REPORT TO THE GOVERNOR
AND GENERAL ASSEMBLY

IOWA CHILD DEATH
REVIEW TEAM

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Administrative Support Provided by:
IOWA DEPARTMENT OF PUBLIC HEALTH

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Table of Contents

Foreword

Lon Walker, Chairperson

A child dies and a family grieves. Flowers attempt to brighten a somber ceremony, and a man of the cloth tries to sooth survivors with reassuring words. But no one knows where that child may have walked, or what that child may have done in life. Many of these child deaths are just empty statistics. There were too many of these "statistics" in Iowa last year. Exactly how many of these were preventable deaths, we can't say for certain, but we know that action on our part may have saved the lives of some of Iowa's children. The Greek dramatist Euripides said: "What greater pain could mortals have than this: To see their children dead before their eyes."

We are burying too many of our children in Iowa, and it's time for a change. The recommendations in this report provide some answers, and it is the hope of the Iowa Child Death Review Team that these recommendations will be acted upon to reduce the number of child deaths in future years.

A Child Dies

When a child dies of neglect or abuse, we cry foul.
When a child dies of SIDS or in an accident, we say what a shame.
But what have we really done; why do the deaths continue?
A child dies, robbed of his or her future, but we never know
what we have really lost.
The world loses a child who may have been a poet, a child whose
rhymes will forever go untold.
A child that could have been the hope and love
of a future generation is dust.
When a child dies, why don't we, as a country, as a state
ask why; did we do all we could to prevent this death?
As adults we aren't just traveling though life as innocent passengers.
We must take responsibility.
If the answer is there was some thing we could have done
and we didn't do it, then the blame is ours!

This marks the eighth year that the Child Death Review Team has made recommendations for change based on extensive reviews of Iowa's child deaths. I hope future reports can claim that we are <u>finally</u> making a difference in reducing the number of these deaths.

Executive Summary

Since 1995, the Iowa Child Death Review Team (CDRT) has been reviewing child deaths and formulating recommendations to prevent future deaths of Iowa's children. When a child dies, not only are the parents, extended family and friends stunned and grief stricken, but the community is devastated as well. No caring parent can learn about the death of someone else's child without sympathizing with the pain and anguish and, perhaps, holding their own child a little closer.

Although the CDRT annual report is based on the team's statistical findings, each "number" represents a child. Someone most likely loved that child, and if he or she had been able to grow up, they could have added to the productivity and prosperity of our state. The entire team urges readers of this year's annual report not only to consider the data and the story they tell, but also to think of the children who died and the grief those deaths caused. Perhaps then, taking action on the recommendations will be faster in coming.

The Maternal and Child Health (MCH) Bureau/Health Resources and Services Administration of the U.S. Department of Health and Human Services has funded a new federal initiative: The National MCH Center for Child Death Review. This center is targeted at supporting states in their child fatality review efforts and to help them use the information to improve the health status of children in our nation. Iowa is ahead of the curve because it has been successfully reviewing child deaths for eight years, and it is one of very few states to have published a comprehensive report each year since the CDRT was established.

During 2002, 401 child deaths occurred among Iowa's child residents dying in or out of state and child residents of other states who died in Iowa. All of the homicide, accident and suicide deaths, as well as many of the undetermined and natural manner deaths could have been prevented through better public education, different attitudes and actions by care providers and/or improved intervention by an outside entity. The recommendations made by the CDRT can not ensure the total safety of every child who lives within the state's boundaries or who visits Iowa, but they could potentially improve the chances that all of these children would live to adulthood. For Iowa's children to be assured a longer and safer life, the legislature, state and other public agencies and all care providers of children would need to take action on the team's recommendations. Such action has been slow to occur. The team continues to promote the recommendations and urge passage of legislation that would offer children a more secure future. In addition, the CDRT advises that entities involved in parenting and child-care provider education adopt the education-related suggestions and actively incorporate them into their education initiatives.

Natural deaths continued to be the leading cause of child deaths in 2002. The vast majority of these deaths occurred during the first month of life. Most of the natural deaths resulted from premature birth or birth defects. Better and earlier prenatal care and smoking cessation would decrease the chances of premature birth. Birth defects would also be decreased if pregnant women and those around them did not smoke. Iowa is improving in the fight against these deaths. In 2001, there were 262 natural manner deaths. Of these deaths, prematurity caused 92 and congenital defects caused 116. In 2002, prematurity caused 106, and congenital defects caused 91 of the 244 natural deaths.

Accidents are the leading cause of death for older children. In 2002, 89 children died from accidents as compared to 84 in 2001. Interestingly, in 2002 there were far fewer motor vehicle accident deaths than in the previous year (62 vs. 42) despite a slight increase in accidental deaths overall. The number of teen motor vehicle accidents is still alarming however. In 47.6 percent of motor vehicle accidents, the child who died used no seatbelt or other restraint system. Lack of driving experience, poor judgement, alcohol/drug use and distractions due to friends in the vehicle all contributed significantly to the motor vehicle accidents where teens were driving. In addition, several children, who were born in other countries and later immigrated to Iowa, died in motor vehicle crashes. In every one of these accidents, the driver of the vehicle (teen or parent) either was inexperienced with the harsh weather conditions or unfamiliar with Iowa's seatbelt and child safety restraint laws. These findings present excellent support for Iowa's graduated driver's licenses based on a young driver's age and other factors. Expanding driving privileges as a driver becomes more experienced with inclement weather driving and night driving is advisable to prevent future accidents of the types seen for 2002 road fatalities.

Even though motor vehicle accidents decreased in 2002, drowning incidences greatly increased. In 2001, there were seven children who drowned. In 2002 drowning deaths increased to 17.

Homicide deaths increased from 14 to 16 deaths from 2001 and 2002. Ten of these children were 6 years or younger at the time they died. For six deaths, the biological father was responsible. A mother killed her child and then herself in one instance. Gang members caused two deaths. A friend of the victim was responsible in two deaths. A stepmother killed her husband's child. A father killed one of his adopted children. The mother's paramour was responsible for only one homicide in 2002, and for two deaths, the perpetrator was unknown.

Undetermined deaths are deaths caused in a manner that cannot be pinpointed from a thorough autopsy, death scene investigation or other means. The majority of these deaths are attributed to Sudden Infant Death Syndrome (SIDS). Despite a decrease in child deaths overall, SIDS deaths remained the same from 2001 to 2002. Iowa's SIDS deaths still exceed that of most other states. Improved compliance by child-care givers (parents, grandparents, child-care providers) regarding proper safe sleep-practices and smoke free environments would greatly reduce the chances that so many of Iowa's children would die from SIDS.

Suicides among children decreased dramatically from 2001 to 2002 (23 to 11). The youngest child to commit suicide was **only 9 years old.** Improved gun safety in the home, including locked gun cabinets and separately locked up ammunition, could greatly reduce the number of suicides by children since four of the 11 deaths were caused by firearms.

Team Recommendations

For Elected Officials:

?? Require immediate drug screens of care providers present when a child dies in a suspected accident, homicide or in an undetermined manner. Require immediate drug screens of drivers when there is a fatal motor vehicle collision.
?? Increase the penalty for child endangerment resulting in the death of a child.
?? Require children through age 6 years to use a car seat or booster seat and children through age 14 to use a seatbelt when riding in a motor vehicle
?? Increase the penalty for driving with an improperly restrained child in a motor vehicle.
?? Expand required autopsies for children from the current birth through age two years to birth through six years.
?? Continue to expand the Community Empowerment initiative.

