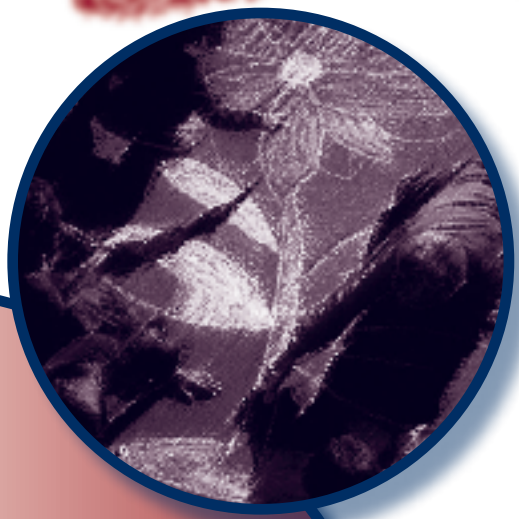
Child Deaths IN MICHIGAN



Michigan Child Death
State Advisory Team
Eighth Annual
EXECUTIVE REPORT

A Report on Reviews conducted in 2007-2008

A report on the causes and trends of child deaths in Michigan based on findings from community-based Child Death Review Teams. With recomendations for policy and practice to prevent child deaths.

The Michigan Department of Human Services
Michigan Public Health Institute

STATE OF MICHIGAN
DEPARTMENT OF HUMAN SERVICES
LANSING

RICK SNYDER
GOVERNOR

MAURA D. CORRIGAN
DIRECTOR

March 11, 2011

The Honorable Rick Snyder, Governor
Honorable Members of the Michigan Legislature

I am submitting this eighth annual report of child deaths in Michigan in accordance with Public Act 167 of 1997. In 2007-2008, over 1,200 community representatives in 65 counties met to conduct comprehensive reviews of 1,374 deaths. This report presents the findings from these review meetings.

In 2007-2008, 3,121 children died in Michigan. While this number continues to fall each year, the local review teams believe that well over half of these deaths were preventable. These deaths could have been prevented through different actions by parents or other caregivers, less risky behaviors by adolescents and/or earlier intervention taken by public support systems.

In addition to the large number of preventable child deaths, wide disparities in race and income persist. African American children ages 0-18 died at a rate 2.5 times that of white children in 2007-2008, and the death rate for African American infants ages 0-1 was 2.7 times higher than that of white infants. Poor children are also more at risk.

Reducing preventable child deaths will require a combination of increased:

- education and information,
- community support structures, and
- clarification and strengthening of certain laws and/or regulatory structures.

The Michigan Child Death State Advisory Team presents recommendations in this report based on their study of local review findings. These recommendations can improve the systems in our state that are designed to keep children healthy and protected. Many of these recommendations require a long-term commitment to children with funding levels that may not be possible until our state budget picture improves. As we continue our work, we hope this report furthers the awareness and action of state and local officials, as well as the citizens of Michigan, on how we can work together to keep kids alive.

Thank you for your continued support in working to make Michigan a safe and healthy place for children.

Sincerely,

Steve Yager, Acting Deputy Director
Director Children's Services Administration

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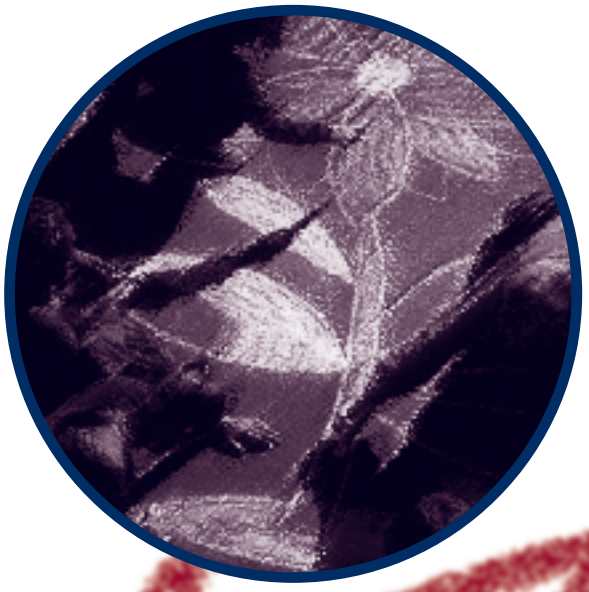
Child Deaths IN MICHIGAN



MICHIGAN CHILD DEATH STATE ADVISORY TEAM

EIGHTH ANNUAL REPORT

A REPORT ON REVIEWS
CONDUCTED IN 2007–2008

MISSION

TO UNDERSTAND **HOW** AND **WHY CHILDREN DIE** IN MICHIGAN,
IN ORDER TO TAKE **ACTION** TO **PREVENT** OTHER **CHILD DEATHS**.

SUBMITTED TO

THE HONORABLE RICK SNYDER, GOVERNOR, STATE OF MICHIGAN

THE HONORABLE RANDY RICHARDVILLE, MAJORITY LEADER, MICHIGAN STATE SENATE

THE HONORABLE JASE BOLGER, SPEAKER OF THE HOUSE, MICHIGAN HOUSE OF REPRESENTATIVES

Keeping Kids Alive

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STATE ADVISORY TEAM

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INTRODUCTION

Children are not supposed to die. The death of a child is a profound loss not only to the child's parents and family, but also to the larger community. In order to reduce the numbers of these tragic losses, we must first understand how and why our children are dying.

The Child Death Review (CDR) process was implemented in Michigan in 1995 to conduct in-depth reviews of child deaths. Multidisciplinary teams of local community members examine the circumstances that led to the deaths of children in their jurisdictions. Required team members include: the county medical examiner's office, the county prosecutor's office, local law enforcement, and representatives from the county health department and county office of the Michigan Department of Human Services (DHS). Teams may add further membership or invite guests as necessary, including emergency medical services, physicians, records staff, schools, community mental health, or other service providers. Based on their review findings, these teams recommend actions aimed at preventing future deaths.

The Michigan Child Death State Advisory Team studies the county review team findings. This team was established by Public Act 167 of 1997 (MCL 722.627b) to "identify and make recommendations on policy and statutory changes pertaining to child fatalities and to guide statewide prevention, education and training efforts." The law further requires the State Advisory Team to publish an annual report on child fatalities. The present report includes deaths reviewed in 2007 and 2008, during which time a total of 3,121 children died in Michigan. Local teams reviewed 1,374 child deaths in that same time period.

DHS has established a contract with the Michigan Public Health Institute (MPHI) to manage the CDR program. The contract requires MPHI to provide an annual training for team members. In the past three years, MPHI also hosted regional trainings around the state attended by approximately 400 professionals involved in the investigations of children's deaths. Annual regional meetings of local CDR team coordinators are held throughout the state. MPHI staff attend local CDR meetings to provide technical assistance and encourage prevention efforts. Program support materials produced include resource guides for effective reviews, protocol manuals, investigative protocols, formatted local and state mortality data, prevention resources and a program website. Staff help teams with case identification, research on causes, county and cause-specific data analysis, and other types of technical assistance and support as needed.

The Michigan CDR program has established working relationships with numerous diverse organizations throughout the state to promote child health and safety. The program also maintains a productive working relationship with DHS that has led to the implementation of innovative strategies to better protect children and prevent deaths. MPHI staff also manage the Fetal and Infant Mortality Review Program (FIMR), funded by the Michigan Department of Community Health (MDCH), which served 16 communities in 2007 and 2008 conducting intensive reviews of infant deaths. Michigan's collaboration of CDR and FIMR is also recognized as a national model.

SCOPE OF THE DATA

The information presented in this report is based on data provided by the local county CDR teams. The teams complete a standardized data reporting tool developed by the National Center for Child Death Review, and submit the information to the CDR program office at MPHI. This reporting tool was developed with input from many states through their CDR programs. This comprehensive document can be viewed on the Michigan CDR web site: www.keepingkidsalive.org.

It is important to note that not all child deaths in the state are reviewed. Local teams choose which cases are reviewed, based on the number of deaths that occur, the resources available in the county to conduct reviews, and the team's ability to access case information. Larger counties in the state typically must limit their reviews to those cases that fall under the jurisdiction of the county medical examiner, which are primarily non-natural deaths. These are generally regarded as more preventable, and information on them is more readily available to the local teams.

The CDR data presented in this report does not account for every child death in the state, but through rich case information on those deaths that are reviewed, assists in the identification of emerging issues, problematic trends and key risk factors that can be used to prevent future deaths. Those interested in additional information not presented in this report should contact MPHI at keepingkidsalive@mphi.org for specific data requests.

Please note: **In this report, when referring to "deaths reviewed," data was derived from the local team reviews. When referring to "total deaths," data was derived from official mortality statistics for the state, which are based on death certificates.**

CHILD DEATH REVIEW DATA OVERVIEW

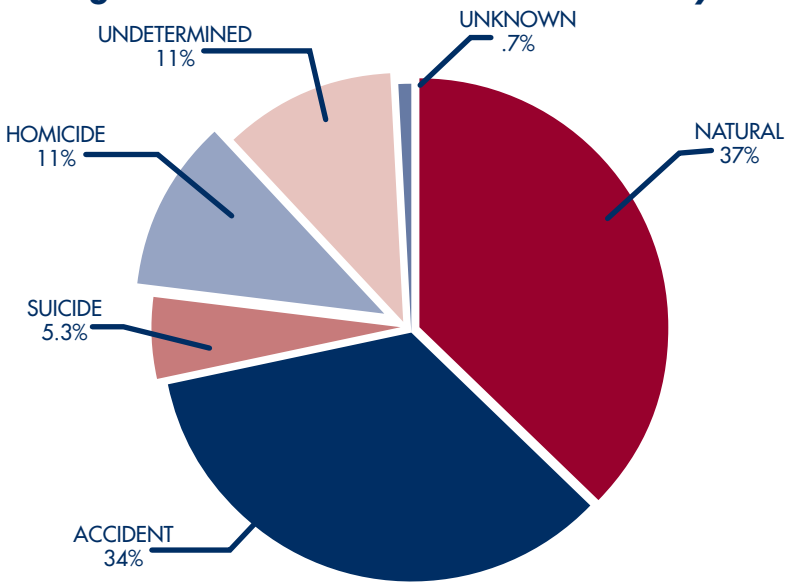
Manner, Age and Race

Two types of death determination are reported on death certificates: Cause and Manner. Cause refers to the actual disease, injury or complications that directly resulted in the death. Manner refers to the circumstances of the death. There are five possible manners: Natural, Accident, Suicide, Homicide or Undetermined. Within each of the five manners of death, there may be many different causes of death. For example, natural deaths include causes such as cancer, birth defects and prematurity. Homicides include causes such as blunt force trauma or multiple gunshot wounds.

Of the total child deaths in the state for 2007-2008, 71 percent were natural deaths, while 19 percent were accidental deaths, including, but not limited to deaths from fires, drownings, car crashes, and suffocations. These two largest categories of manner are nearly identical in percentage to those from the previous two years.

Local teams reviewed 1,374 deaths in 2007 and 2008. The largest portion (37 percent) were those classified as natural deaths, followed by accidental deaths (34 percent). The difference in percentages between total deaths and reviewed deaths is due to the fact that the most populous counties in Michigan review very few of their natural deaths, while reviewing most, if not all, of their accidental deaths.

