehicle crashes in which the driver of the car was impaired;
- Gunshot wounds associated with gross negligence and gang activity;
- Carbon monoxide poisoning;
- Strangulation;
- Starvation and dehydration;

By age group, mortality rates for natural deaths were highest for children ages 1-4 years and lowest for children ages 5-9 (Figure 10). The mortality rate for Alaska Native children was twice the rate for non-Native children (29.1 vs. 14.2 per 100,000 population).
Question 9 on the Consensus form (Appendix C) asks the committee to identify whether abuse, intentional neglect, or gross negligence by a caregiver caused or contributed to the child’s death. The committee defined “abuse” as deliberate and intentional words or overt actions that result in harm to a child; “neglect” included the intentional failure to provide for a child’s basic physical, emotional, or educational needs or to protect a child from harm or potential harm; and “negligence” included the unintentional failure to exercise reasonable care that would be expected of most people in a similar situation. Among the deaths for which the committee believed abuse or neglect was the manner of death, they found that abuse caused or contributed to seven, neglect contributed to five, and negligence contributed to five.

Demographics
Almost all (93%) of the deaths with a manner of death of abuse or neglect were non-Native children. Half were ages 10-14 years and 43% were ages 1-4 years. Half were residents of the Interior region, 29% were residents of Anchorage/Mat-Su, 14% were residents of the Gulf Coast, and 7% were residents of the Southeast. The abuse and neglect mortality rate for the Interior region was 10.1 per 100,000 population. There were less than five deaths due to abuse or neglect in all other regions so rates were not calculated.

Preventability
All of the deaths with a manner of death abuse or neglect were preventable.

d. Suicide

Five deaths had a manner of death of suicide. The ages of these children ranged from 10 to 14 years. Contributing factors noted by the committee included:
- Lack of access or inadequate access to care, including identification and treatment for depression; child removed from inpatient treatment with no follow-up; and lack of access to mental health services in rural communities.
- Prior sexual abuse of the child.
- Substance abuse by the child.
- Exposure to prenatal alcohol and possible fetal alcohol spectrum disorder of the child.

Preventability
All of the deaths due to suicide were preventable.

e. Manner could not be determined

The committee could not determine a manner of death for 22 deaths. The manner of death identifies whether the death was intentionally caused by another person, self harm by the child, unintentional injury, or a medical condition, and in most cases the committee felt they did not have enough information to distinguish between two possible manners of death. Seven deaths had an unclear medical cause, which may not have fit their definition of a natural manner of death. For three of these, the committee believed that the child was receiving less than adequate medical care which may have contributed to the death. In one case of a death due to a drug overdose, the committee did not think it
was clear where the drugs came from and who administered them (the child or someone else). For six cases, the committee was undetermined whether the manner was unintentional injury or suicide. Four of these were deaths due to asphyxia, one was a drug overdose, and one child was a motor vehicle crash. Finally, the committee was undetermined whether the manner was natural or maltreatment in eight cases. In seven of these, the child had a chronic or acute medical condition which required care, but the committee was suspicious that the caregiver was purposefully negligent or neglectful in providing care.

An autopsy was not done for 11 of 22 deaths for which the committee could not determine a manner of death. For all 11, the committee thought that an autopsy would have been helpful in determining the cause and/or manner of death.

Demographics
Half of the cases with unknown manner of death were children ages 10-14 years, 14% were ages 5-9, and 36% were ages 1-4. Thirty-six percent were Alaska Native children. Most (59%) were residents of the Anchorage/Mat-Su region, while 23% were residents of the Interior, 9% were residents of the Southeast, and 5% each were residents of the Gulf Coast and Southwest regions.

Preventability
The committee believed that six of the deaths with an unknown manner were preventable, while 6 were probably preventable, and 4 were possibly preventable.

7. Priorities

For each death reviewed, the committee noted actions or behaviors that may have prevented specific deaths and identified priorities for actions, policies, or programs to keep Alaskan children safe. These priorities will be used to identify messages for targeted recommendations to be issued in the future.