?? Expand annual funding for the Iowa Child Death Review Team to cover actual operating expenses either through a permanent legislative appropriation or by levying a surtax of $2 on each death certificate issued by the Iowa Department of Public Health's Vital Records Bureau.
?? Require all in-ground and above-ground swimming pools sold in Iowa to have swimming pool alarms installed by the purchaser or seller.
?? Require all child autopsies to be completed and reported to the State Medical Examiner's office within three months of the death.
?? Increase reimbursement to counties for SIDS autopsies.
?? Require nicotine metabolite testing to be included in the autopsy when an infant dies so that accurate exposure to tobacco can be determined and evaluated for its role in the death of the child.

Many of these recommendations *do not* require additional money to implement. However, they all require action by elected officials to become policy.

A preventable death is one in which an individual or a community could have reasonably done something that would have changed the circumstances that led to the death.

2002 IOWA CHILD DEATH REVIEW TEAM REPORT TO THE GOVERNOR AND IOWA GENERAL ASSEMBLY

In 1995, a new state law established the Iowa Child Death Review Team (CDRT). This law (*Code of Iowa 135.43*) describes the team membership and the specific responsibilities of the CDRT. Additional legislation was passed in 1998 that protects team representatives from liability while performing their duties to the team and protects entities that supply information to the CDRT for review.

The Child Death Review Team is composed of 14 members and seven state government liaisons. Each member represents a different profession or medical specialty, but all of the organizations represented have a documented commitment to helping children survive and thrive. There is a member representing each of the following: perinatology, pediatrics, law enforcement, social work, mental health, substance abuse, domestic violence, family practice, state medical examiner, county attorneys, SIDS, insurance industry, emergency room nurse and a member-at-large.

Liaisons from the following state agencies also participate in review of child death cases: human services, public health, transportation, attorney general's office, education, vital records and public safety. These representatives are selected by their agency director with consideration of their expertise in child behavior, injury and death and their commitment to team attendance and inter-departmental cooperation.

The Iowa Department of Public Health provides coordination and administrative support for the Child Death Review Team. The teams' responsibilities include:

?? Collection, review and analyses of child death certificates, data and records concerning the deaths of children ages birth through 17 years, and preparation of an annual report summarizing the team's findings.
?? Formulation of recommendations to the governor and general assembly about interventions that could prevent future child deaths.
?? Formulation of recommendations to state agencies represented on the CDRT as to how they may improve services to children to prevent future child deaths.
?? Maintenance of confidentiality of all records that the team reviews.
?? Development of protocols and a child abuse-related death committee.

The law also specifies the length of team appointment and attendance requirements for the CDRT members. The rules governing the team's operation may be found in the* Iowa Administrative Code 641-90(135*).

It should be noted that the 1995 legislation mandated reviews of child deaths through age 6 years. In 2000, that age was expanded to include child deaths through age 17 years.

Since 1995, the Child Death Review Team has reviewed more than 2800 cases of child death. This document is the eighth CDRT annual report regarding child death in the state of Iowa and ways that future child deaths might be reduced or prevented.

RECOMMENDATIONS FOR PREVENTION OF FUTURE DEATHS

The Child Death Review Team has reviewed cases of child deaths for eight years. The recommendations made in this report are intended to help prevent future deaths. These recommendations are not case-specific, but are intended to deal with a broad range of issues. After a list of the specific recommendations, there is a brief discussion as to why each recommendation was made. **Special attention should be given to any recommendation that has been made in previous annual reports and is stated again this year.**

RECOMMENDATIONS TO THE GOVERNOR AND THE IOWA GENERAL ASSEMBLY

RECOMMENDATIONS REQUIRING LEGISLATIVE ACTION:

***Recommendation 1*:** The CDRT recommends continued expansion of the Community Empowerment initiative. The CDRT especially advocates implementation of Community Empowerment programs that devote approximately 60 percent of their funds to home visits for all families with a pregnant mother or a newborn child, so that each family may become educated in appropriate parenting, preventive health, social and economic issues relating to infants and young children.

***Recommendation 2*:** The CDRT recommends that children under 1 year of age and weighing less than 20 pounds be required by law to ride in an appropriate rear facing child restraint. In addition, children under 6 years of age should be secured during transit by a child restraint system, and children 6 through 14 years of age should be required to be secured while in transit by either a booster seat or seatbelt.

The CDRT also recommends raising the fine to $100 for driving with an improperly restrained child under 6 years of age in a motor vehicle.

***Recommendation 3*:** The CDRT recommends that the performance of an autopsy including toxicology studies be required for every death of a child through age 6 with the exception of children who are known to have died of a disease process while attended by a physician. In addition, the team recommends full body x-rays of any child who dies before their second birthday.

***Recommendation 4*:** The CDRT recommends reimbursement for actual expenses incurred for the performance of an autopsy, x-rays and toxicology tests on an infant dying from Sudden Infant Death Syndrome to any county in which a SIDS death occurs. The current law allots $400 per case. The limit for this reimbursement should be $1700.

The CDRT also recommends reimbursement of up to a $600 for transportation of the body to the autopsy site.

***Recommendation 5*:** Immediate drug screens should be done on caretakers and people having access to a child just prior to the death. All drivers involved in a fatal motor vehicle accident should be tested for alcohol and drugs at the time of the crash.

***Recommendation 6*:** Funding for continued operation of the Iowa Child Death Review Team should be raised from the current $15,000 appropriation to $55,000, so that the actual expenses incurred in operation of team activities may be covered in full. The CDRT recommends that the additional monies be funded through an additional permanent appropriation **or** that a levy of $2 be added to the fee for each death certificate issued in Iowa and those funds be used to finance the team's continuing operation.

Recommendation 7: The penalty for child endangerment that results in the death of a child should be increased. Section 726.6 of the Iowa Code should be amended to add a NEW subsection 726.6(3A), as follows: "A person who commits child endangerment resulting in the death of a child or minor is guilty of a class "B" felony. Notwithstanding section 902.9, subsection 2, a person convicted of a violation of this subsection shall be confined for no more than fifty years."

Recommendation 8: The CDRT recommends that all in-ground and above ground swimming pools sold in Iowa be

required by law to have a pool alarm installed by the seller or the purchaser.

OTHER RECOMMENDATIONS:

***Recommendation 9*:** The CDRT recommends the performance of cotinine (a metabolite of nicotine) testing on all infants who die in Iowa to accurately determine the potential role of tobacco exposure as a risk factor in their deaths. It is suggested that funding for this testing should come from state sales taxes on tobacco products.

Recommendation 10: The CDRT recommends establishment of a statewide system of local or regional child death review teams to review deaths of all children through age 17 occurring in their area. They would share their information with the state team. These teams should be permitted the same statutory authority given to the state CDRT to gather and review information related to child deaths as long as they operate under strict confidentiality guidelines. Team members would be volunteers, so the cost of operating local teams would be minimal.