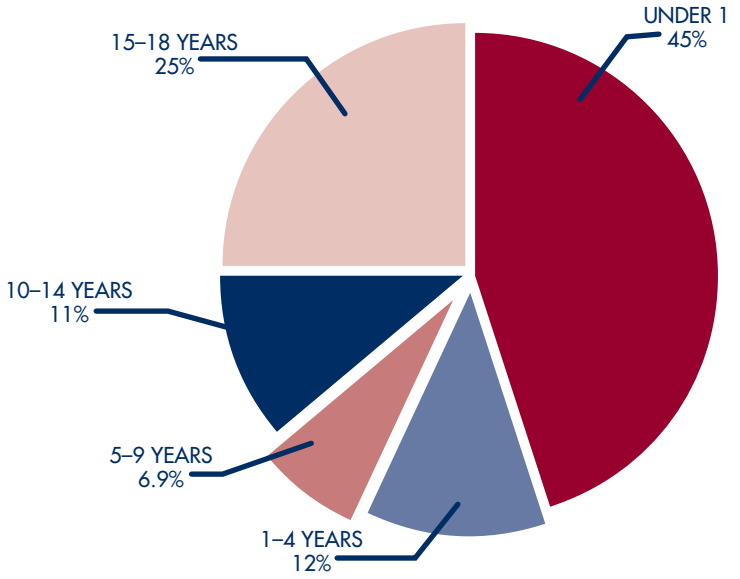
Percentage of Deaths Reviewed in 2007-2008 by Manner



Each year, the deaths of infants (children under age one) account for approximately half of all child deaths ages 0-18, both in Michigan and nationwide. Similarly, in 2007 and 2008, deaths of children under the age of one accounted for 45 percent of all cases reviewed in Michigan.

Deaths of children ages 15-18 were the next most frequently reviewed age category, accounting for 25 percent of all deaths reviewed. Compared with other age groups, a higher percentage of deaths in the 15-18 age range were attributed to accidents, homicides and suicides, and are therefore more likely to be reviewed.

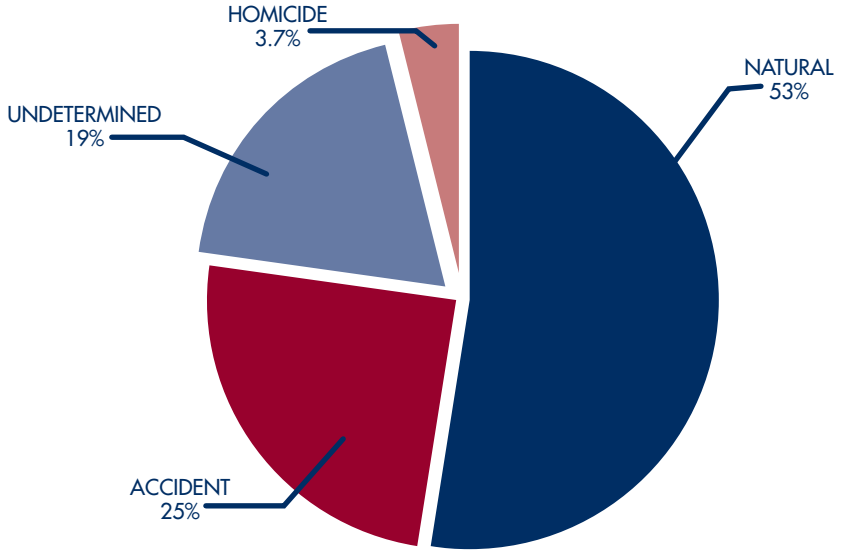
Percentage of Deaths Reviewed in 2007-2008 by Age



The largest percentage of infant deaths were classified as natural. Nearly three-quarters of natural infant deaths reviewed in 2007-2008 were due to birth-related conditions: Prematurity (birth at less than 37 weeks gestation) at 45 percent; and congenital anomalies (birth defects) or other perinatal conditions at 27 percent. Infant mortality in Michigan is addressed in greater detail in the section of this report entitled *Fetal Infant Mortality Review.*

Of all age groups, infants made up the largest percentage of deaths ruled undetermined by medical examiners. This was largely due to the recent diagnostic shift away from use of the term "Sudden Infant Death Syndrome" (SIDS) when an infant is found unresponsive in a sleep environment. Medical examiners are more frequently referring to these as "Sudden Unexpected Infant Deaths" (SUIDs) and the manner of death is classified as undetermined.

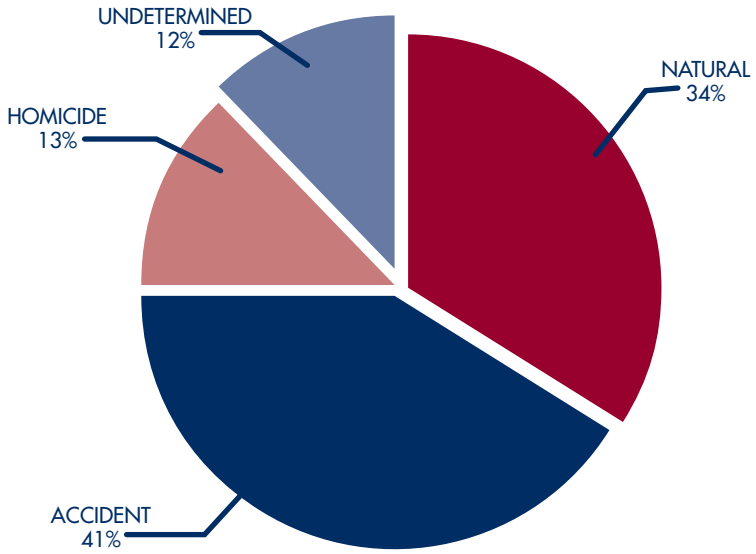
Percentage of Deaths to Infants < 1 Reviewed in 2007-2008 by Manner



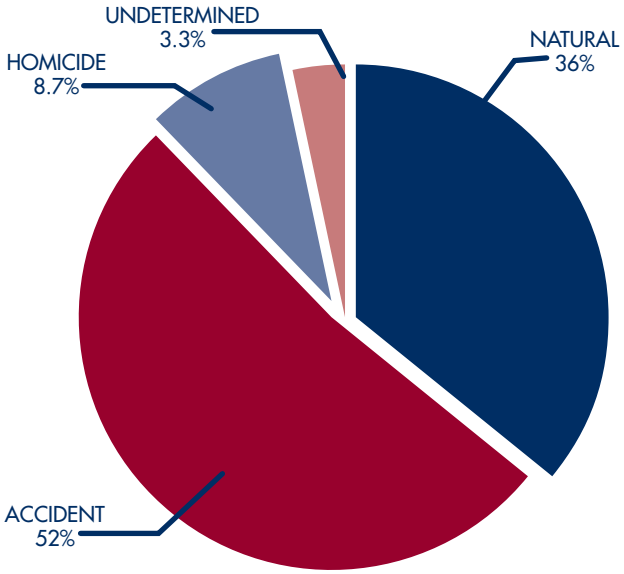
Most infant deaths given a manner of accident by medical examiners are due to suffocation in a sleep environment. Of all accidental infant deaths reviewed in 2007-2008, 92 percent (133 deaths) were due to sleep-related suffocation. This type of death is addressed later in this report.

As children age, the incidence of natural death decreases, while the incidence of death due to accidents, homicides and suicides increase.

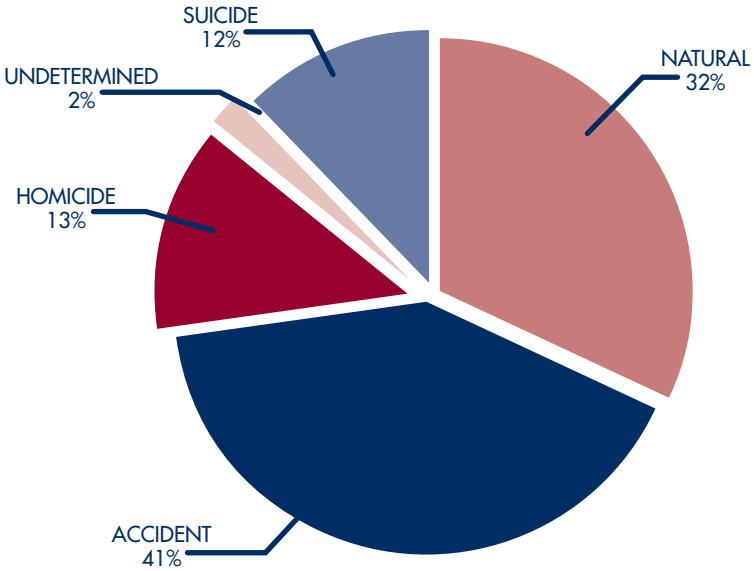
Percentage of Deaths to Children Ages 1-4 Reviewed in 2007-2008 by Manner



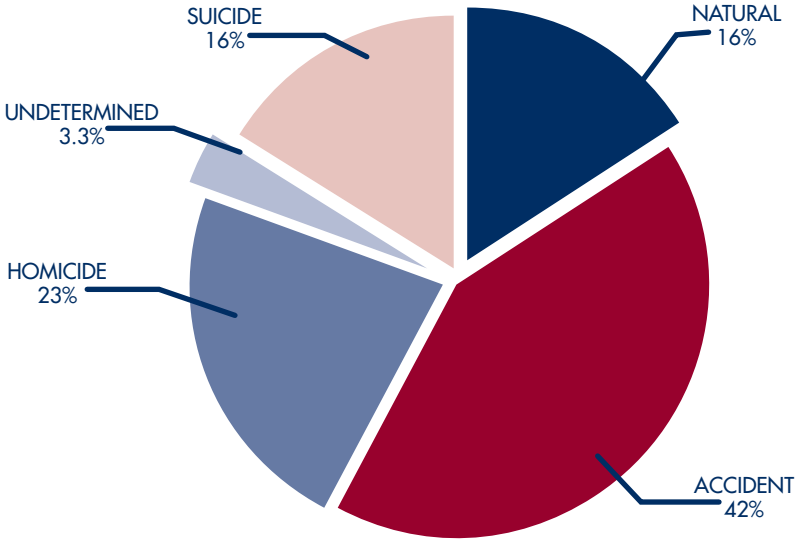
Percentage of Deaths to Children Ages 5-9 Reviewed in 2007-2008 by Manner