For parents and caretakers
  o Provide age-appropriate supervision of children, including supervised summer activities for children
  o Provide close supervision of youthful or inexperienced hunters.
  o Follow gun safety practices in the home and around children, including education, unloading guns when in house, and educating babysitters.
  o Lock vehicles so that young children cannot get in, do not leave keys in ignition, and use the parking brake so that young children cannot move the vehicle on their own.
  o Always look before backing up a vehicle, especially with young children around.
  o Teach children to look both ways before crossing the road.
  o Wear helmets while riding bicycles and ATVs.
  o Wear PFDs at all times while on the water.
  o Don’t allow children to sled on roadways.
  o Use booster seats with shoulder harnesses appropriate for a child’s age.
  o Use GPS tracking devices to assist rescue attempts in rural areas.
  o Seek substance abuse and mental health treatment for children when needed.
For state and local leaders

- Enforce regulations to maintain working smoke detectors and carbon monoxide detectors in rental properties statewide.
- Enforce underage drinking laws.
- Enforce traffic regulations (speed, side of road, ATV’s on private roads).
- Faster response by law enforcement when drivers call to report unsafe driving.
- Provide public education about the dangers of open windows accessible to young children.
- Provide boating education.
- Provide opportunities for swimming lessons and water safety education for children.
- Provide hunter safety training.
- Maintain natural growth along highways to allow for clear visibility.
- Advocate for or develop child-friendly side air bags.
- Increase booster seat outreach, education and availability.
- Ensure that flares and signal equipment are easily accessible on boats.
- Install safety devices on outside of boats for people who have fallen overboard to grab on to.
- Train village staff on treatment of hypothermia, including Wrap Up strategies, humidified O2, and bundle up (Bear Hugs).
- Improve interventions and access to and availability of resources for runaways.
- Teach children of parents with drug problems how to address stressors and healthy reactions to stress.
- Provide treatment for inhalant abuse.
- Improve interstate collaboration and communication between health care providers and systems.
- Develop and provide on-line medical records.
- Provide a coordinated, centralized, and efficient EMS response and air transport (MediVac) system.
- Increase availability of pediatric hospice care and pediatric palliative care services.
- Provide cutting edge newborn screening and increase research into CPT1a.
- Improve access to treatment for mental illness and educate parents about mental health resources.
- Improve identification and treatment of substance abuse.
- Educate parents and communities about sign of problems with adolescents and potential triggers for suicide attempts.
- Educate CHAPS about depression screening.
- Implement a buddy system at schools so that all children have someone looking out for them who can notify others of unusual behavior.
- Improve truancy monitoring for unexplained absences.
- Educate caretakers on safe driving in adverse road conditions.
- Increase access to specialty care for children.
- Conduct child death scene investigations on all unexpected out of hospital deaths and Child Fatality Review Team meetings when the case meets CFRT criteria for review.
- Improve monitoring by OCS of high risk children, including ongoing OCS supervision after substantiated abuse.
## Appendix A

### Number of child deaths (ages 1-14) per year

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<th>2005</th>
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### APPENDIX B