***Recommendation 11*:** The CDRT recommends that every child death that is a medical examiner's case be reported on a Medical Examiner I report form to the State Medical Examiner's office within four weeks of its occurrence. The final autopsy and toxicology results should be submitted within three months of the child's death unless special laboratory tests delay this process. It is recommended that all results be submitted within six months of the child's death.

DISCUSSION OF RECOMMENDATIONS:

The following text offers background that supports and explains each recommendation.

Recommendation 1: The majority of child deaths resulting from accidents and many resulting from SIDS could be prevented. Lack of adequate knowledge about child rearing and health, sometimes coupled with lack of parental supervision, plays a huge role in these types of deaths. For example, parents may be unaware of the dangers of even a small amount of bathtub water and the danger it poses to a toddler. Rural families often do not think about the dangers offered by farm ponds, large machinery or building materials. Many parents are unaware that prone sleep position or smoking during pregnancy or afterward contributes to SIDS. **Therefore,** programs such as the Community Empowerment initiative are of tremendous value in educating new parents and preparing them to provide appropriate and adequate care for their children.

Recommendation 2: All too frequently children are not properly restrained in a moving automobile, SUV or truck. In a motor vehicle collision, an unrestrained or inadequately restrained child can be ejected from the vehicle or thrown around in the vehicle. Fatal head injuries and internal injuries often result in these instances.

Iowa's current seatbelt laws do not coincide with "best practice" recommendations that exist. For example, a child under 6 years of age that is restrained by a shoulder attached seatbelt risks strangulation in a motor vehicle accident because the cross strap is not properly placed on a child that is so small. Therefore, a child restraint system that is designed specifically to protect children in this age group is more appropriate and should be required by law.

Likewise, any person who is unrestrained in a vehicle is at far greater risk of injury or death than someone who is secured by a seatbelt. Therefore, children ages 6 through 14 should be required by law to use a seatbelt when riding in a motor vehicle.

In addition, anything that may help deter drivers from failing to follow the law that

requires children under age 6 to be restrained in a moving-vehicle should be done. A significant fine of $100 would help to obtain compliance.

Recommendation 3: An immediate autopsy of a young child who dies helps to accurately pinpoint the precise cause and manner of death. Accurately classifying manner and cause assures that any wrongdoing may be adequately and quickly investigated. It also helps to determine preventable factors that led to the death.

Recommendation 4: The state currently reimburses counties $400 for any autopsy done on an infant who dies from Sudden Infant Death Syndrome. The actual costs for this type of an autopsy **exceeds $1500** when required x-rays and toxicology tests are included. This poor reimbursement places a burden on any county where a SIDS infant dies. In addition, no reimbursement is made for transporting the body to another city or county where a deputy state medical examiner has agreed to perform the autopsy.

Increased reimbursement would ease the burden of counties adhering to guidelines for autopsies on infants. It would also encourage transporting bodies to the state medical examiner for autopsy rather than sending them out-of-state to a closer facility.

Recommendation 5: Alcohol and drugs may play a large part in child neglect, inappropriate child-care, child abuse or in motor vehicle mishaps. It is impossible to assess the involvement of chemical substances in the death of a child if testing for these substances is not immediately done at the death scene on all care providers present when the child dies. Deaths may be inaccurately classified as to cause; perpetrators may go unidentified or unpunished; the extent of the involvement of chemical substances in child deaths may be under-reported and so not addressed by public health programs or legislative action. A law requiring this testing would assure that law enforcement in all parts of the state follow this recommendation.

Recommendation 6: In 1995, when the legislature and the governor established the CDRT, an appropriation of $20,000 was set aside for the team's operation. This funding was to cover team members' travel, report requests, copying of records, development and printing of an annual report, staff support and any other related expenses necessary for the optimal functioning of the CDRT. In 1998, the legislature and the governor established the Domestic Violence Death Review Team. The CDRT had the same tasks as when it was originally founded, but $5,000 of the original $20,000 appropriation was set aside for the new Domestic Violence Death Review Team!

In 2000, the purview of the CDRT expanded from children birth through age 6 to birth through age 17. The appropriation still remained at $15,000. This funding does not cover much more than team travel expenses for meetings, the annual report development, case ordering and some printing. Funding for staff salary, office expenses, team training, etc. is not adequate. Although the FY 2002 budget recommendation originally included a significant increase in the appropriation for the CDRT, it was not funded at that level. Currently, the Iowa Department of Public Health (IDPH) is providing additional funds to continue the very basic operation of the CDRT. IDPH obviously understands and appreciates the value of the team. However, it is unrealistic and unfair to expect IDPH to eke out additional funds from its already meager budget to fund an interdisciplinary team that was established by law.

Since the 14 professionals on the team donate an average of 12 hours per month to the perform the work of the CDRT, it appears that funding the team at $55,000 per year through an adequate budget appropriation is a small investment for saving the lives of Iowa's children.

If funds are not available to increase the appropriation, the team suggests levying a surtax on death certificates that could fund all activities of the team and eliminate the need for an appropriation. Other states such as Nevada are finding that this surtax works well to maintain their team's functions. The surtax needed in Iowa would be only $2 per death certificate and would yield $55,000 per year for team operations.

Recommendation 7: When children die from non-accidental, intentionally inflicted injuries, a perpetrator may presently be charged with either child endangerment resulting in serious injury, a class "C" felony punishable by 10 years in prison, or with murder in the first degree, a class "A" felony punishable by life in prison without parole. In instances where the available evidence does not support a first degree murder charge ("extreme indifference to human life"), the child endangerment resulting in serious injury is seen an **insufficiently serious** charge for those acts of child endangerment that result in a child's death.

Recommendation 8: The CDRT has reviewed numerous deaths of children who drowned in residential swimming pools. All of these deaths were preventable had someone known that a child had entered the water. Despite Consumer Product Safety Commission recommendations to the public about putting a fence with a locked gate around any home pool, owners continue to leave pools open and accessible to curious children. A new pool alarm has been developed that can be installed at the water line, inside of the pool. If anyone goes into the pool when the alarm is set, a warning signal sounds to alert the owner and others residing in the area that someone has entered the water. The cost of this type of alarm is approximately $250, a cost that is negligible compared to the cost of a pool.

Recommendation 9: Medical research long ago identified the role of secondhand tobacco exposure in the deaths of infants. Smoking during pregnancy has been shown to be a major risk factor for both premature birth and SIDS. When prone sleeping position is removed as a risk factor for SIDS, smoking emerges as the next most significant risk. If all smoking during pregnancy were eliminated, perinatal mortality would be reduced by an estimated 10 percent.

Although birth certificates have a place to record the use of tobacco by the mother during pregnancy, this information may not be recorded or may be inaccurate due to the mother's unwillingness to admit to a behavior that could be harmful to her unborn child. Exposure of an infant to secondhand smoke either at home or at a child care provider's residence may be noted on an Infant Death Scene Investigation, if one is done, but this information has usually been sketchy. We truly do not have an accurate idea of how many infant deaths in Iowa may be related to smoking. The number is probably much greater than birth certificates and death scene investigations indicate.

If cotinine testing were done on all infants who die in Iowa, a true grasp of the extent of tobacco exposure in-utero and after birth could be assessed. Then, the need for better smoking-related interventions would be documented in Iowa's population, and additional public health initiatives could be planned.