Percentage of Deaths to Children Ages 10-14 Reviewed in 2007-2008 by Manner

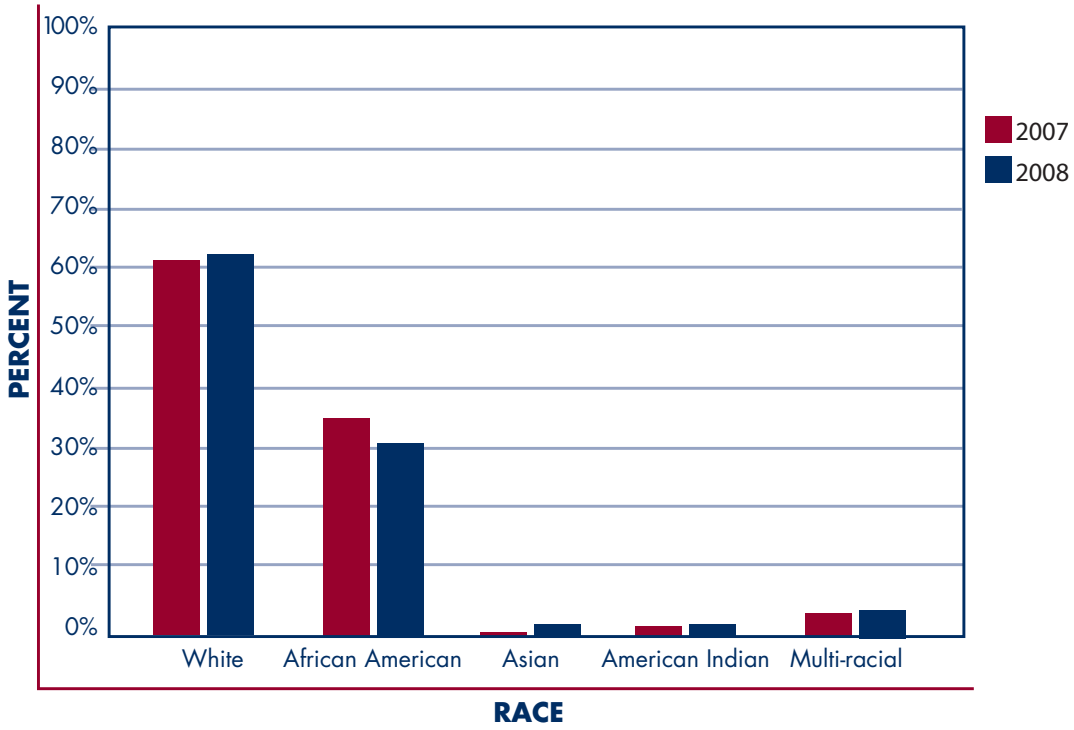


Percentage of Deaths to Children Ages 15-18 Reviewed in 2007-2008 by Manner



In 2008, African Americans made up about 14 percent of the population in Michigan, but accounted for 35 percent of the total child deaths in Michigan in 2007-2008, and 32 percent of the child deaths reviewed in that same time frame. This overrepresentation has remained consistent throughout the 13 years that the CDR process has been in place in Michigan.

Percentage of Child Deaths Reviewed in 2007 & 2008 by Race

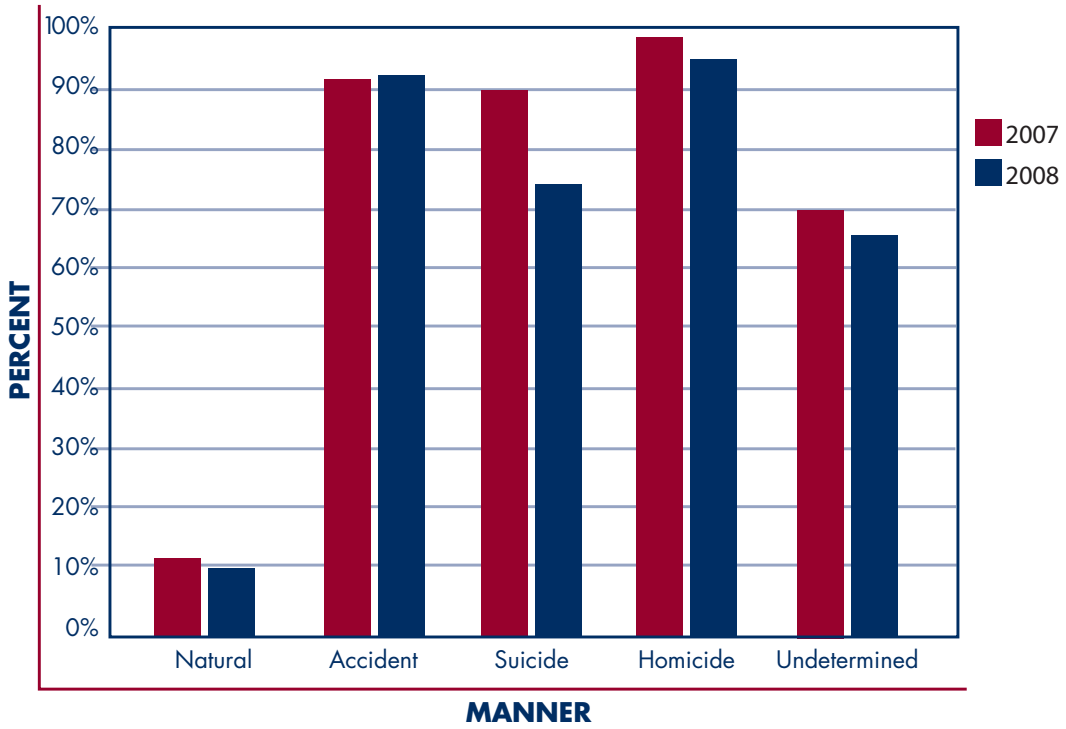


Preventability

Local teams define a child's death as preventable "if the community or an individual could reasonably have changed the circumstances that led to the death"* and each team decides if cases meet this criterion. Using this standard, nearly all accidents and homicides were determined by the local teams to be preventable. Consistent with review findings in previous years, the teams determined that **over half** of all deaths reviewed in 2007-2008 **were preventable**.

The graph below shows that a significant percentage of deaths classified as undetermined were deemed preventable. Most of these were sleep-related infant deaths. Local teams consider specific risk factors such as unsafe sleep environments when making their preventability determinations.

Percentage of Preventable Child Deaths Reviewed in 2007 & 2008 by Manner

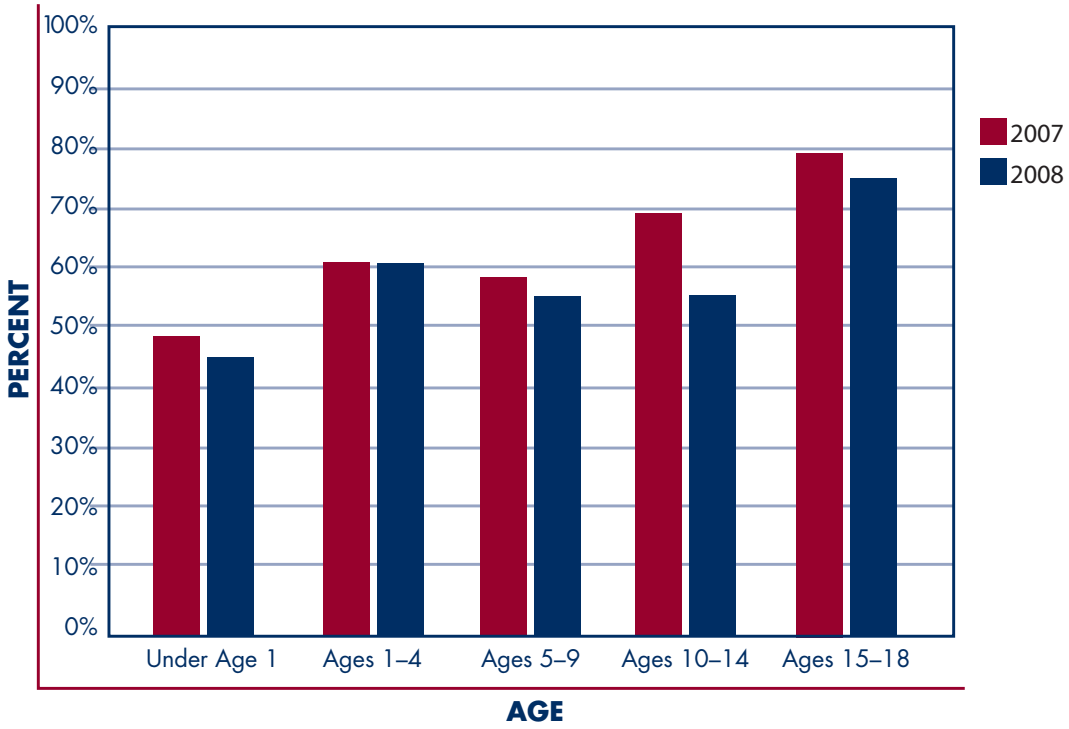


** National Center for Child Death Review Case Report Data Dictionary, January 2008.*

As is the case each year, in 2007 – 2008, local review teams considered teen deaths as more preventable than deaths of younger children, in part because the majority of teen deaths are due to accidents, homicides and suicides, which are viewed by local teams as more preventable than natural deaths.

The deaths considered least preventable by local teams are those that occur within the perinatal period—the first 28 days of life. The majority of these deaths involve infants born prematurely and/or with congenital anomalies, and make up a large portion of all deaths under age one.

Percentage of Preventable Child Deaths Reviewed in 2007 & 2008 by Age



SELECTED CAUSES OF DEATH AND RECOMMENDATIONS FOR POLICYMAKERS

This section of the report addresses causes of child death that were of particular concern to local review teams in 2007 and 2008:

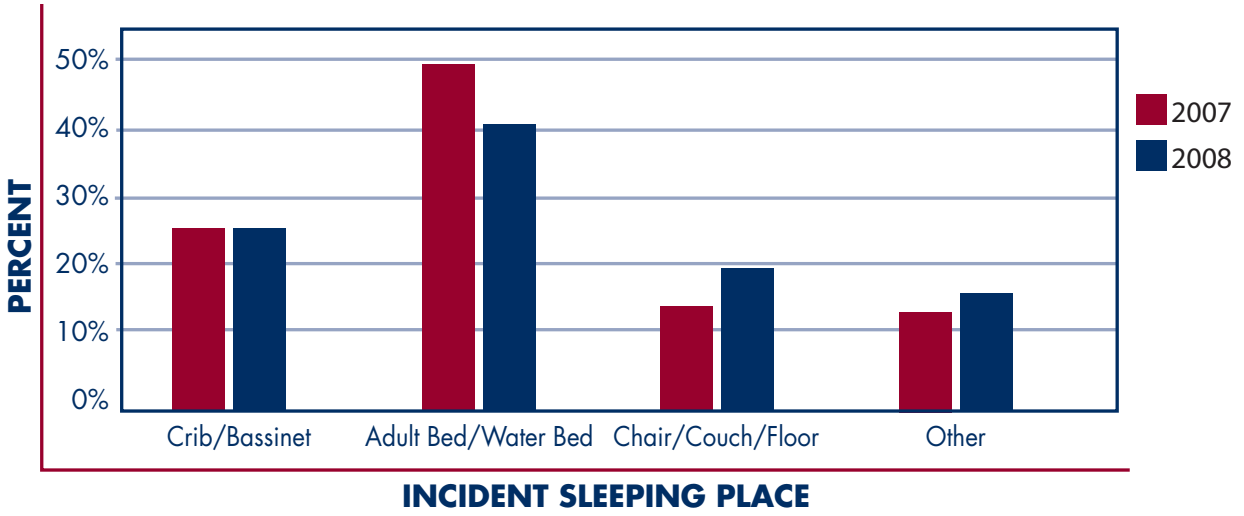
- Sleep-Related Infant Deaths
- Poisonings/Overdoses/Acute Intoxications
- Motor Vehicle Deaths
- Child Abuse and Neglect Deaths

Sleep-Related Infant Deaths

During the past several decades, the diagnosis of Sudden Infant Death Syndrome (SIDS) was often made when an infant died suddenly and unexpectedly in his or her sleep, and no medical cause for the death could be identified. The nationally recognized definition of SIDS, originally defined in 1994 by the National Institutes of Health, is the death of an infant under one year of age which remains unexplained after a thorough autopsy, review of the medical history and death scene investigation have been conducted. In the past ten years, there has been a national effort to improve the quality of death scene investigations in these types of cases. As a result, better information is now available on the circumstances surrounding these deaths, including the infant's sleep environment.