Current members as of July 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty/Organization</th>
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</thead>
<tbody>
<tr>
<td>Tina Anliker, MPH, RNC, CDR, USPHS</td>
<td>Clinical Coordinator, Nutaqsivik program, Southcentral Foundation</td>
</tr>
<tr>
<td>Cathy Baldwin-Johnson, MD</td>
<td>Family Physician and Medical Director, Alaska CARES</td>
</tr>
<tr>
<td>Bruce Chandler, MD</td>
<td>Pediatrics, Anchorage Neighborhood Health Center</td>
</tr>
<tr>
<td>BJ Coopes, MD</td>
<td>Medical Director, PICU and Inpatient Pediatric Services, Children’s Hospital at Providence</td>
</tr>
<tr>
<td>Martin Grasmeder, MD</td>
<td>Pediatrics and Medical Director, SouthEast Alaska Regional Health Consortium</td>
</tr>
<tr>
<td>Jessica Hagan, MPH</td>
<td>Epidemiologist, Alaska Native Tribal Health Consortium, Alaska Native Epidemiology Center</td>
</tr>
<tr>
<td>Bernita Hamilton</td>
<td>Program Officer, Office of Children’s Services (Ex officio member)</td>
</tr>
<tr>
<td>Georgia Heiberger, EdD, PNP</td>
<td>Assistant Professor of Nursing, University of Alaska Anchorage</td>
</tr>
<tr>
<td>Matt Hirschfeld, MD, PhD</td>
<td>Medical Director, Pediatrics, Alaska Native Medical Center</td>
</tr>
<tr>
<td>Melissa Kemberling, PhD, MPH</td>
<td>Senior Epidemiologist – Alaska Native Tribal Health Consortium, Alaska Native Epidemiology Center</td>
</tr>
<tr>
<td>Carol Klamser, FNP, DNP</td>
<td>Kachemak Bay Medical Clinic and Seldovia Village Tribal Health Center</td>
</tr>
<tr>
<td>Susan Lemagie, MD</td>
<td>Obstetrics-Gynecology, Valley Women’s Health Care</td>
</tr>
<tr>
<td>Jenny Miller, DrPH, MS, MPH</td>
<td>Assistant Professor of Public Health, University of Alaska Anchorage</td>
</tr>
<tr>
<td>Jaime Muhr, MSW</td>
<td>Social work, Office of Children’s Services (Ex officio member)</td>
</tr>
<tr>
<td>Kelly Murphy, RN, LCDR, USPHS</td>
<td>Southcentral Foundation</td>
</tr>
<tr>
<td>Neil Murphy, MD</td>
<td>Obstetrics-Gynecology, Alaska Native Medical Center</td>
</tr>
<tr>
<td>Diane Payne</td>
<td>Children’s Justice Specialist and Alaska Native community liaison</td>
</tr>
<tr>
<td>Marilyn Pierce-Bulger, FNP, CNM</td>
<td>Nurse Midwife, Southcentral Foundation; Owner, Pioneer Consulting</td>
</tr>
<tr>
<td>Ellen Provost, DO, MPH</td>
<td>Director, Alaska Native Tribal Health Consortium, Alaska Native Epidemiology Center</td>
</tr>
<tr>
<td>Sherrie Richey, MD</td>
<td>Maternal/Fetal Medicine, Alaska Perinatology Associates</td>
</tr>
<tr>
<td>Nigel Wappett, MD</td>
<td>Obstetrics-Gynecology, Tanana Chiefs Conference</td>
</tr>
</tbody>
</table>
**MIMR-CDR Committee Consensus Form**

<table>
<thead>
<tr>
<th>What type of death is this?</th>
<th>[ ] Natural</th>
<th>[ ] Accidental</th>
<th>[ ] Suicide</th>
<th>[ ] Assault/Neglect</th>
<th>[ ] Unknown</th>
</tr>
</thead>
</table>

1) Autopsy Performed: [ ] Yes [ ] No
   If No, Committee recommended autopsy: [ ] Yes [ ] No
   Why: ________________________________

2) What do you believe was the **most probable** cause of death for this child? ________________________________

3) What do you believe were **other contributing cause(s)** that led to this death, or the incident resulting in death?
   A) ________________________________
   B) ________________________________
   C) ________________________________
   D) ________________________________
   E) ________________________________

4) Does the death certificate completely capture the above causes and contributors of death? [ ] Yes
   [ ] Does not accurately reflect most probable cause of death
   *Explain why not: ________________________________
   [ ] Does not accurately reflect contributing cause(s) of death
   ________________________________

5) Was the information available for review adequate for the committee to determine the cause(s) of death?
   [ ] Yes [ ] No [ ] Presumptive death

   **What missing information** would have helped to better understand this case? (check all that apply)
   [ ] Post-mortem cultures [ ] Post-mortem drug screen [ ] Post-mortem x-rays [ ] School records
   [ ] Social Service records [ ] Home interview [ ] Police report
   [ ] Other medical records: (psychiatry/psychology)
   [ ] Standardized death scene investigation form
   [ ] Toxicology Testing: ________________________________
   [ ] Other: ________________________________

   * If No, what **improvements of the available records** would have helped? ________________________________