Recommendation 10: The CDRT conducts retrospective reviews of child deaths so that all records related to the child, such as autopsies and law enforcement investigations, are complete prior to the reviews. The drawback to this method is that if some part of the death investigation was not adequately completed or if questionable information exists on reports, it is most likely too late to obtain that information. In addition, with a retrospective review system, follow-up checks on the safety of surviving siblings, the involvement of vital community agencies in the investigation or public education endeavors are delayed.

Several states, notably North Carolina, Colorado and Missouri have developed statewide systems of county multi-disciplinary child death review teams. These teams meet immediately following the death of a child to share their information, determine what else needs to be done, conduct public education activities for prevention of future child deaths and send reports of their reviews to the state child death review team. Communication and sharing of records expedites the review process at all levels and helps assure complete and thorough review of each death by two competent panels of reviewers, one at the local level and one at the state level.

Only five Iowa counties (Polk, Woodbury, Dubuque, Pottawattamie and Scott) currently have local review teams. Most of these teams review only infant deaths or child abuse-related deaths. With the expansion of the state's CDRT to include children through age 17 years, it would be helpful to have all local teams include children of the same ages. As with the state team, these five local teams try to use what is learned in reviews to prevent future deaths.

Establishing a statewide system of local or regional teams would assure earlier, more thorough and targeted interventions on a community level when any child dies.

Recommendation 11: Although efficient reporting of out-of-hospital deaths and other medical examiner cases is requested from county medical examiners, current reporting can take months or longer to be reported on an M.E. I form to the State Medical Examiner's office. This delay in reporting causes inaccurate statistical reporting to other agencies and delays the collection of autopsies and other reports for CDRT review. Requiring more efficient completion of reports to the state medical examiner's office would assist the team in its operation and assure complete reporting of all deaths to that office.

RECOMMENDATIONS TO STATE AGENCIES

Recommendation 1: to the Iowa Department of Human Services, Field Office Support Unit. When a child dies due to a parent's or a caretaker's ignorance, neglect or aggression, the CDRT recommends that ongoing efforts be made to visit the surviving children in the home within one month to assess the safety and well-being of these children and enable voluntary referrals to appropriate services. This visit is to be completed by DHS caseworkers knowledgeable in family dynamics and child abuse and/or neglect. (It is recognized that the Iowa Department of Human Services has made much progress in addressing this issue. The assessment approach is now being used statewide to respond to reports of child abuse. This approach mandates evaluating the alleged abuse, taking needed actions to safeguard the child and engaging the family in services to enhance family strengths and address identified needs. This approach facilitates the provision of needed services to children and families. In addition, it is recognized that DHS staff cannot investigate situations of which they are not notified. Delayed autopsy results and delayed caretaker drug testing results, along with inconclusive or nonexistent law enforcement investigations, hamper the ability of DHS to intervene with surviving children when abuse may have been involved in the death of a sibling.)

Recommendation 2: to the Commission of Uniform State Laws. The CDRT recommends that the Commission on Uniform State Laws propose legislation in Iowa and promote the passage of legislation in other states which would facilitate the exchange of medical, investigative or other information pertaining to a child death.

This legislation should include the following language: " A person in possession or control of medical, investigative or other information pertaining to a child death and child abuse review shall allow the reproduction of the information by the Child Death Review Team of another state operating substantially in conformity with the provisions of this chapter, to be used only in the administration and for the duties of that Child Death Review Team and provided that state grants reciprocal exchange of such child death information to Iowa's Child Death Review Team. Information and records that are otherwise confidential remain confidential under this section. A person does not incur legal liability by reason of releasing information to a Child Death Review Team as required under this section." A meeting between Iowa's CDRT and representatives from other Child Death Review Teams was held in Des Moines in April 2000. One of the main objectives of that conference was to discuss better sharing of information among states. All state team representatives agreed that they also have problems collecting information from other states, and they would support an interstate agreement that would expedite and ease the process.

***Recommendation 3*: to the Iowa Department of Human Services.** The CDRT recommends that all foster care parents be required to learn and be certified in child and infant CPR and that they be required to be re-certified in this procedure annually. In addition, foster parents should be required to have extensive education regarding appropriate sleep practices and environment for infants. Their homes should be assessed for secondhand smoke exposure and safety before they are accepted into the foster care program.

***Recommendation 4*: to the Department of Public Safety.** The CDRT recommends follow up by law enforcement officers of all cases involving potentially life-threatening injuries resulting from any accident for all children of any age. In the event that an injured child dies either in-state or out-of-state from an injury that occurred in their jurisdiction, a thorough investigation of the circumstances surrounding the accident should be conducted by law enforcement.

***Recommendation 5*: to the Iowa Department of Public Health.** The CDRT recommends enhanced statewide education of parents and other care providers and health care professionals who regularly come in contact with new parents. This education should focus on all risk factors related to an infant's sleep environment (including hazards of bed sharing) and on issues related to tobacco exposure before and after birth.

***Recommendation 6*: to all state agencies and their local units or contractors who conduct activities in the homes of their clients/ customers.** The CDRT recommends that the state agencies require each local unit or contractor, whenever conducting activities in the homes of their clients or customers, to check for the presence and operating status of smoke alarms. They should also evaluate the presence of other safety hazards and recommend to residents when repairs, changes or replacements are needed.

***Recommendation 7:* to the Iowa Department of Public Safety and the Iowa Law Enforcement Academy.** The CDRT recommends that all law enforcement agencies follow the Child Death Scene Investigation Protocol and that the report forms be filled out and submitted as quickly as possible to the proper entity. It is further recommended that the curriculum of the Iowa Law Enforcement Academy include instruction on this protocol and report form.

***Recommendation 8:* to the Iowa Law Enforcement Academy.** The Child Death Review Team recommends that the Iowa Law Enforcement Academy curriculum emphasize the importance of death scene photographs and sketches along with use of the Death Scene Investigation Form.

Recommendation 9: **to the Iowa Department of Human Services.** The Child Death Review Team recommends long term close monitoring of children after they have been returned to their parental home or after a parent who has been incarcerated returns to the home. Special attention should be given to substance abuse by the parent(s) and unsafe surroundings in the child's home. Multidisciplinary team staffings and contacts with the parent's probation officer are suggested for these types of cases.

Recommendation 10: **to the Iowa Department of Human Services.** The Child Death Review Team recommends removal of very young children (less than 4 years old) from unsafe family situations while the parents work to improve the home environment. Close follow up with the family to monitor its progress should be made for one year after the child is back in the home, and frequent and thorough visits to the home should be made. In addition, any caseworker entering a home for any reason should perform a home safety check. The results should be reviewed with the parents, and the safety check should be repeated at a later date to evaluate improvements.

Recommendation 11: **to the Iowa Department of Public Health.** The Child Death Review Team recommends increased education for parents on the hazards of delayed medical care, secondhand smoke exposure, inappropriate dosing of medications and drug interactions. It further recommends enlisting the cooperation of hospitals to include this education for new parents both verbally and through printed information in their discharge-packets.

Child Death Review Team Accomplishments

During the 2003 calendar year, the members of the Child Death Review Team took a very serious and proactive approach to help save Iowa's children from early deaths. These accomplishments focused primarily on education, meetings and awareness building activities around the state.