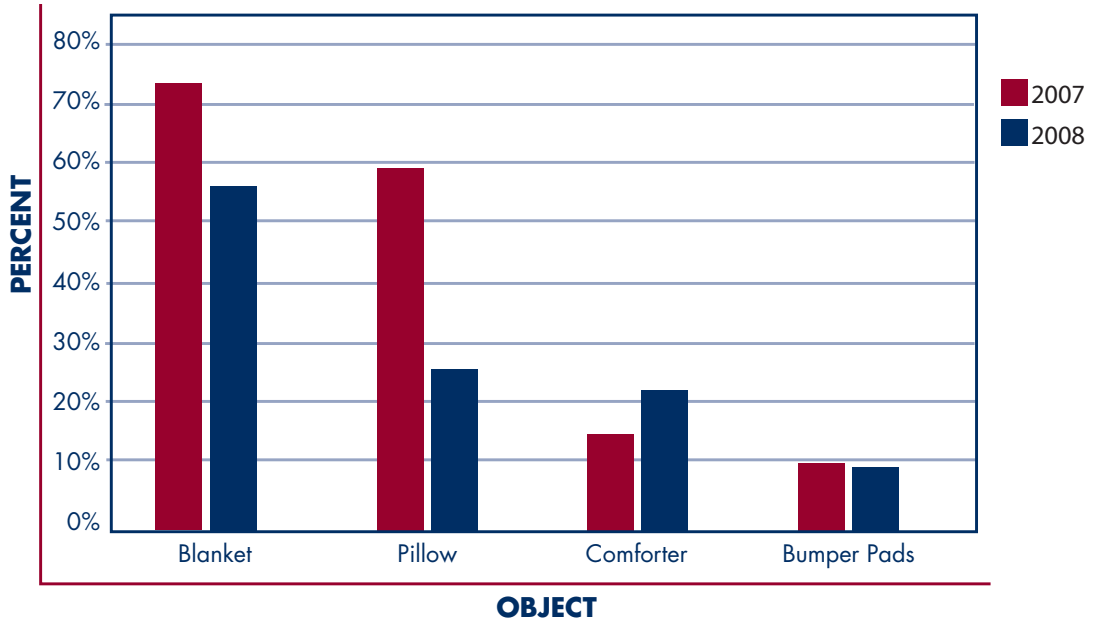
The graphs in this section include deaths designated as: SIDS, positional asphyxia, and undetermined/ sudden unexpected infant death (SUID) in a sleep environment. The percentages are based on 316 deaths reviewed in 2007 and 2008 where the local team indicated that sleep environment was a factor in the death. This number represents a 14 percent increase over the previous two years (2005-2006), at a time when the child population in Michigan actually decreased by six percent. Since 1996, local teams have reviewed over 1,500 sudden deaths of infants in sleep environments.

Percentage of Sleep-related Deaths Reviewed in 2007 & 2008 by Incident Sleep Place



The American Academy of Pediatrics (AAP) has defined a safe infant sleep environment to be a safety-approved crib, bassinet or portable crib with a firm mattress and a tight-fitting sheet. During the report period, only 26 percent of the sleep-related deaths reviewed occurred in an AAP safe infant sleep location. The remaining deaths occurred in locations considered unsafe for infants. In almost half (45 percent) of the deaths reviewed, the infant died after being placed to sleep on an adult bed.

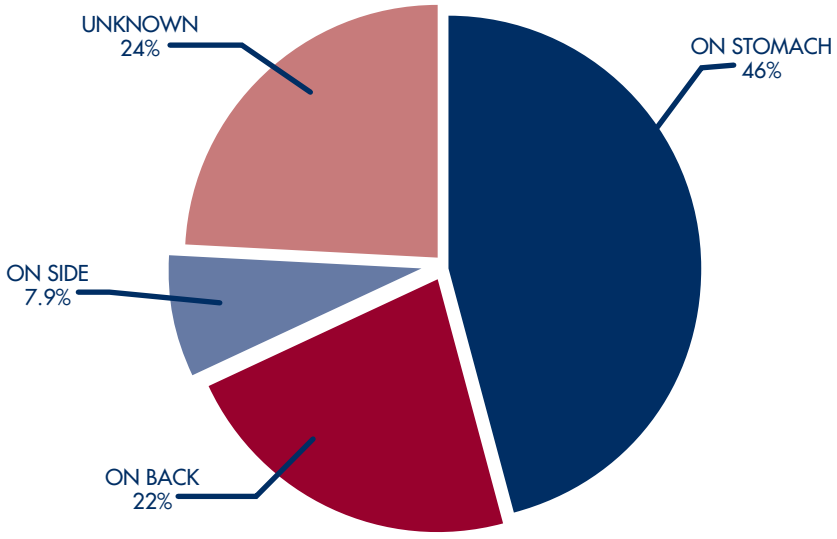
Percentage of Sleep-related Deaths Reviewed in 2007 & 2008 where Sleep Place was Crib/Bassinet by Objects in Sleep Environment



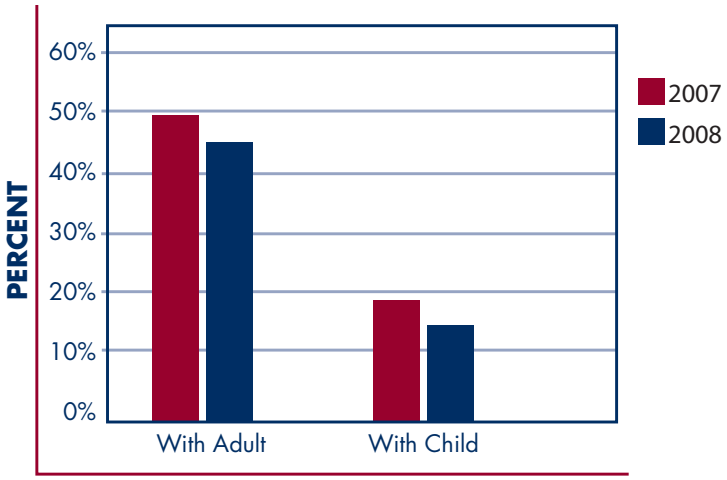
According to the AAP, loose blankets, pillows, comforters and stuffed toys should not be present in an infant's sleep environment. Of the 26 percent of sleep-related infant deaths reviewed that occurred in a safe infant sleep location, many involved unsafe items in the child's immediate sleep environment. In 64 percent of these cases reviewed in 2007 and 2008, blankets were present in the crib, bassinet or playpen at the time of the death. The items shown in this graph are not mutually exclusive; in some cases, the infants had more than one of the unsafe items present at the time of death.

According to the AAP, infants should always be placed to sleep on their backs. In 22 percent of the sleep-related deaths reviewed in 2007 and 2008, the infants were reportedly found unresponsive on their backs. In nearly a quarter (24 percent) of the cases, local teams did not have information about the position in which the infant was found unresponsive. More complete information collected at the death scene, including doll re-enactment of the exact position of the infant when found, gives the medical examiner a clearer picture of how and why infants are dying.

Percentage of Sleep-Related Deaths Reviewed in 2007–2008 by Found Position



Percentage of Sleep-related Deaths Reviewed in 2007 & 2008 by Sleep Surface Sharing



The AAP recommends that infants sleep on a surface separate from other children or adults. In 2007-2008, there were 149 sleep-related deaths reviewed in which the infant was sleeping with at least one adult at the time of death, and 50 were sleeping with at least one other child. Since these categories are not mutually exclusive, some infants may have been sleeping with both adults and other children at the time of their deaths.

Recommendations to Policy Makers to Prevent Sleep-Related Infant Deaths:

1. **Implement Law.** Each county medical examiner: Work with your prosecuting attorney and law enforcement agencies to assure that 2004 PA 179 is implemented, by using the *State of Michigan Sudden & Unexplained Child Death Scene Investigation Form* for every sudden and unexpected death of a child under age two.

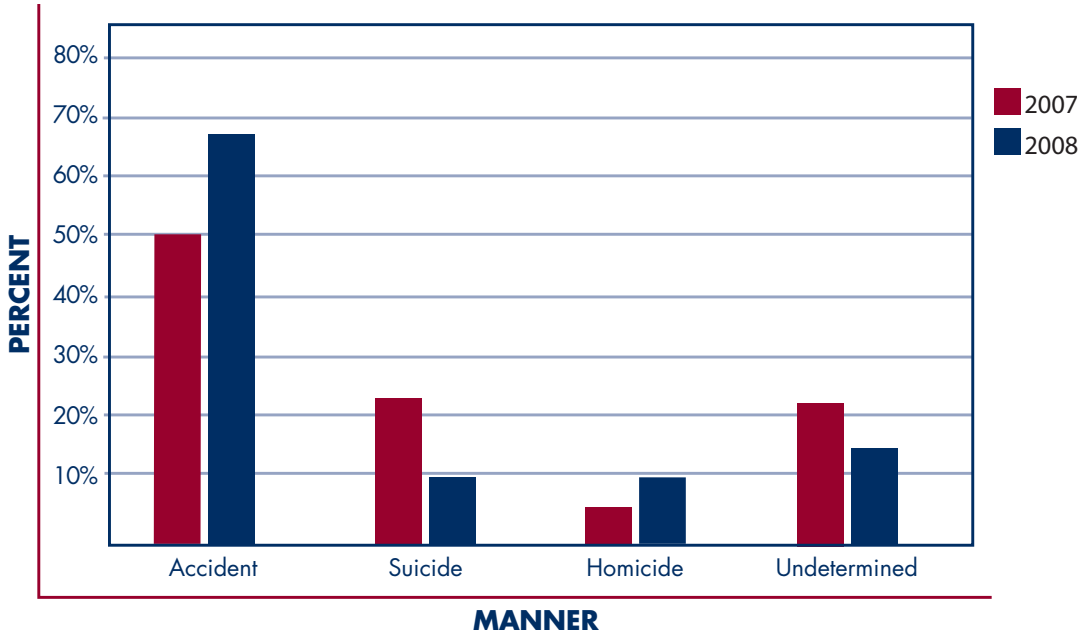
2. **Improve Education Campaign.** Michigan Department of Community Health, Michigan Department of Human Services, and the Michigan Department of Education: Review and standardize policies, practices, and educational materials to ensure the public is provided with consistent and evidence-based information on how to prevent sleep-related infant deaths. Consistent with the recommendations of the American Academy of Pediatrics, maintain and enhance resources for infant safe sleep initiatives, including a statewide infant safe sleep public service campaign: http://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/A-Parents-Guide-to-Safe-Sleep.aspx.