Did **lack of access or inadequate access to care** contribute to this death? (due to geographical or other reasons)
   [ ] Yes [ ] Yes probably [ ] Yes, possibly [ ] No [ ] Unknown

If any "Yes", explain: ________________________________
6) **Summary Cause of Death:** Which of the following causes of death do you believe were part of the causal chain? (i.e. if prevented may have prevented the death, even if no known prevention exists). **Check all that apply.**

<table>
<thead>
<tr>
<th></th>
<th>Unknown</th>
<th>Infection</th>
<th>Perinatal event</th>
<th>Use of weapon(s), including body parts</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MVI</td>
<td>Poisoning</td>
<td>Animal bite or attack</td>
<td>Fire, burn or electrocution</td>
<td>SUID/SIDS</td>
</tr>
<tr>
<td></td>
<td>Drowning</td>
<td>Congenital anomaly</td>
<td>Asphyxiation, suffocation, strangulation</td>
<td>Fall or crush</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spontaneous preterm birth</td>
<td>Mental health disease</td>
<td>Drug, alcohol, or tobacco use</td>
<td>Medical condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medically indicated preterm birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[ ] Other____________________________

9) Did any of the following cause or contribute to the child’s death? *(See definitions handout.)*

9a) **Abuse** by caregiver/other Adult(s)?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes, probably</th>
<th>No</th>
</tr>
</thead>
</table>

*If Yes, was the Abuse:*

<table>
<thead>
<tr>
<th></th>
<th>Primary cause of death</th>
<th>Relate cause of death</th>
<th>Unknown</th>
</tr>
</thead>
</table>

*If Yes, relationship(s) of suspected/confirmed perpetrator(s)? ____________________________

9b) **Intentional neglect** by a caregiver(s)?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes, probably</th>
<th>No</th>
</tr>
</thead>
</table>

*If Yes, was the neglect:*

<table>
<thead>
<tr>
<th></th>
<th>Primary cause of death</th>
<th>Relate cause of death</th>
<th>Unknown</th>
</tr>
</thead>
</table>

*If Yes, relationship(s) of suspected/confirmed perpetrator(s)? ____________________________

9c) **Gross negligence** by caregiver(s)?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes, probably</th>
<th>No</th>
</tr>
</thead>
</table>

*If Yes, was the negligence:*

<table>
<thead>
<tr>
<th></th>
<th>Primary cause of death</th>
<th>Relate cause of death</th>
<th>Unknown</th>
</tr>
</thead>
</table>

*If Yes, relationship(s) of suspected/confirmed perpetrator(s)? ____________________________

10) Did **substance use by the child** cause or contribute to the death?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes probably</th>
<th>Yes, possibly</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
</table>

*If Yes, what type of substance?*

<table>
<thead>
<tr>
<th></th>
<th>Cocaine</th>
<th>ETOH</th>
<th>Methadone</th>
<th>Tobacco</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Semi-synthetic opiates</td>
<td>OTC</td>
<td>Marijuana</td>
<td>Other: ____________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Victim’s prescribed meds</th>
<th>Other’s prescribed meds</th>
</tr>
</thead>
</table>

10b) How did the substance use cause or contribute to the death? ____________________________

11) Did **substance use by someone else** contribute to the child’s death?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes probably</th>
<th>Yes, possibly</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
</table>

*If Yes, what type of substance?*

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<td>OTC</td>
<td>Marijuana</td>
<td>Other: ____________________________</td>
</tr>
</tbody>
</table>

*If Yes, How did the substance use cause or contribute to the death? ____________________________

*If Yes, what was their relationship to the child?*

<table>
<thead>
<tr>
<th></th>
<th>Unknown</th>
<th>Mother</th>
<th>Father</th>
<th>Friend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stranger</td>
<td>Family member</td>
<td>Other: ____________________________</td>
<td></td>
</tr>
</tbody>
</table>

*If Yes, was the person the supervisor of the child?*

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
</table>
Specific Causes or Contributing Factors to Death

Please also refer to and correct the data extraction sheet on the left side of the file

Motor Vehicle  N/A  (Circle N/A and skip to next section if not applicable)

12) Was the child properly restrained or was the child wearing proper protective gear (i.e. seatbelt, child safety seat, ATV rider protection)?