Specifically, in addition to reviewing 401 cases of child death, the members of the CDRT:

?? Secured grants to purchase gun-locks to be given away free across the entire state as part of a gun safety education program provided by the Iowa Emergency Nurses Association.

?? Advanced awareness among health professionals and the public by giving presentations about child abuse and Sudden Infant Death Syndrome.

?? Participated as members of local child death review teams in their county of residence.

?? Worked with the state medical examiner to widely disseminate the revised Child Death Scene Investigation Form to law enforcement personnel and county medical examiners.

?? Worked with the IDPH and the Iowa SIDS Alliance on planning their "Train the Trainer" conference that will take place in April 2004 so that every county in Iowa will have trained speakers to disseminate accurate information about SIDS to lay audiences and other health professionals.

?? Worked with the State Medical Examiner's office to identify deceased children who should have been autopsied but were not and to identify deceased children who should have been medical examiner cases but were not reported or not investigated as such.

?? Attended the first national meeting of Child Fatality Review Teams held in Chicago in October. The chair of the Iowa CDRT made a formal presentation at this meeting. ***It should be noted that Iowa continues to be one of the very few teams that has successfully published an annual report each year since the team was established.***

?? Worked more closely with the Bureau of Family Services at IDPH to disseminate child safety and health care information to families, health professionals and child care providers.

?? Worked more closely with other programs coordinated by IDPH to share public information about child deaths such as the child's name and county of residence so that other programs would refrain from unknowingly contacting the grief stricken parents.

Iowa Year 2002
Deaths of Children Ages Birth through 17 Years
By County of Residence

County	Number	County	Number	County	Number
Adair	0	Floyd	5	Monona	3
Adams	3	Franklin	1	Monroe	1
Allamakee	1	Fremont	1	Montgomery	3
Appanoose	2	Greene	2	Muscatine	5
Audubon	1	Grundy	1	O'Brien	4
Benton	2	Guthrie	0	Osceola	0
Black Hawk	18	Hamilton	1	Page	2
Boone	3	Hancock	2	Palo Alto	0
Bremer	1	Hardin	1	Plymouth	6
Buchanan	4	Harrison	2	Pocahontas	0
Buena Vista	4	Henry	3	Polk	64
Butler	1	Howard	0	Pottawattamie	14
Calhoun	2	Humboldt	2	Poweshiek	1
Carroll	1	Ida	5	Ringgold	0
Cass	2	Iowa	1	Sac	0
Cedar	0	Jackson	1	Scott	15
Cerro Gordo	6	Jasper	6	Shelby	1
Cherokee	1	Jefferson	1	Sioux	5
Chickasaw	3	Johnson	10	Story	9
Clarke	1	Jones	3	Tama	1
Clay	1	Keokuk	1	Taylor	0
Clayton	4	Kossuth	0	Union	4
Clinton	12	Lee	8	Van Buren	0
Crawford	0	Linn	24	Wapello	2
Dallas	4	Louisa	3	Warren	2
Davis	0	Lucas	1	Washington	5
Decatur	1	Lyon	0	Wayne	2
Delaware	4	Madison	1	Webster	6
Des Moines	6	Mahaska	3	Winnebago	1
Dickinson	2	Marion	4	Winneshiek	2
Dubuque	9	Marshall	4	Woodbury	14
Emmet	3	Mills	1	Worth	0
Fayette	4	Mitchell	3	Wright	2

Number of Out of State Children
Ages Birth through 17 Years
Dying in Iowa in 2002

State	Number	State	Number
Nebraska	1	Indiana	3
Wisconsin	2	Missouri	1
Illinois	9	New Mexico	1
Oklahoma	1	S. Dakota	2

2002 Child Deaths by Age Groups, Race/Ethnicity and Gender

A total of 401 children ages birth through 17 years died in 2002. The age classifications used in this report are birth through 28 days (neonatal), 29 days through 364 days (post-neonatal) and 1 through 17 years (child).

Race/ethnicity and gender are shown by age group in the following tables for calendar year 2002 child deaths. The race/ethnicity attributed to the child is that listed on the birth certificate for the mother.

The majority of deaths occurred among whites, followed by blacks. Because Iowa's population is primarily white, these results are to be expected. However, prevention messages and intervention programs must be careful to target all cultural and ethnic groups across the state in the manner most accessible and useful to each group.

2002 Total Deaths by Race/Ethnicity and Gender

Race/ Ethnicity	Male	Female	Total	% of Total
White	195	145	340	84.8
Native American	0	1	1	.3
Hispanic	17	6	23	5.7
Black	13	13	26	6.5
Asian	5	4	9	2.2
Unknown	1	1	2	0.5
Total	**231**	**170**	**401**	**100%**

2002 Neonatal Deaths by Race/Ethnicity

Race/ Ethnicity	Male	Female	Total	% of Total
White	73	52	125	83.9
Native American	0	0	0	0.0
Hispanic	6	4	10	6.7
Black	3	8	11	7.4
Asian	1	1	2	1.3
Unknown	1	0	1	0.7
Total	**84**	**65**	**149**	**100%**

2002 Post-Neonatal Deaths by Race/Ethnicity and Gender

Race/ Ethnicity	Male	Female	Total	% of Total
White	32	27	59	88.0
Native American	0	0	0	0
Hispanic	2	0	2	3.0
Black	2	2	4	6.0
Asian	0	2	2	3.0
Total	**36**	**31**	**67**	**100%**

2002 Child Deaths by Race/Ethnicity and Gender

Race/ Ethnicity	Male	Female	Total	% of Total
White	90	66	156	84.3
Native American	0	1	1	0.5
Hispanic	9	2	11	6.0
Black	8	3	11	6.0
Asian	4	1	5	2.7
Unknown	0	1	1	0.5
Total	**111**	**74**	**185**	**100%**

Manner of Death

The attending physician or medical examiner records the manner of death on each death certificate. Five manners of death relate to deaths of children:

?? **Natural** means the death was the result of some natural process, such as disease, prematurity/immaturity or congenital defect. Most deaths by this manner are considered by the CDRT to be non-preventable. However, many deaths from prematurity or congenital defects might be prevented through better counseling during preconception and pregnancy, earlier or more consistent prenatal care and smoking cessation.

?? **Accidental** means the death resulted from some unintentional act. This manner of death is the most effectively reducible through education of all care providers of children to provide a safe environment with adequate supervision.

?? **Homicide** means the death was caused at the hands of another individual but not necessarily with the intent to kill.

?? **Undetermined** means that investigation of the circumstances and examination through autopsy did not clearly identify the way in which the death occurred. SIDS is included in this category, since this cause is determined by the absence of other signs rather than by a clearly identified finding.

?? **Suicide** means that evidence exits that the child intentionally caused his or her own death.

Prior to 2001, the team only dealt with deaths from natural, accidental, undetermined and homicide manners.

In addition to these five manners of death, when the manner and cause have not yet been determined and the investigation is still incomplete, "pending" is recorded as the manner of death. When the final determination has been made, the medical examiner amends the death certificate to accurately indicate the manner and cause of death.

For 2002, there were no children for whom an amended death certificate was not submitted to Iowa's Department of Vital Records because of diligent efforts by their staff to obtain the updated information.

