

Colorado Child Fatality Prevention System

*Annual Report*  
*January 2007*

**To the Governor,  
Health and Human Services Committees and  
Judiciary Committees of the  
House of Representatives and the Senate of the  
Colorado General Assembly**

### **Document Information**

Title: Colorado Child Fatality Prevention System Annual Report

Submitted By: The members of the Colorado Child Fatality Prevention System  
(See Attachment One for a list of members)

Subject: A description of trends in child deaths reviewed by the Colorado Child Fatality Prevention Review Team and, as required in statute, specific recommendations for changes in laws or policies most likely to reduce child deaths in Colorado.

Statute: Article 20.5 of Title 25 of the Colorado Revised Statutes

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# Colorado Child Fatality Prevention System

## *Annual Report*

### **I. Introduction**

The Child Fatality Prevention Act (Article 20.5 of Title 25, Colorado Revised Statutes) established the Child Fatality Prevention System, a statewide, multi-disciplinary, multi-agency effort to prevent child deaths. The mandate of the Child Fatality Prevention System is to:

- 1) *Review specified deaths* of children from birth to 18 years of age occurring in Colorado and involving circumstances where the child is receiving services from a county department or where there has been a report of suspected abuse or neglect;
- 2) *Review the records* of all other unexpected and unexplained deaths of children from birth to 18 years of age occurring in Colorado;
- 3) *Understand the incidences and causes* of childhood deaths;
- 4) *Identify services* provided by public agencies to children and their families that are designed to prevent child abuse, neglect or death;
- 5) *Identify any gaps or deficiencies* that may exist in the delivery of services by public agencies to children and their families that are designed to prevent child abuse, neglect or death;
- 6) *Make recommendations* for implementing any changes to laws, rules and policies that will support the safe and healthy development of children and prevent child abuse, neglect and death; and
- 7) *Develop a community approach* to the problem of child abuse and neglect and to the prevention of childhood deaths.

The Colorado Child Fatality Prevention System is housed at the Colorado Department of Public Health and Environment in the Injury, Suicide, and Violence Prevention Unit. The Child Fatality Prevention System Review Team (State Review Team), a volunteer multi-disciplinary committee comprised of clinical and legal experts in child health and safety, works collaboratively with state staff in reviewing child deaths. Many of the members of the State Review Team are nationally known experts in the fields of child abuse prevention, pediatrics, family law, death investigation, and Sudden Infant Death Syndrome (SIDS). The variety of disciplines involved and the depth of expertise provided by the State Review Team augments the comprehensiveness of the review process, allowing for a broader analysis of both contributory and preventive factors in each case of child death. A list of the State Review Team members is included in Attachment One.

This report describes trends in child deaths identified by the State Review Team. Additionally, as required in statute, specific recommendations for changes in laws or policies, most likely to reduce child deaths in Colorado, are included.

## II. Key Findings

In 2006, the State Review Team completed reviews on 634 child deaths occurring in 2002 and 2004. For logistical reasons, deaths from 2003 were not reviewed and will be analyzed at a later date. The cases are categorized by type of death in Table 1.

In 2002, 733 children (674 Colorado residents and 59 non-residents,) ages 17 and younger, died in Colorado. Of these, 280 were neonatal deaths, which are not included in the review process. Neonatal death is defined as a death from natural causes in an infant less than 28 days old. Neonatal deaths are not included in the review process because of the large number of deaths and because Children's Hospital is conducting reviews on these deaths.

In 2004, 767 children (691 residents and 76 non-residents), ages 17 and younger, died in Colorado. As of December 2006, the State Review Team reviewed all cases of child death (excluding neonatal deaths) occurring in 2002 and analyzed 181 deaths (excluding neonatal deaths) from 2004. The remaining 2004 deaths will be reviewed during 2007.

**Table 1: Deaths of children ages 0-17 in Colorado, 2002 and 2004**

Type of Death	2002 Deaths		2004 Deaths		Total Deaths, 2002 + 2004	
	Number	Number Reviewed by 12/06	Number	Number Reviewed by 12/06	Number	Number Reviewed by 12/06
<b>Neonatal Death<sup>1</sup></b>	280	0	321	0	601	0
<b>Child Abuse and Neglect</b>	20	20	19	13	39	33
<b>Violence<sup>2</sup></b>	42	42	44	21	86	63
<b>Motor Vehicle</b>	86	86	106	0	192	86
<b>Accidental/Unintentional</b>	40	40	43	0	83	40
<b>Natural causes</b>	179	179	170	135	349	314
<b>SIDS<sup>3</sup>/Undetermined</b>	86	86	64	12	150	98
<b>Total Deaths</b>	<b>733</b>	<b>453</b>	<b>767</b>	<b>181</b>	<b>1,500</b>	<b>634</b>

<sup>1</sup> Death of an infant less than 28 days old from natural causes

<sup>2</sup> Homicide or suicide of a child age 13-17

<sup>3</sup> Sudden Infant Death Syndrome

In preparation for the clinical review, the Child Fatality Prevention System Coordinator requests information from county coroners, law enforcement, county district attorneys, hospitals, the Department of Human Services, local health departments, and newspapers to develop a case file for each fatality. Case files are used during the clinical reviews that are held every other week. During the clinical review, five to ten experts/reviewers meet for three hours to study the information available on each case. Data are collected using several tools, including one created by the Maternal and Child Health National Center for Child Death Review (<http://www.childdeathreview.org/history.htm>). At the end of each clinical review, team members identify any system failures associated with the case and make recommendations for prevention.