- [ ] Yes
- [ ] No
- [ ] Unknown
- [ ] N/A

*If No, please list what was not or incorrectly used. ___________________________________________

The above listed was:

- [ ] Not Used
- [ ] Incorrectly used
- [ ] Unknown

13) Please describe any factors not previously mentioned that you believe may have contributed to motor vehicle incident resulting in the death of the child: ____________________________________________________

Drowning  N/A  (Circle N/A and skip to next section if not applicable)

14) What was the primary reason child was in the water?

- [ ] Unknown
- [ ] Rescuing another
- [ ] Swimming
- [ ] Bathing
- [ ] Accidental fall (i.e. fell in toilet, fell off boat)
- [ ] Other: _______________________________

15) Contributing factor(s) to death (check all that apply):

- [ ] Weather
- [ ] Current
- [ ] Drop-off
- [ ] Inappropriate supervision
- [ ] House not child safe
- [ ] No personal flotation devise
- [ ] Water temp
- [ ] Child’s inability to swim
- [ ] Other: _______________________________

16) Please describe any factors not previously mentioned that you believe may have contributed to the drowning of the child: ____________________________

Assault  N/A  (Circle N/A and skip to next section if not applicable)

17) Child-related factors that may have contributed to the assault (check all that had supporting evidence)

- [ ] Current sexual abuse
- [ ] Past sexual abuse
- [ ] Dangerous online activities
- [ ] Prostitution
- [ ] Drug use/abuse
- [ ] History of delinquency
- [ ] Other: _______________________________

18) Perpetrator-related factors that may have contributed to the assault (check all that had supporting evidence)

- [ ] Inexperienced caregiver
- [ ] Stress/frustration
- [ ] Drug use/abuse
- [ ] Mental health issues
- [ ] Previous victim of DV/abuse
- [ ] Previously committed DV/abuse
- [ ] Religious beliefs
- [ ] Discrimination
- [ ] Other: _______________________________

19) Event-related factors that may have contributed to the assault (check all that had supporting evidence)

- [ ] Domestic dispute
- [ ] Gangs
- [ ] Other: _______________________________
Accident/Risky Behavior  N/A  (Circle N/A and skip to next section if not applicable)

20) Behavior that led to accident (describe behavior):

_______________________________________________________________________

*Did risky behavior lead to the accident?  (See definition of risky behavior on the definitions sheet.)
[ ] Yes [ ] Yes, probably [ ] Yes, possibly [ ] No [ ] Unknown [ ] N/A

21) The behavior described in #20 was (check all that apply):
[ ] N/A [ ] behavior of someone else [ ] Unknown [ ] behavior of child

22) Behavior by self or other(s) was:
[ ] Unknown [ ] Direct cause of death [ ] Contributing cause of death

23) If by child, was this behavior typical for the child's age?
[ ] Yes [ ] Yes, probably [ ] Yes, possibly [ ] No [ ] Unknown [ ] N/A
*If No, why not? ______________________

24) If BEHAVIOR of child, does evidence support this was typical behavior for this individual?  [ ] N/A (reckless behavior by others)
[ ] Yes [ ] Yes, probably [ ] Yes, possibly [ ] No [ ] Unknown
*If No, why not? ________________________

25) If BEHAVIOR of other(s), what is the relationship to the child?  [ ] N/A (reckless behavior by child)
[ ] Unknown [ ] Parent [ ] Other primary caregiver [ ] Friend [ ] Family member
[ ] Stranger [ ] Sibling [ ] Other: ___________________________

26) What was the primary reason for this behavior? __________________________________________

Medical Condition  N/A  (Circle N/A and skip to next section if not applicable)

27) Was/were the medical condition(s) that led to the death (check all that apply):
[ ] Congenital [ ] Chronic [ ] Acute

28) Was death expected as a result of any of the medical condition(s)?  [ ] Yes [ ] Possibly [ ] No
*If yes, typical remaining life expectancy with condition(s): _______________