Manner of Death For All 2002 Child Deaths

Manner	Number	% of Deaths
Natural	244	60.8
Accident	89	22.2
Homicide	16	4.0
Suicide	11	2.7
Undetermined	41	10.2
Total	**401**	**100%**

Causes of Death

Death certificates identify the immediate cause of death and, where it can be determined, one or more conditions leading to the immediate cause (*i.e.*, the immediate cause of death was due to or a consequence of some other disease or condition). Because the immediate cause in most instances is cardiac and/or respiratory arrest, we have followed the usual death analysis procedure of using the underlying cause (the disease or injury that initiated events resulting in the death) for our data and analyses.

When the team reclassified the manner or cause of death, analyses are based upon manner and cause of death as **determined by the CDRT** through case reviews. **Note**: Case determinations were based on evaluations of all materials available at the time the reviews were conducted.

Natural

The 244 deaths in this group were due to five causes: premature birth, congenital defects that were incompatible with life or following treatment to correct the defect, birth complications, infections and cancers of various types. As demonstrated in the following table, the predominant two causes of natural deaths were prematurity and congenital defects. The 244 natural deaths comprised 60.8 percent of all 2002 child deaths.

Deaths from Sudden Infant Death Syndrome (SIDS), although coded as natural on death certificates, are considered separately in this report as part of the undetermined category.

Causes of 2002 Natural Deaths
All Children through 17 Years of Age

Cause	Number	% of Natural	% of All Deaths
Prematurity	106	43.4	26.5
Congenital Defects	91	37.2	22.7
Cancer	16	6.6	4.0
Infection	15	6.2	3.7
Birth Complications	15	6.2	3.7
Unknown	1	0.4	0.2
Total	**244**	**100%**	**60.8**

Accidental

In 2002, 89 children died from accidental trauma. Accidents comprised 22.2 percent of all child deaths occurring that year. The major cause was motor vehicle collisions (47.2%), followed by drowning (19.1%). Accidental trauma is considered preventable, but to prevent it requires the efforts of many people including the victim, the family and the community. Education of the community, parents and care providers can help prevent accidental deaths among children of all ages.

The CDRT believes that better adult supervision could have prevented many deaths. Parents and other caregivers need to know where young children are at all times. Adults should remove all dangerous objects from the child's environment and make children use protective gear when they are taking part in potentially dangerous activities.

Adults who care for young children should adhere to safe bedding guidelines set forth by the American Academy of Pediatrics and the Consumer Product Safety Commission.

They should watch for drug and alcohol use among teens that drive and stress bike, ATV, motorcycle and automobile safety, including proper use of seat belts or child restraint systems and helmets when appropriate. Schools and communities should periodically review their driver's training curriculum and revise it accordingly. Rural areas, in particular, should teach student drivers about hazards unique to gravel roads and uncontrolled intersections.

Fences with locked gates and pool alarms should be used to protect children from wandering into yards with unattended swimming pools. Pool ladders should be removed when not in use so little children do not climb into a nearby pool.

Communities with multicultural populations should post warning signs near lakes and rivers in languages that reflect the composition of their resident population.

Firearms should be locked away from children and ammunition kept in separate, locked areas even if children have been taught firearm safety and to hunt.

Children under 12 should not be allowed to operate any motor vehicle including snowmobiles, all terrain vehicles or go-carts. Older children should be given adequate instruction and supervision before they are permitted to drive these vehicles.

All parents and other caregivers should make sure fire alarms are in operational order at all times and that children know an alternate escape route from their residence.

Causes of 2002 Accidental Deaths
All Children through 17 Years of Age

Cause	Number	% Acc. Deaths	% of All Deaths
ATV Accident	3	3.4	0.8
Asphyxiation	6	6.7	1.5
Bike/MVA Accident	3	3.4	0.8
Blunt Trauma	5	5.6	1.2
Drowning	17	19.1	4.2
Electrocution	1	1.1	0.2
Gunshot Wound	4	4.5	1.0
House-fire	2	2.2	0.5
Skiing Accident	1	1.1	0.2
Motor Vehicle Acc.	42	47.2	10.5
Pedestrian/ MVA	2	2.2	0.5
Strangulation	2	2.2	0.5
Suffocation	1	1.1	0.2
Total	**89**	**100%**	**22.2%**

Homicide

Homicides accounted for 16 deaths in 2002. **The perpetrator's relationship to the victim varied.** In six cases, the biological father was the perpetrator. The mother was responsible in one death and a stepmother was responsible for another death. A father killed one of his adoptive children. The mother's paramour was guilty in one case. Friends killed two teens, and members of gangs killed two children. The perpetrator was never identified in two homicide deaths.

Homicides are another area where prevention is possible. When a young child is the victim, this type of death often indicates anger and frustration on the part of

the caregiver. Parents and caregivers need easily accessible outlets, i.e. respite care or someone to call, when stresses of child-care escalate. Improved dissemination of information to all new parents about resources could assist in preventing future child homicide deaths. Home visits soon after an infant's birth to families that are at high risk for abusing children is needed in every community. Early intervention could save lives.

Children must not have easy access to firearms. All children should be closely supervised to make sure their social contacts are appropriate and interactions take place under safe circumstances. Parents should monitor teens for alcohol and drug use.

Parents must be conscientious and discriminating about the adults they bring into close and unsupervised contact with their children no matter what the role of the outsider in the household.

Communities must work together to stem the use of drugs and alcohol and eliminate the existence of domestic violence and gang activities.

Causes of 2002 Homicide Deaths
All Children through 17 Years of Age

Cause	Number	% of Homicides	% of All Deaths
Shaken Baby	1	6.3	0.2
Blunt Trauma	6	37.5	1.5
Gunshot Wound	3	18.7	0.8
Motor Vehicle	3	18.7	0.8
Strangulation	1	6.3	0.2
Suffocation	1	6.3	0.2
Undetermined	1	6.3	0.2
Total	**16**	**100%**	**4.0%**

Age Groups by
Causes of 2002 Homicide Deaths

Cause	Neo-Natal	Post Neo-Natal	Child	Total
Shaken Baby		1		1
Blunt Trauma			6	6
Gunshot Wound			3	3
Motor Vehicle			3	3
Strangulation			1	1
Suffocation			1	1
Undetermined	1			1
Total	**1**	**1**	**14**	**16**
% of Homicides	**6.3**	**6.3**	**87.4**	**100%**

Undetermined

Undetermined manner of deaths includes any death that cannot be classified as natural, accident, suicide or homicide. Most of the deaths included in this manner are ruled SIDS. It is specified as the cause of death when all other causes have been eliminated based on a thorough autopsy, death scene investigation and clinical history.

Although SIDS deaths are recorded on the death certificate as natural, the CDRT considers all SIDS deaths to be of the undetermined manner of death based on the technical definition of SIDS.

The team determined that there were 41 child deaths for which autopsies failed to pinpoint a specific manner of death in 2002. The cause of death in the majority (37) of these cases was found to be SIDS. The remaining four deaths were due to a variety of other causes: drowning, undetermined cause, Sudden Unexpected Death Syndrome (SUDS) and strangulation.