3. **Ensure Training.** Michigan Department of Human Services and Michigan Department of Community Health: Ensure training at the local level for medical providers in local communities so that they are equipped to disseminate consistent infant safe sleep advice to parents.

Poisonings/Overdoses/Acute Intoxications

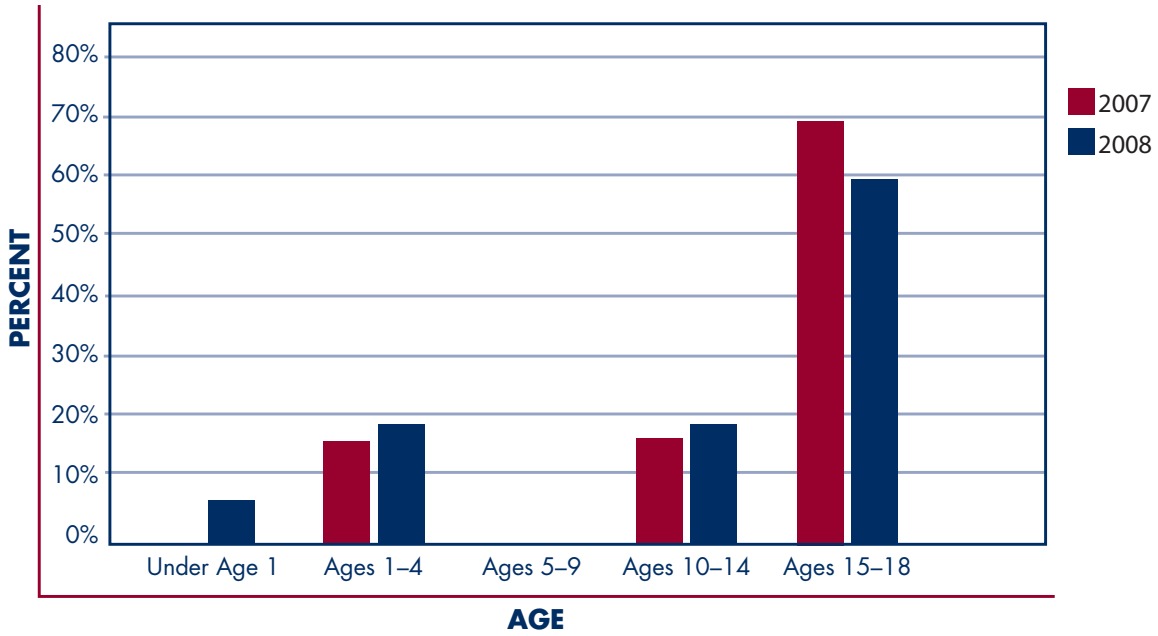
Poisoning occurs when a substance not meant for human consumption is ingested and causes harm; overdose is when a substance for which a safe dosage has been established (pain medications and other types of prescription drugs) is taken in excess and causes harm; and acute intoxication is when a substance for which no safe dosage has been established (cocaine and other types of illegal drugs) is ingested and causes harm.

Percentage of Reviews of Poisoning, Overdose, or Acute Intoxication Deaths in 2007 & 2008 by Manner



Local review teams have identified increasing numbers of teens dying from overdoses or acute intoxications. The greatest portion of all poisonings, overdoses, and acute intoxications reviewed in 2007 and 2008 were accidental. In some cases, the medical examiner cannot be certain whether a teen's overdose was a result of suicide or an accident, and will classify the manner of death as undetermined.

Percentage of Accidental Poisoning, Overdose, or Acute Intoxication Deaths Reviewed in 2007 & 2008 by Age*



**Homicides, Suicides and Undetermined are not included.*

Teens were the most frequent victims of *accidental* deaths reviewed in this category. These deaths often involved the abuse of one or more prescription or illegal drugs. The risk of overdose increases when alcohol is also consumed.

The number of accidental teen overdoses, especially involving prescription drugs, has increased over the past several years. There were 25 such deaths in Michigan over the five-year span from 1999-2003, for an average of five per year. Between 2004-2008, that average nearly tripled to 13.4 deaths per year, or 67 total deaths.

Teen males accounted for 73 percent of reviews of accidental overdoses or acute intoxications.

Recommendations to Policy Makers to Prevent Poisonings/Overdoses/Acute Intoxications:

1. **Educate Parents.** State Board of Education: Adopt a policy encouraging school districts to include in middle and high school parent orientations, The Medication Abuse Resource Guide developed by the Bureau of Substance Abuse and Addiction Services at the Michigan Department of Community Health. The purpose is to educate about the signs and symptoms of prescription drug abuse and the potential for overdose when teens have access to prescription medications.

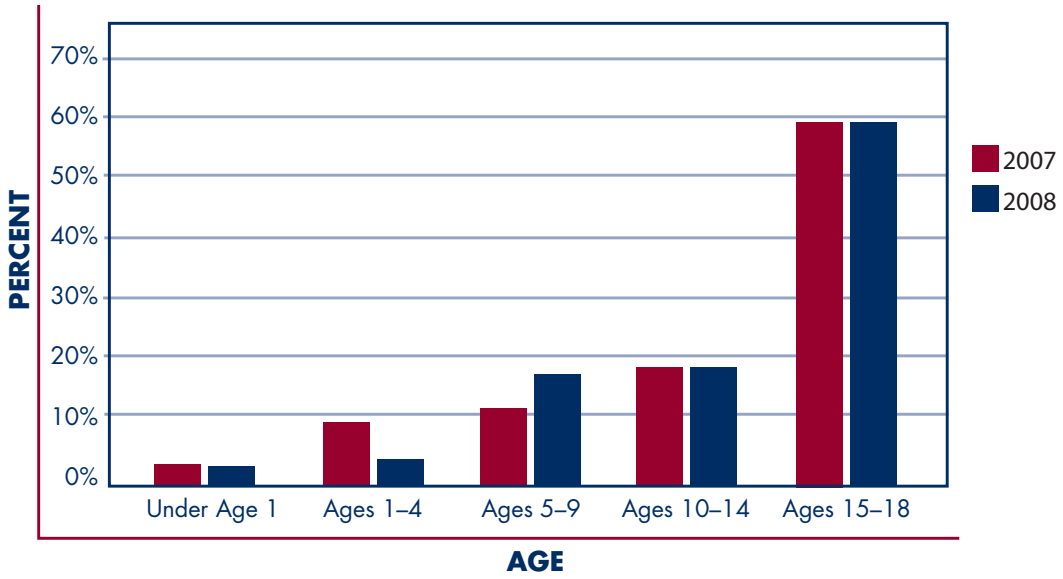
2. **Target Prevention.** All local human service agencies that work with teens and their families: Collaborate with the Regional Substance Abuse Coordinating Agency in your area to implement evidence-based youth substance abuse prevention campaigns.

3. **Implement Take-Back Program.** Michigan State Police, Michigan Sheriff's Association and Michigan Chiefs of Police: Institute prescription drug take-back programs such as *Operation Medicine Cabinet* to reduce the availability and accessibility of unused prescription drugs by unauthorized users: http://www.operationmedicinecabinet.org/.

Motor Vehicle Deaths

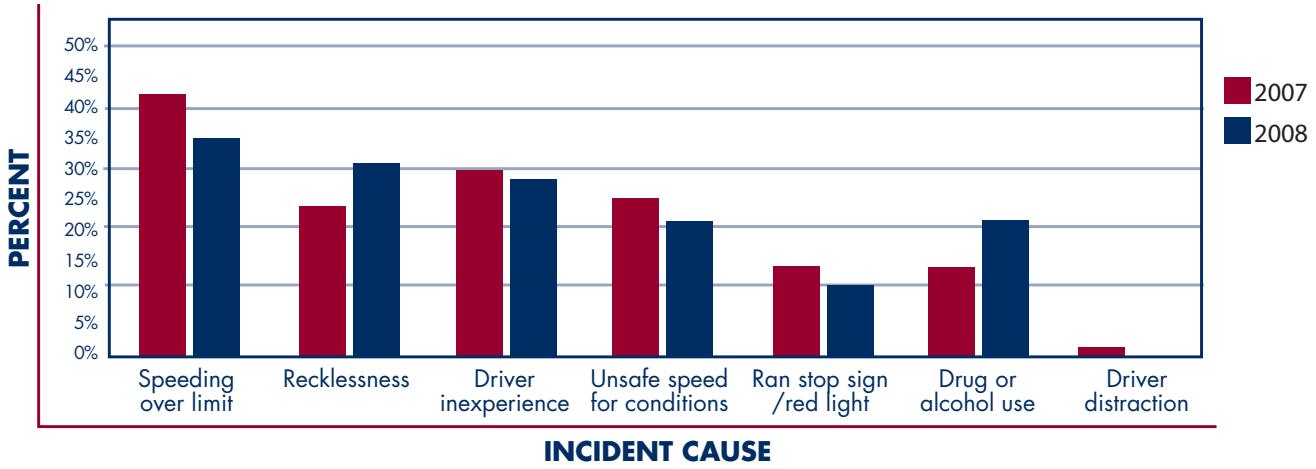
New teen drivers are at very high risk for causing motor vehicle crashes. According to the National Highway Traffic Safety Administration, teenagers are involved in three times as many fatal crashes as are all drivers. This statistic is attributed in part to teens' inexperience behind the wheel and increased likelihood of risk-taking behavior. These risks increase with each additional teen passenger in the vehicle.

Percentage of Motor Vehicle Deaths Reviewed in 2007 & 2008 by Age



Local teams reviewed 194 child deaths involving motor vehicles in 2007 and 2008. Males have been, and continue to be, overrepresented in motor vehicle fatalities reviewed. Sixty-five percent of the motor vehicle deaths reviewed during the report period involved male victims.

Percentage of Motor Vehicle Deaths Reviewed in 2007 & 2008 by Incident Cause



**Graph only includes teen drivers who were responsible for incident.*

Local review teams can identify as many causes of the incident as applicable. Well over half of the motor vehicle deaths reviewed where a teen was responsible for the crash listed speed (whether over the limit or unsafe for conditions) as at least one of the causes (62 percent). While drug or alcohol use was considered a factor in 16 percent of the fatal teen crashes, teams were more likely to cite driver inexperience, recklessness and/or speeding as a cause of the crash. True numbers of teen deaths due to distracted driving are difficult to gather because, in many cases, the deceased victim was the driver and sole occupant of the vehicle at the time of the crash. Some of the teen drivers who ran stop signs or red lights may have done so because they were distracted at the time.

Recommendations to Policy Makers to Prevent Motor Vehicle Deaths:

1. **Strengthen Licensing System.** The Michigan Legislature: Strengthen the current graduated licensing system to place limits on the number of teen passengers allowed in vehicles driven by teens with Level Two Intermediate Licenses. This limitation should apply at all times of day and without exceptions.

2. **Revise Driver Education.** The Michigan Department of State: Partner with the Office of Highway Safety Planning to conduct a comprehensive review and revision of driver education programs throughout the state to ensure that instructors and curricula meet minimum requirements.