29) Were any of the medical condition(s) the result of a previous event (e.g. accident, suicide attempt, etc.)?
[ ] Yes [ ] No [ ] Unknown [ ] N/A
*If yes, what? __________________________________________________________

30) Did any of the medical condition(s) complicate or lead to the event that was the direct cause of the child’s death?
[ ] Yes [ ] No [ ] Unknown

Medical condition continued on next page:
Medical Condition continued:

31) Was the child receiving adequate health care for the medical condition(s)? [ ] Yes [ ] No [ ] Unknown
   * If no, was the inadequate care while the child was in utero, or after birth? [ ] in utero [ ] after birth

32) Was the child or primary caregiver compliant with prescribed care plans?
   [ ] Yes [ ] No [ ] Presumed [ ] Unknown [ ] N/A
   *If No, check non-compliance issues: [ ] Appointments [ ] Medications [ ] Medical equipment use
   [ ] Therapies [ ] Other: ________________________________

33) Did the primary care facility provide adequate care based on available knowledge and technology?
   [ ] Yes [ ] No [ ] Unknown [ ] N/A
   *If no, please explain: __________________________________________

Sudden Unexpected Infant Deaths  N/A  (Circle N/A and skip to next section if not applicable)
(Include all child asphyxiation/suffocation sleep related deaths)

34) Was child sleeping with an impaired person?
   [ ] Yes [ ] Yes, Probably [ ] Yes, Possibly [ ] No [ ] Unknown [ ] Not bed sharing
   *If YES, how was the person impaired [ ] ETOH [ ] Tobacco [ ] Extreme exhaustion
   [ ] Sleep apnea [ ] Other ________________________________

35) Did overlying contribute to the death?
   [ ] Yes [ ] Yes, Probably [ ] Yes, Possibly [ ] No [ ] Insufficient information [ ] Not bed sharing

36) Did inappropriate bedding contribute to the death?
   [ ] Yes [ ] Yes, Probably [ ] Yes, Possibly [ ] No [ ] Unknown

37) Did any object that is not sleep related contribute to the death (i.e. plastic bag in crib)?
   [ ] Yes [ ] Yes, Probably [ ] Yes, Possibly [ ] No [ ] Unknown

38) Please circle how close this case fits the definition of a true SIDS death (see definitions handout).
   [ ] Definitely SIDS [ ] Probably SIDS [ ] Possibly SIDS [ ] Unlikely SIDS [ ] NOT SIDS
Preventability

39) Was this death preventable? (see definitions handout)  [ ] Unknown  [ ] No. Why not? ____________________________
                              [ ] Yes, possibly (causal chain/mechanism between prevention and outcome is unclear)
                              [ ] Yes, probably (causal chain/mechanism between prevention and outcome is clear)
                              [ ] Yes

40) If yes, during the sequence of events prior to the death, what reasonable things, if they had not occurred or had occurred, might have prevented the death? (Please rank in order, with 1 being most likely to have prevented death.)

    Rank
    [ ] ________________________________________________________________
    [ ] ________________________________________________________________
    [ ] ________________________________________________________________
    [ ] ________________________________________________________________
    [ ] ________________________________________________________________

41) What specific change(s) do you believe should occur to prevent other similar deaths and to keep children safe, healthy and protected? (Check all that apply and describe.)

    [ ] Improved patient education
    [ ] Improved parent education
    [ ] Improved other caretaker education
    [ ] Improved education of medical care providers; Who? ________________________________
    [ ] More widely offered school education programs
    [ ] Increased availability and use of alcohol/drug/tobacco abuse treatment programs
    [ ] New or expanded social support programs or services
    [ ] New or revised procedures
    [ ] New law or ordinance
    [ ] Improved enforcement of existing law/ordinance; What? ____________________________
    [ ] Modify or recall consumer product; What product? ________________________________
    [ ] Improved access to medical care
    [ ] Primary [ ] Intensive [ ] Specialty [ ] Mental Health ______________________________
    [ ] Changes in public health nursing: ______________________________________________
    [ ] Other: _______________________________________________________________________

42) Other comments (Anything else important about this death that has not already been captured):

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________