Causes of 2002 Undetermined Deaths All Children through 17 Years of Age

Cause	Number	% of Undetermined	% of All deaths
SIDS	37	90.2	9.2
Undeter-mined	4	9.8	1.0
Total	**41**	**100%**	**10.2**

SIDS Deaths

Most SIDS deaths occur in infants 2 to 4 months of age, and SIDS is more prevalent in males than females. In the year 2002, over 51 percent of the SIDS deaths occurred in children 2 to 4 months old, and about 59 percent involved males.

Ages and Gender of 2002 SIDS Deaths

Age	Male	Female	Total
<01 month	1	1	2
01 months	7	1	8
02 months	5	2	7
03 months	4	5	9
04 months	2	1	3
05 months	1	4	5
06 months	0	0	0
07 months	0	0	0
08 months	1	0	1
09 months	0	0	0
10 months	1	0	1
11 months	0	1	1
Total	**22**	**15**	**37**

Race/Ethnicity of Children Who Died of SIDS in 2002

Race	Count	% of SIDS
White	32	86.5
Hispanic	1	2.7
Black	3	8.1
Native American	0	0.0
Asian	1	2.7
Total	**37**	**100%**

The majority of 2002 SIDS deaths occurred while a parent was caring for the infant, and most occurred during November. SIDS deaths usually occur during colder months.

2002 SIDS Deaths by Month

Month	Number of Deaths
January	1
February	4
March	4
April	2
May	4
June	1
July	4
August	3
September	3
October	2
November	7
December	2
Total	**37**

Care Provider at Time of Death For 2002 SIDS Deaths

Provider	Number	% of SIDS
Parent	28	75.7
Grandparent	1	2.7
Child Care	6	16.2
Other	2	5.4
Total	**37**	**100%**

Risk factors for SIDS include prenatal smoking, secondhand smoke exposure after birth, inappropriate sleep surface, inappropriate (soft, porous) bedding, overheating and most especially, prone or side sleeping position**. Bed sharing is becoming an enormous risk.** In 2002, 17 (45.9%) of the infants dying from SIDS were sleeping with at least one adult or with an older child on an adult bed or sofa.

Prenatal Smoking by Mother for Infants Who Died of SIDS in 2002

Smoking	Number	% of SIDS
Yes	17	45.9
No	20	54.1
Unknown	0	0.0
Total	**37**	**100%**

Prenatal smoking is self-reported on birth certificates, so the number of mothers admitting to this habit is undoubtedly **underreported**.

Secondhand Smoke Exposure by Infants Who Died of SIDS in 2002

Exposure	Number	% of SIDS
Yes	27	73.0
No	5	13.5
Unknown	5	13.5
Total	**37**	**100%**

Alarmingly, 73 percent of SIDS infants were routinely exposed to second hand smoke **from at least one** source after birth. If tobacco exposure related to SIDS is dose–response related, then infants exposed to multiple sources would be at the greatest risk from this contributing factor.

Bedding at Time of Death for Infants Who Died of SIDS in 2002

Bedding	Number	% of SIDS
Inappropriate	26	70.3
Appropriate	1	2.7
Unknown	10	27.0
Total	**37**	**100%**

Sleep Position at Time of Death for Infants Who Died of SIDS in 2002

Position	Number	% of SIDS
Face Down	13	35.2
Side	6	16.2
Face Up	17	45.9
Unknown	1	2.7
Total	**37**	**100%**

Thermal Environment at Time of Death For Infants Who Died of SIDS in 2002

Environment	Number	% of SIDS
Inappropriate	14	37.8
Appropriate	10	27.0
Unknown	13	35.2
Total	**37**	**100%**

Research has shown that placing a baby down for sleep on its back, on a firm mattress in a crib of its own, without soft bedding, including blankets, stuffed animals or bumper pads **reduces** the risks for SIDS. Clearly, most of the infants dying in 2002 from SIDS were exposed to risks in their sleep environment. More than 70 percent were exposed to unsafe bedding, and 51.4 percent were found either in a prone or side position. Literature indicates that prone position carries **nine times** the risk, while side carries **two times** the risk of back sleeping. Infants who were found on their back at the time of death were exposed to other risk factors in their sleep environment.

In recent years, there has been a significant increase in bed-sharing which puts infants at risk, not just from possible overlaying by a parent or sibling, but from porous bed covers and pillows and from overheating when exposed to adult body heat. Breast-feeding is beneficial for infants and is strongly advocated by the CDRT. However, many breast-feeding experts promote bed sharing to ease access for the infant, but the hazards of the adult bed should preclude such advice.

Sleeping Location at Time of Death for Infants Who Died of SIDS in 2002

Location	Number	% of SIDS
Adult Bed – Bed-sharing	14	37.8
Adult Bed	2	5.4
Baby Swing	1	2.7
Bassinet	3	8.1
Bouncy Seat	1	2.7
Carseat	1	2.7
Crib	4	10.8
Floor on Blankets	2	5.4
Playpen	1	2.7
Portable Crib	1	2.7
Sofa Bed-sharing	3	8.1
Sofa or Stuffed Chair	4	10.8
Total	**37**	**100%**

For comparative purposes, SIDS rates are expressed as the number of deaths per 1000 live births. In 2002, the total number of births in Iowa was 37,555. Iowa's **SIDS death rates for** the past 10 years are as follows:

?? 1993 - 1.43 deaths per 1000 live births
?? 1994 - 1.37 deaths per 1000 live births
?? 1995 - 1.22 deaths per 1000 live births
?? 1996 - .73 deaths per 1000 live births
?? 1997 - .82 deaths per 1000 live births
?? 1998 - .86 deaths per 1000 live births
?? 1999 - 1.28 deaths per 1000 live births
?? 2000 - .99 deaths per 1000 live births
?? 2001 - .98 deaths per 1000 live births
?? **2002 - .99 deaths per 1000 live births**

For comparison, based on preliminary data for 2001 the national SIDS mortality rate was .555 per 1000 live births. Therefore, Iowa's SIDS rate still exceeds that of the nation as a whole.

Suicide

Suicide is a manner of death not initially reviewed by the members of the CDRT. As the team expanded its purview to include children ages 7 through 17, suicide deaths became a primary area where lives could potentially be saved.

In 2002, suicides comprised 2.7 percent of all child deaths. In any given year, more males than females successfully commit suicide. Males are more likely to use a violent means of death. The victim may be involved with drugs or alcohol abuse, may have unhealthy social contacts or family problems, be physically or sexually abused or have a history of mental health problems.

Eleven youths died from suicide in the year 2002 compared with 23 who committed suicide in 2001. Of the 11 suicides of children, seven were males and four were females. The **youngest victim was only 9 years old**, and the oldest child was nearly 18. Several victims had a history of family or school problems, and some had used drugs and/or alcohol. Most of the deaths occurred in rural counties. Hanging was the primary method used by these children.

Gender of Children Who Died from Suicide in 2002

Gender	Number	% of Total
Male	7	63.6
Female	4	36.4
Total	**11**	**100%**

Ages of Children Who Died from Suicide in 2002

Age	Number	% of Suicides
9	1	9.1
10	0	0.0
11	0	0.0
12	1	9.1
13	0	0.0
14	0	0.0
15	3	27.3
16	1	9.1
17	5	45.4
Total	**23**	**100%**

Methods Used in Child Suicides Occurring in 2002

Method	Number	% of Suicides
Drug Overdose	1	9.1
Hanging	6	54.5
Gunshot Wound	4	36.4
Total	**11**	**100%**

What Actions and Strategies Could Prevent Future Deaths?