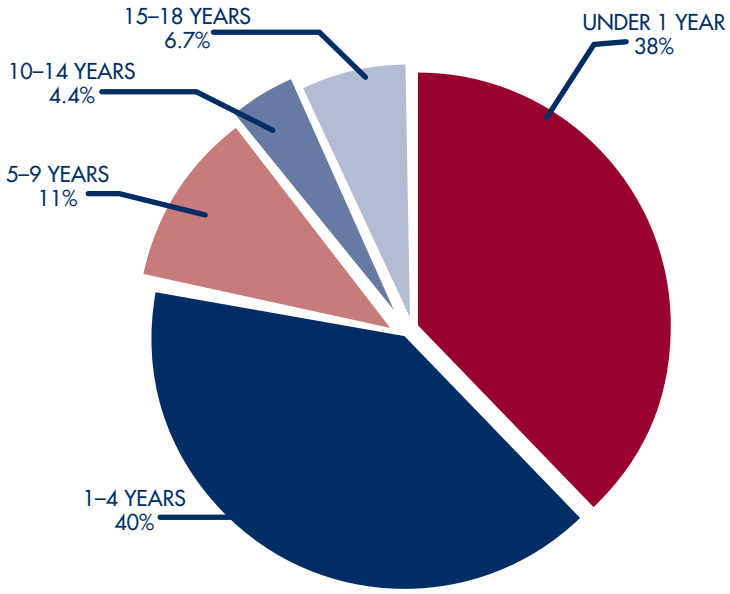
Child Abuse and Neglect Deaths

Identification of child abuse and neglect fatalities presents unique challenges. A study published in *Pediatrics* (2002) that reviewed nine years of children's death certificates estimated that about half of child abuse and neglect deaths were coded inconsistently on death certificates. The Centers for Disease Control and Prevention (CDC) has funded state-level surveillance projects which concluded that local review teams are the most accurate way to identify deaths due to child abuse and neglect.*

The percentages of deaths reported in the graphs in this section are based on 45 abuse fatalities and 56 neglect deaths reviewed in 2007 and 2008. The local teams decided whether abuse and/or neglect was involved in the deaths reviewed. While teams identified the same number of abuse deaths as in the previous two years (2005-2006), the number of neglect deaths increased by 32 percent over the same time frame. This difference is due in part to an increase in teams identifying prescription drug overdoses as a category of fatal child neglect.

Infants under age one and children ages 1-4 were at increased risk of abuse fatality over other age groups, consistent with national trends.

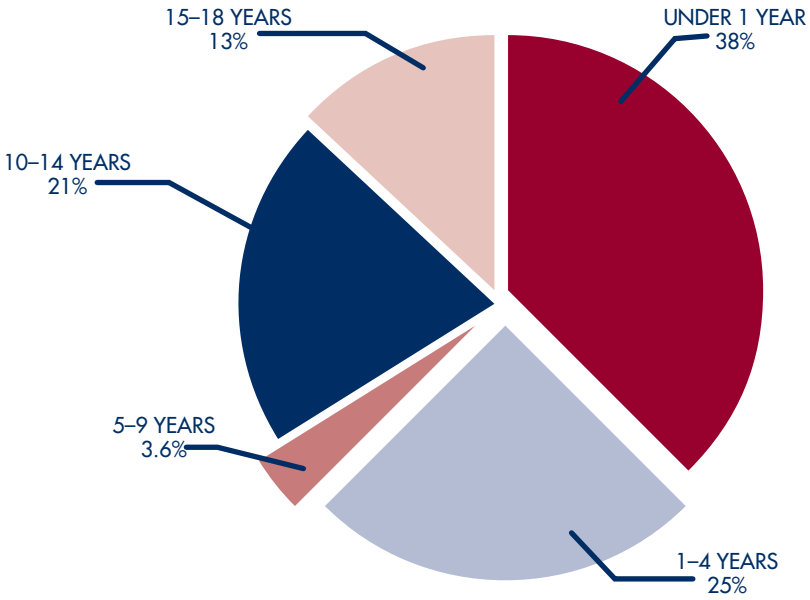
Percentage of Child Abuse Deaths Reviewed in 2007–2008 by Age



**McCurdy J, Wetterhall S, Gibbs D, & Farris T. Child Maltreatment Surveillance: Recommended Model System. CDC, May 22, 2006*

The percentages of neglect deaths reviewed involving children ages 10-18 were significantly higher in 2007 - 2008 than in 2005 - 2006. In addition to drug overdoses, this increase can also be attributed to more teams identifying inadequately treated conditions such as asthma and diabetes as a category of fatal neglect.

Percentage of Child Neglect Deaths Reviewed in 2007–2008 by Age



Across the state, teams identified a lack of knowledge on the part of human service providers at all levels regarding community resources available to high-risk families.

Teams reviewed 19 fatalities of children residing in foster care. Nearly half of those cases were due to natural causes, and none were identified as homicides at the hands of their foster parents.

The Child Death State Advisory Team also functions as Michigan's federally mandated Citizen Review Panel (CRP) on Child Fatalities. The CRP meets quarterly to examine deaths of children who were involved in the child protection system. This examination is a specialized, multi-step process that involves the identification of cases with the assistance of DHS, the collection of relevant materials and a thorough case review. As a result, the CRP has identified the following recommendations:

Recommendations to Policy Makers to Prevent Child Abuse and Neglect Deaths:

1. **Enhance Resource Awareness.** The Michigan Departments of Human Services, Community Health and Education: Ensure that human service professionals working with high-risk families are knowledgeable about, and make appropriate referrals to, state and community resources, such as the Maternal Infant Health Program and other primary and secondary prevention services.

2. **Maintain Protocol for Coordinated Investigations.** Michigan Department of Human Services: Work with local prosecuting attorneys in conjunction with the finalization of the revised *"A Model Child Abuse Protocol Coordinated Investigative Team Approach,"* to identify and/or develop resources that will enable counties to periodically update the protocol, monitor adherence to the protocol, and provide training to users as needed.

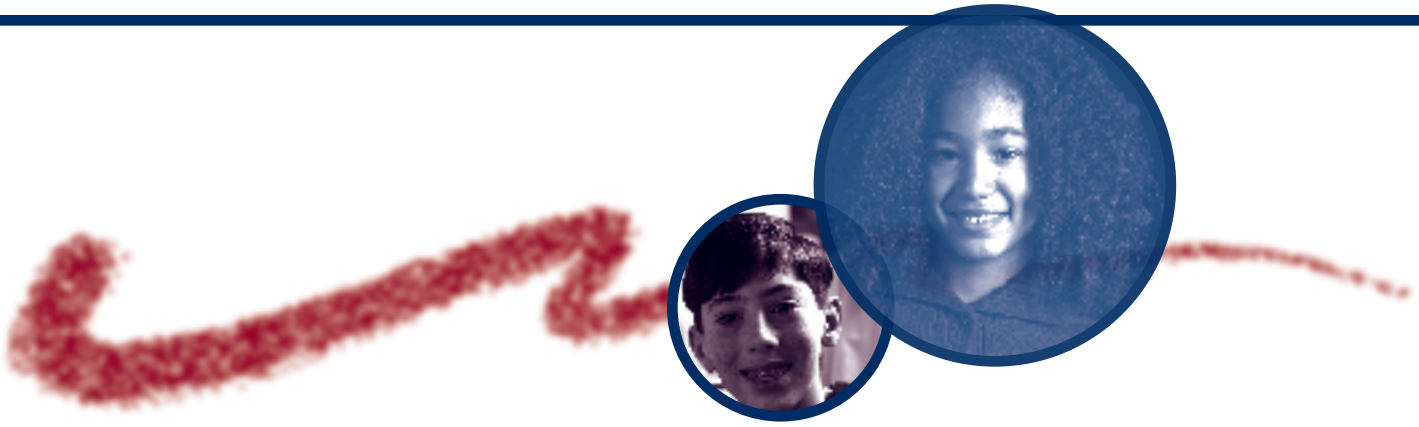
3. **Train School Professionals.** Michigan Department of Education: Encourage school districts to offer annual mandated reporter training to teachers and other school professionals.

4. **Train Medical Professionals.** Michigan Department of Community Health, Bureau of Health Professions: As part of licensing standards, require training for medical professionals on failure to thrive and other types of medical neglect, as well as on their duty as mandated reporters to contact Children's Protective Services when child abuse or neglect is suspected.

5. **Hold Mandated Reporters Accountable.** County Prosecutors: Pursue criminal charges against mandated reporters when there is sufficient evidence that the mandated reporter failed to report suspected child abuse or neglect as required under the Child Protection Law.

6. **Assess Support Services.** Michigan Department of Human Services: Assess steps other states have taken to provide voluntary placement resources and supportive services to parents who seek assistance to safely meet their children's needs.

7. **Continue and Enhance Training.** Michigan Department of Human Services: Provide training to CPS and foster care workers on the identification and assessment of mental health and substance abuse service needs of families involved in the child protection system. In addition to initial training, within the first year, child welfare workers must have specific mental health and substance abuse training.

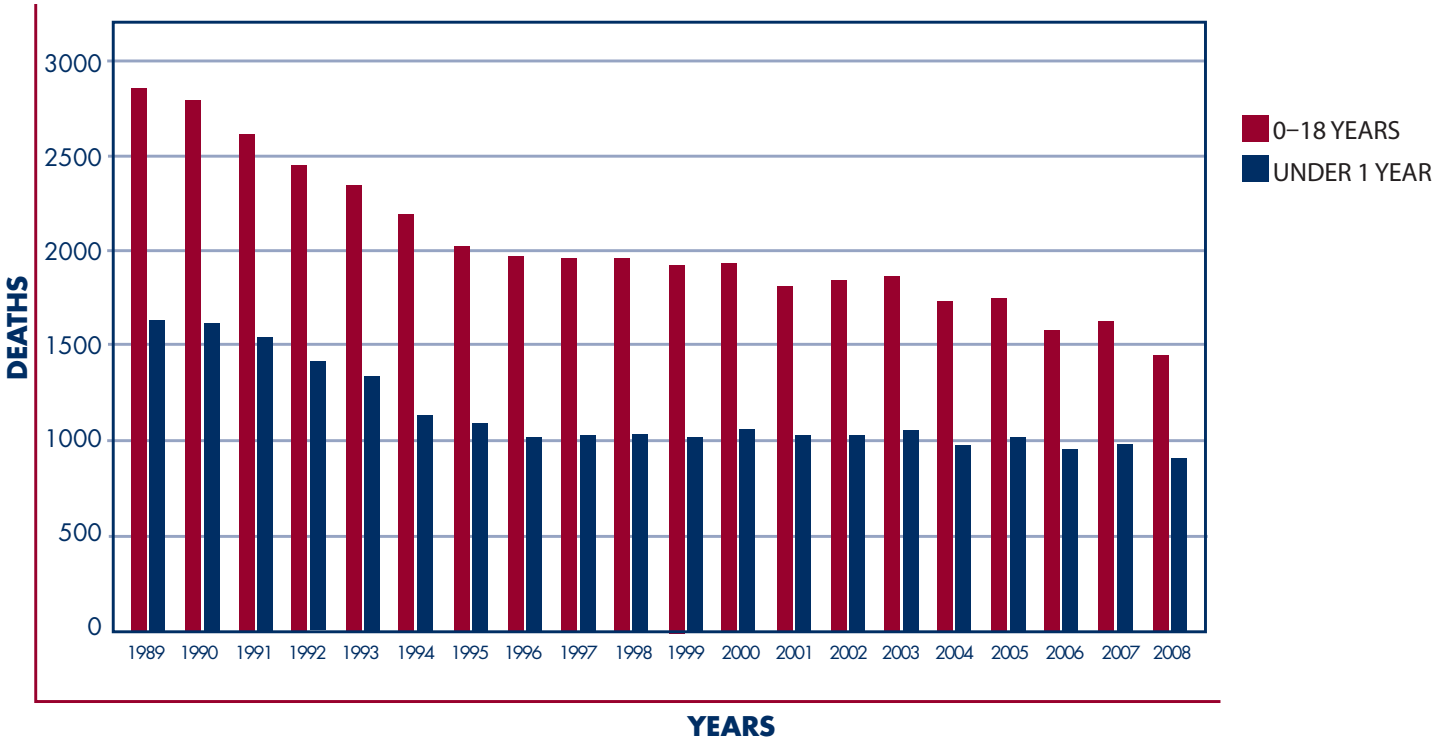


FETAL INFANT MORTALITY REVIEW (FIMR) IN MICHIGAN

This section was authored by the Michigan Department of Community Health

Infant mortality is a sentinel event that serves as a measure of a community's general health status as well as its social and economic well-being. High rates of infant mortality continue to create a challenge for Michigan, with disparities between Black*, Native American, and White infant mortality. More than half of the deaths occurring to children ages 0–18 years in Michigan are infants under age one. In Michigan's difficult economy, many communities have had to face changes in the finance and delivery of health care services. Now more than ever, greater attention needs to be given to core public health functions and increased emphasis on improving quality and accountability. FIMR is a program that assures that the needs of women, infants and families continue to be met as resources become more scarce.

Michigan Child Deaths 0–18 Years, 1989–2008



**In infant mortality circles, the term Black is most often used; this should be considered analogous to the term "African American" in the previous sections of this report.*

Overview:

FIMR is a process dedicated to the identification and examination of factors that contribute to fetal and infant deaths through the systematic evaluation of individual cases. The goal of FIMR is to find patterns of need in a community or gaps in the perinatal health delivery system for the purpose of finding solutions to improve future birth outcomes.

There are many similarities between the FIMR and CDR processes. Both operate under the guiding principle that local multidisciplinary review aids in better understanding of how and why children are dying, in order to benefit the lives of babies, children and their families. Both processes are concerned with improving the accuracy of determining the cause and manner of a child's death and generating data that will help local and state efforts to improve systems and prevent future infant and child mortality. FIMR and CDR have in common the objective of identifying gaps between the availability of services in the community and the needs of children and their families. Outcomes from both processes are related to increased communication and understanding among all agencies represented in the review process.

There are several distinct differences between FIMR and CDR:

- FIMR is a de-identified process. Case preparation and summary work is done up-front by a medical chart abstractor who has access to maternal and infant health records. At the review, the names of those involved are not used.

- FIMR staff attempt to do home interviews with all mothers who have experienced a loss, conveying the mother's story and her encounters with the health care system.

- FIMR is a two-tiered process. The Case Review Teams (CRTs) are multidisciplinary, much like the CDR teams, who review the summary of the case information and the interview. They identify issues on individual cases, look at trends over time, and make recommendations for community change. The Community Action Team (CAT) is a diverse group of community leaders, advocates and consumers, who receive the recommendations of the review team, prioritize issues, then design and implement interventions to improve service systems and resources.

- FIMR uses information from individual cases as a springboard for overall, community wide assessment and improvement of health and human service systems as well as community resources for women, infants and families. As such, FIMR is a type of continuous quality improvement program. FIMR teams do not manage individual cases that they review.

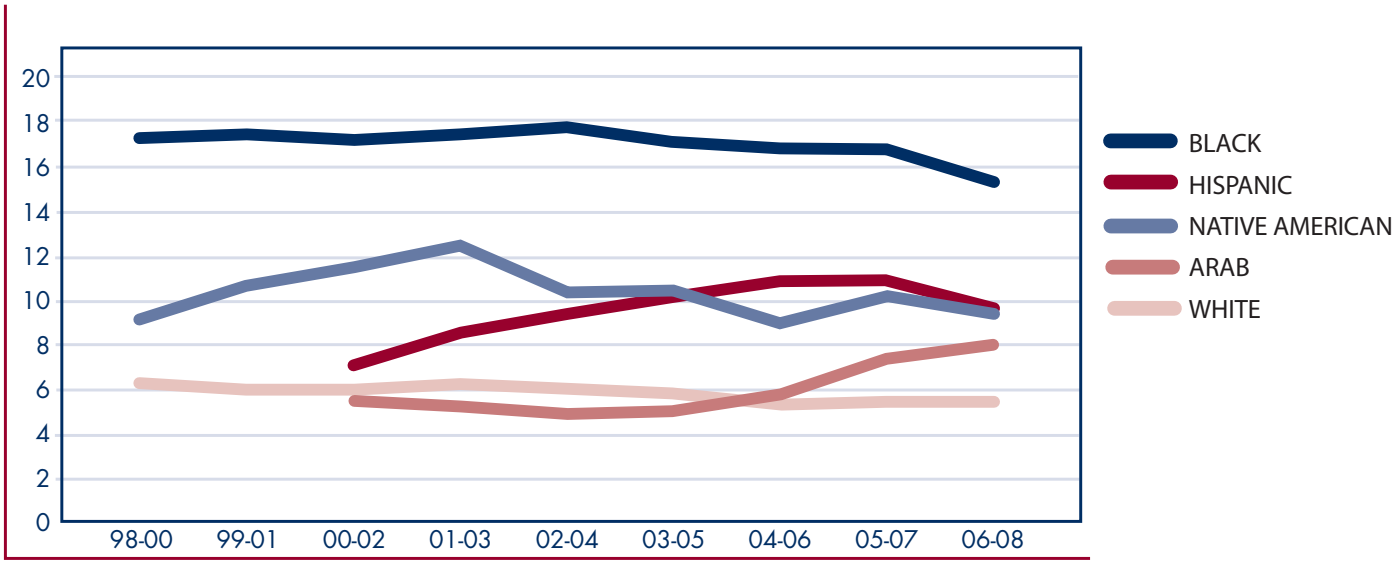
The state support program for FIMR provides technical assistance to local communities and coordination of team activities, including team organization; hands-on skills for abstracting, interviewing and conducting team meetings; moving recommendations to action, and resources on best practices in prevention; and link with other child health, safety, and protection sources. Program support materials include standard Case Abstraction forms and Access database, state developed Maternal Home Interview guide, Standard Issues Summary form with standard state developed definitions, and a program coordinator's manual.

Scope of the Problem

Infant mortality (IM) continues to be higher for Michigan than for the rest of the United States. In 2008, a total of 894 infants died in Michigan, resulting in an IM rate of 7.4 per 1,000 live births, compared to the U.S. rate of 6.7 in that year. Michigan currently ranks 36th among states for overall infant mortality. (Three-year average, 2004 - 2006, National Center for Health Statistics, Centers for Disease Control and Prevention.)

Disparities exist between the Black, Native American, and White IM rates in Michigan. In 2008, the White infant mortality rate was 5.4 per 1,000 live births while the Black rate was 14.6. The Native American IM rate was 7.9 in 2008, but three-year averages show a more alarming trend with a Native American IM rate of 9.5.

Michigan Infant Mortality Trend Rates by Race and Ancestry
Three-year Averages, 1998 – 2008



Status of Local FIMR Teams

In 2007 and 2008, there were 16 FIMR sites in Michigan, establishing a FIMR presence in the communities which accounted for approximately 75 percent of the infant deaths statewide and nearly 96 percent of the Black infant deaths in the state.

During this two-year report period, local teams held 219 Community Review meetings, reviewing a total of 569 cases. Maternal interviews were conducted for 191 of these, or 33% of cases.

County	Year Begun	# of Cases, 2007	# of Cases, 2008
Saginaw	1991	22	21
Kalamazoo	1998	10	24
Genesee	1999	24	21
Oakland	2000	31	22
Calhoun	1991 – 1994 resumed in 2000	25	14
Kent	2001	60	48
City of Detroit	2001	12	9
Branch	2001	3	0
Jackson	2003	20	13
Berrien	2003	14	16
Washtenaw	2003	14	13
Native American	2003	2	2
Wayne County	2005	11	18
Macomb	2005	12	17
Ingham	2003 - 2004 resumed late 2006	14	17
Muskegon	2007	11	29

Examples of Local Initiatives Resulting from FIMRs

Saginaw

- One of the longest continually operating FIMRs in the country, Saginaw's FIMR and health department personnel developed "Sister Friend" - a volunteer program to mentor pregnant teens for one year. After training, a volunteer mentor meets with the teen face-to-face one time, then telephones at least twice a month to offer support and monitor her needs.
- In response to the high number of FIMR cases reviewed where maternal drug and/or alcohol use impacted the infant death, Saginaw's FIMR personnel established a relationship with an outpatient substance abuse treatment facility. A format for casual group meetings with the clients was developed as a result of this collaboration. It had been identified that women who have had substance abuse history and pregnancy loss were at high risk for another pregnancy. The topics included healthy life style; risk reduction; birth control methods; reproductive health and ovulation; and the grieving process. The group meetings added another level of support and education to their recovery.

Kalamazoo

- FIMR staff worked with local emergency departments on a protocol to screen all pregnant women who visited the department. If they were not in prenatal care, they were referred to a hospital social worker for a provider and resources.
- Borgess Hospital, in collaboration with Healthy Babies Healthy Start and FIMR personnel, held an Infant Mortality Conference, entitled *Mapping the Future*, September 24, 2007. Keynote speakers included Karla Damus (March of Dimes) and Jim Collins (Northwestern University, Chicago).

Genesee

- Genesee FIMR identified large numbers of women who experienced an infant death were using drugs, alcohol, and tobacco. Multiple interventions implemented by the community included hosting a perinatal addiction specialist to educate the medical and provider community, enhanced screening and assessment of women in prenatal care for substance use, and intense case management and referrals to treatment and counseling options for those who screened positive.

Oakland

- After learning that many women lacked information on prenatal care and community resources, the FIMR team partnered with Star Theaters to have short clips with prenatal health care information run prior to local film showings.
- 2004 PA 179 became effective in July 2004, mandating death scene investigations for sudden unexplained deaths of children at home under age two. Among others, Representative Paul Condino (Southfield) introduced this legislation after a FIMR presentation alerted him to the issues surrounding infant deaths in unsafe sleep environments.
- A six-week class called "Crib Notes" was developed by Oakland County Public Health Nurses and FIMR personnel. The classes target middle school children and apply lessons on healthy and proper eating, sleeping and living. "Crib Notes" was part of a panel presentation at the Association of SIDS and Infant Mortality Programs (ASIP) national conference in September 2008.

Calhoun

- FIMR found large numbers of new mothers being discharged from a hospital after giving birth with few resources and limited education. Delivery hospitals received local foundation funding for the Newborn Nursing Services program, which will provide follow-up calls to new mothers after discharge from the hospital.