Actions and Strategies that Could Prevent Future Deaths of Natural Manner

1. Both prospective parents (father and mother) should be physically mature and healthy, both prior to conception of the child and throughout the pregnancy. Damaging substances of any sort, including alcohol, tobacco, certain prescription medications and all street drugs must be avoided.

2. Prenatal care should begin as early as possible, and regular prenatal visits should be continued. Prenatal visits should include intensive smoking cessation counseling if the mother currently smokes. In addition, evaluation of secondhand smoke exposure of the mother should be conducted early in the pregnancy, and the potential risks of such exposure should be carefully explained to her.

3. Prenatal visits should include patient-specific education and interventions aimed at modifiable risk factors such as tobacco, alcohol and drug use.

4. Genetic counseling, available through the University of Iowa regional clinics or private sources, should be recommended to and utilized by parents with potential genetic problems, especially to those who have given birth to children with genetic anomalies, to identify and make the parents aware of the possibilities of future problems.

5. All children should receive regular and timely wellness checkups at clinics or physicians' offices. Parents should be educated about signs and symptoms of illness in their children and indications for seeking medical attention. Families should be discouraged in using hospital emergency rooms as their only source of medical care, since preventive activities such as immunizations may be missed at the time of care.

6.New parents should be thoroughly instructed on the appropriateness and timeliness of well child checkups and proper administration of medicines to young children.

7. Iowa's hard to reach populations, such as certain cultural and ethnic communities, should have culturally-targeted education on the necessity for quality and timely prenatal care, potential hazards of home births and preventive care and practices relating to young children. This education should be done in the language most used by each population.

8. Hospitals should evaluate the mental stability and intellectual capacity of mothers prior to discharge after a new baby is born. Referrals to social services, DHS or local Empowerment should be made if there are concerns about a mother's ability to parent.

Actions and Strategies that Could Prevent Future Accidental Deaths

1. Children 6 and under should always be properly restrained when riding in motor vehicles of any type. Care should be taken that the child restraint device being used is of the correct type (i.e. infant-seat or booster-seat) and has been properly fitted to the child. The device should also be installed properly, and the child must be correctly positioned and fastened in the restraint system.

2. Children should ride in the rear seats of vehicles and child safety door locks should be used when available. Automobiles should be kept locked when not in use.

3. Individuals who have repeatedly demonstrated unsafe driving should not be permitted to continue driving. Stronger penalties for multiple offense drivers should be instituted.

4. Bicycle helmet use should be required by law, and the requirement should be strongly supported by parents, teachers and caregivers.

5. Parents and other drivers should check behind all motor vehicles, including farm equipment, before backing up any vehicle.

6. Parents, grandparents, foster parents, daycare providers and other caregivers should learn first aid, administration of CPR, and the Heimlich Maneuver to infants and children.

7. Parents and caregivers should recognize and give only age-appropriate foods to infants and children with special attention to solids given before the age of 4.

8. Extreme vigilance should be practiced whenever children are in, around, or near water, including bathtubs, pools and larger bodies of water regardless of the water depth. **Parents and caregivers need to be cautioned that bathtub rings are not safety devices and that children must never be left alone in the water, even momentarily.** Children playing near lakes, ponds and rivers should use flotation devices as a precaution. In addition, children should be taught to swim as early as possible.

9. Home pools should be surrounded by fencing and have locked gates. To prevent unsupervised play by curious children, wading pools should be emptied immediately after each use. Likewise, fencing should be put around decorative ponds in residential areas.

10. Smoke alarms should be installed in every house, apartment and trailer home and checked frequently to assure their continuing operability.

11. Children less than twelve years of age should never operate an all terrain vehicle. Young children should not ride on all terrain vehicles.

12. A responsible person should supervise children at play, especially if potentially dangerous equipment or hazardous apparatus is in or near the play area. **This supervision is especially important in areas where open septic tanks, manure pits or grain bins may be accessible to the children.**

13. Firearms should be stored unloaded and in a locked receptacle, and ammunition should be stored in a separate, locked receptacle, with both keys unavailable to children.

14. Children should not ride on farm equipment unless it is in a closed cab that has securely fastened doors, and they are under the direct supervision of an adult.

15. Matches and lighters should be stored only in safe places that are unknown to young children. Parents should teach all children about the dangers of matches and lighters.

16. Children should be well supervised by a competent and alert adult at all times. The adult should be capable of and attuned to evaluating potential dangers in the child's environment and continually monitoring their surroundings for possible hazards.

17. Infants and young children should sleep only in a safety-approved crib and alone. Cribs should not be purchased at garage sales or second-hand stores where they may not meet CPSC requirements.

Actions and Strategies that Could Prevent Future Homicide Deaths

1. Mothers should be cautioned about careful selection of individuals who care for their children, most especially paramours. Reports of criminal history can be obtained at reasonable charge from local police departments.

2. Inexperienced parents should be linked with a mentor to whom they can turn when they have questions or are stressed.

3. The frequency and content of public service announcements that illustrate the importance of parents or other caretakers taking a "time out" when the stress of child care becomes overwhelming should be improved.

4. Parents should be given a list of respite care resources/options and emergency numbers at the time of hospital discharge after the birth of every new infant. These resources should also be discussed at prenatal visits.

5. Parents of older children should carefully and consistently monitor the friends with whom they associate and enforce strict curfews.

Actions and Strategies that Could Prevent Future SIDS and Other Undetermined Deaths

1. Media efforts to promote back sleeping should be stepped up. Easy to read and understandable SIDS informational brochures and other educational materials should be widely distributed on a continual basis across the state to physician offices, public health nurses, public agencies, child care providers, hospital OB departments and other groups who deal directly with infants and their families.

2. Every baby should have its own sleeping place and **should not share** a sleeping place with parents, whether a potential shared place is a bed, a couch, a chair or the floor.

3. Cribs, bassinets, and other sleeping places should be checked for mattress firmness and absence of potential causes of smothering, choking or re-breathing, such as pillows, adult blankets, wide spaces between mattress and sides, crib bumper pads, stuffed toys and small items. Sofas, adult beds or chairs, recliners and waterbeds should never be used as an infant bed or sleep surface.

4. Pregnant women, mothers, fathers and other caregivers should be counseled about smoking hazards to children, both before and after their birth.

5. Pregnant women should be counseled as to the potential negative effects on their offspring of illicit drug use and alcohol use during pregnancy.

6. Parents, grandparents and other care providers to neonates and infants should be educated about appropriate sleep position and sleep environment.

7. Physicians should repeatedly counsel pregnant females and parents of very young children about SIDS risk factors, especially if the mother is very young herself, either parent smokes or the mother is not seeking consistent prenatal care.

8. Special efforts to educate non-English speaking pregnant women and their families about SIDS risk factor should be implemented.

9. Parents should be educated on selection of an appropriate childcare provider who is aware of and follows the "Back to Sleep" recommendations, and who provides a smoke-free home in which to care for children.

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