Kent

- High numbers of cases reviewed were unplanned pregnancies. Personnel encouraged prenatal care providers to discuss family planning through the creation of Prenatal Care Core Concepts and provided referral information for providers in the "Pregnancy Resource Guide" (web-based – www.healthykent.org and hard copy). In addition, FIMR personnel presented a poster presentation at the CityMatCH annual conference in September 2008. The title of the poster is *Neighborhood Outreach to Engage African American Women in Family Planning Services*.
- Recognizing the need for preconception care, Kent County's FIMR Community Action Team developed Preconception Education kits. Kits contain dental floss, tooth brush, tooth paste, vitamins, water bottle, Healthy Women's Resource Guide, and $5 coupons to the farmers market, all in a canvas bag. These kits are given to women who have a negative pregnancy test at Planned Parenthood and the Pregnancy Resource Center.

Detroit

- Responding to the high number of infant deaths reviewed in FIMR due to unsafe infant sleep environments, the Detroit Department of Health and Wellness Promotion (DDHWP) applied for and received a March of Dimes Community Award to do a Sleep Safely Educational Project. A total of 60 Pack 'N Plays were distributed by Maternal and Infant Health Program and Nurse Family Partnership staff, and Safer Sleep videos were shown in homes as part of protocol. A Detroit Kiwanis Foundation grant provided an addition 34 Pack 'N Plays to distribute to families through the end of December 2007.
- FIMR/HIV Pilot Project funding ended in September 2008. Thirty women were interviewed; 58 chart abstractions completed; and 17 CRT meetings were held at which 28 cases were reviewed. Lynn Kleiman, Detroit FIMR Coordinator, presented *"Adopting the FIMR Model to Review other MCH Sentinel Events"* at the annual ASIP National conference, September 2008. The Detroit FIMR/HIV Pilot Project was featured as one of 3 projects on a panel at the July 2008 meeting in Atlanta. Published report on the FIMR/HIV Pilot Prevention project is available at www.citymatch.org.

Branch

- FIMR personnel partnered with the Child Abuse and Neglect Council to distribute parenting information to new moms through the hospital and Women, Infants and Children (WIC) clinics.

Jackson

- A March of Dimes grant allowed FIMR personnel to create and implement an intense prenatal smoking cessation program. The program's highlight was the supportive counseling approach, using motivation, confidence level, identifying stressors and triggers, recognizing barriers and strengths, providing education and goals and setting a quit date.

Berrien

- Responding to the high number of sleep related infant deaths reviewed in FIMR, a community campaign entitled Baby's Own Bed (BOB) was launched. Flip charts were produced for use in community presentations and a Safe Sleep power point was created. Funding from the Heart of Cook foundation was obtained allowing for the purchase of portable cribs, sleep sacks and sheets for give-away. Since the beginning of this project, 289 portable cribs have been distributed.

Intertribal Council (Native American FIMR)

- Intertribal Council (ITC) personnel participated in a Regional Maternal and Child Health meeting, entitled "Keeping Native Women and Families Healthy and Strong". Lessons learned from FIMR and CDR were presented in breakout sessions. The meeting was held in Milwaukee, WI, a collaborative effort of the Indian Health Service, Bemidji Area, and the Great Lakes Intertribal Council.

Macomb

- FIMR personnel planned and participated in a TV segment on WWJ: "A Closer Look" Infant Mortality. The purpose was to raise awareness of infant mortality and the role of stress and racism in poor pregnancy outcomes in Southeast MI.

Muskegon

- FIMR partnered with Lakeshore Perinatal Mood Disorder Coalition to develop the community's first Perinatal Mood Disorder support group.
- After review of a number of infant deaths affected by maternal use of Methadone, FIMR personnel collaborated with local substance abuse professionals to develop a patient education handout describing the effects of methadone on female reproduction. The brochure targets women taking methadone for the management of chronic pain.

The State Support program for FIMR provides technical assistance to local communities and coordination of team activities, resources on best practices in prevention, and links with other child health, safety and protection sources. For more information about Michigan's FIMR program, contact Rosemary Fournier, at fournierr1@michigan.gov.

APPENDIX

Total Numbers of Resident Child Deaths vs Number of Reviews by County, 2007 and 2008

COUNTY	TOTAL DEATHS* 2007	REVIEWS** 2007	TOTAL DEATHS* 2008	REVIEWS** 2008
Alcona	1	0	2	0
Alger	0	1	2	0
Allegan	31	14	18	28
Alpena	1	0	3	0
Antrim	4	0	5	4
Arenac	1	1	1	1
Baraga	0	0	1	0
Barry	7	13	10	5
Bay	13	24	13	10
Benzie	3	0	0	0
Berrien	36	18	22	32
Branch	3	4	5	0
Calhoun	35	6	21	7
Cass	7	6	8	5
Charlevoix	2	1	5	0
Cheboygan	2	0	1	0
Chippewa	6	3	6	6
Clare	7	6	4	3
Clinton	8	7	5	0
Crawford	5	6	1	1
Delta	6	0	2	0
Dickinson	2	1	4	2
Eaton	9	5	12	9
Emmet	2	0	3	0
Genesee	85	37	69	32
Gladwin	2	0	0	2
Gogebic	4	0	1	0
Grand Traverse	12	13	10	10
Gratiot	6	9	3	1
Hillsdale	7	0	5	12
Houghton	3	0	6	0
Huron	3	4	0	0
Ingham	43	14	32	7
Ionia	12	8	4	4
Iosco	3	2	1	2
Iron	4	3	0	0
Isabella	10	14	4	5
Jackson	26	13	27	6

continued

Kalamazoo	45	25	30	12
Kalkaska	2	2	3	1
Kent	110	47	103	63
Keweenaw	0	0	0	0
Lake	2	3	1	0
Lapeer	11	11	11	11
Leelanau	1	0	0	0
Lenawee	13	0	16	6
Livingston	23	5	19	14
Luce	2	0	2	2
Mackinac	0	0	3	3
Macomb	102	12	107	28
Manistee	1	0	2	0
Marquette	5	9	7	4
Mason	3	12	3	0
Mecosta	6	8	11	6
Menominee	1	0	5	0
Midland	9	4	5	3
Missaukee	0	0	2	2
Monroe	18	11	13	14
Montcalm	7	3	10	5
Montmorency	0	0	0	0
Muskegon	29	10	24	10
Newaygo	14	7	7	3
Oakland	159	26	133	26
Oceana	6	0	5	0
Ogemaw	4	0	2	6
Ontonagon	1	1	1	0
Osceola	4	0	0	3
Oscoda	1	0	2	0
Otsego	9	3	2	0
Ottawa	32	5	37	6
Presque Isle	2	0	6	0
Roscommon	6	0	3	6
Saginaw	48	13	44	16
St Clair	18	19	14	14
St Joseph	13	10	16	13
Sanilac	8	0	4	0
Schoolcraft	1	1	1	0
Shiawassee	16	8	3	5
Tuscola	6	0	4	1
Van Buren	11	13	11	12
Washtenaw	39	11	30	8
Wayne	442	192	451	172
Wexford	5	0	3	1
Total	**1,646**	**704**	**1,475**	**670**

** Source: Michigan Department of Community Health, Division for Vital Records and Health Statistics*

*** Note: number of reviews may exceed number of total deaths in a county for a given year if deaths occurring later in the year were reviewed the following year, or if non-residents were reviewed in the county of incident.*

ACKNOWLEDGEMENTS

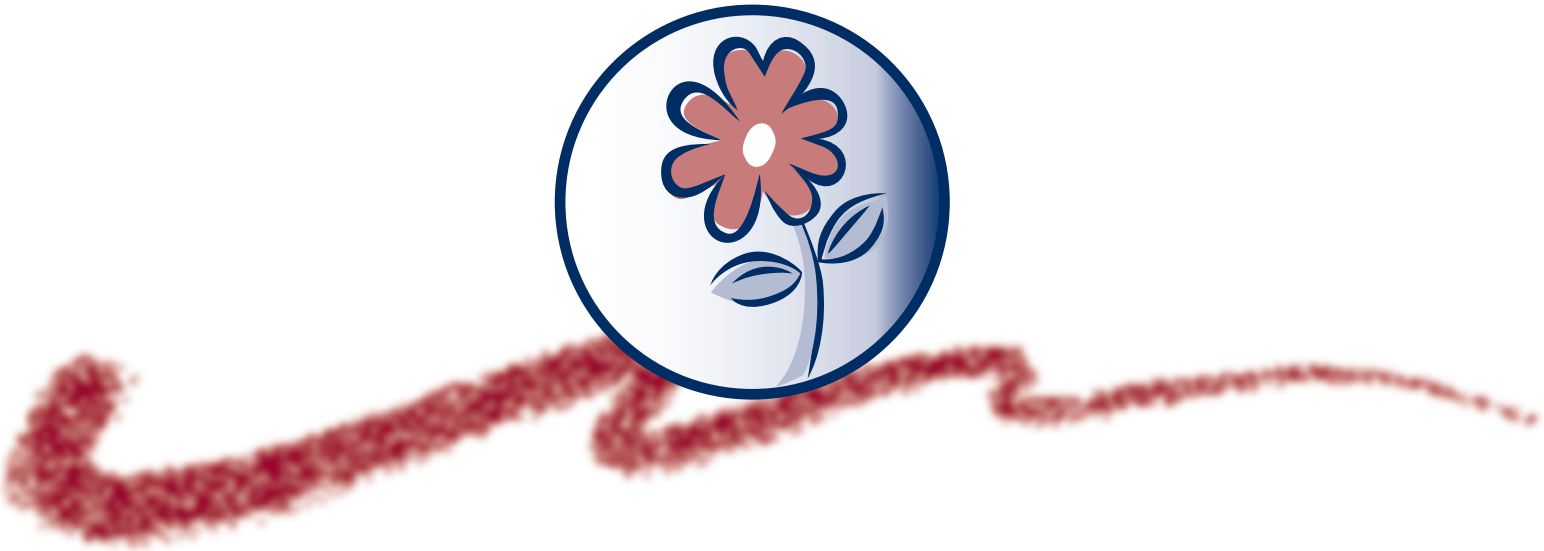
We wish to acknowledge the dedication of the over twelve hundred volunteers from throughout Michigan who serve our state and the children of Michigan by serving on Child Death Review Teams. It is an act of courage to acknowledge that the death of a child is a community problem. Their willingness to step outside of their traditional professional roles, and examine all of the circumstances that lead to child deaths, and to seriously consider ways to prevent other deaths, has made this report possible.

Many thanks to the local Child Death Review Team Coordinators for volunteering their time to organize, facilitate and report on the findings of their reviews. Because of their commitment to the child death review process, this annual report is published.

The Michigan Department of Community Health, Office of the State Registrar, Division for Vital Records and Health Statistics has been especially helpful in providing child mortality data and in helping us to better understand and interpret the statistics on child deaths.

The Michigan Department of Human Services provides the funding and oversight for the Child Death Review program, which is managed by contract with the Michigan Public Health Institute.

This report is also available at **www.michigan.gov/dhs** and **www.keepingkidsalive.org**.



This report is written in memory of all of the children in Michigan who have died. The Michigan Child Death State Advisory Team issues this report with the hope that it will encourage additional efforts, both in local communities and among our state leaders, to keep every child in Michigan safe and healthy.

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Keeping Kids Alive