Deaths are grouped into six major categories: child abuse and neglect, violence, motor vehicle, accidental/unintentional, natural, and Sudden Infant Death Syndrome (SIDS)/Undetermined. Key findings for each category of death are outlined in Table 2.

**Table 2: Key findings from Clinical Reviews**

CLINICAL REVIEW GROUP	NUMBER OF CASES REVIEWED	KEY FINDINGS
Child Abuse and Neglect	33	<ul style="list-style-type: none"> <li>• Most of the children were less than two years old.</li> <li>• The majority of the perpetrators (66 percent) were male partners (36 percent were the biological father of the child and 30 percent were the mother’s boyfriend).</li> <li>• Commonly, the male perpetrator was left to care for the child while the mother was working or away from the home.</li> <li>• The majority of the perpetrators (61 percent) were under 22 years of age, with limited preparation and experience in parenting.</li> <li>• In 52 percent of the cases, other people involved with the family (including the mother of the child) were aware of prior incidences of abuse or suspected that abuse might be occurring. In most of these cases, those who were suspicious never notified law enforcement or social services.</li> <li>• It was frequently noted that the perpetrator had been abusing substances, including alcohol.</li> <li>• In some cases, the family of the decedent was involved with the county department of social services prior to the child’s death. However, the State Review Team rarely identified a system failure on the part of social services. In only one instance, a corrective action was given by the state Department of Human Services.</li> </ul>
Violence	63	<ul style="list-style-type: none"> <li>• 48 deaths were suicides; 15 deaths were homicides</li> <li>• In the majority of the homicides, the victim knew the suspect/perpetrator. Youth homicides were frequently associated with either teen dating violence or criminal/gang activity.</li> <li>• The majority of youth suicides (73 percent) involved males.</li> <li>• The majority of youth suicides resulted from hanging/ suffocation, although 42 percent resulted from use of a firearm.</li> <li>• All of the youth who died by firearm-related suicide had easy access to the weapon.</li> <li>• In nearly half of the youth suicides, the youth had made prior threats of suicide or had been identified as having substance abuse issues. Many of the decedents had a history of problems with their parents, including involvement with the local department of social services due to reports of child abuse.</li> <li>• More than half of the youth who died by suicide had been diagnosed with a mental disorder or showed signs and symptoms suggesting a mental health crisis.</li> <li>• Many of the youth who died by suicide had either current or recent past involvement with the juvenile justice system.</li> </ul>

CLINICAL REVIEW GROUP	NUMBER OF CASES REVIEWED	KEY FINDINGS
Motor Vehicle	86	<ul style="list-style-type: none"> <li>• Of these deaths, 67 children were drivers or passengers in a motor vehicle; 14 were pedestrians struck by a motor vehicle; three were injured in an ATV crash, and two resulted from “car surfing” (riding on the hood of a car in motion).</li> <li>• 71 percent of the children who died in a motor vehicle crash were not restrained (not using a seatbelt, car seat or booster seat).</li> <li>• Eight of the 14 children who died as pedestrians were younger than ten years of age. Lack of adequate supervision was noted in six of these eight deaths.</li> </ul>
Accidental/ Unintentional	40	<ul style="list-style-type: none"> <li>• 14 of these deaths were due to drowning. Of the eight drowning deaths that occurred in recreational areas with open bodies of water, none of the children were wearing appropriate flotation devices.</li> <li>• Four children and youth died in skiing accidents. In all of these cases, the child was not wearing a helmet and crashed into a tree or pole. Three of the four children died from head injuries.</li> <li>• Nine deaths involved infants. Most of the infant deaths were the result of positional suffocation (e.g., the child became wedged between cushions or under another person).</li> <li>• 60 percent of the deaths attributed to unintentional injury involved children under the age of five. A lack of supervision was a factor in many of these deaths. In several instances, investigators noted that the caregiver responsible for supervising the child appeared to be impaired by drugs or alcohol.</li> </ul>
Natural causes	314	<ul style="list-style-type: none"> <li>• This category includes deaths due to asthma, cancer, cardiovascular conditions, congenital anomalies, HIV/AIDS, influenza, neurological/seizure disorders, pneumonia, prematurity, and other infectious diseases or medical conditions.</li> <li>• Deaths in this category are generally considered to be non-preventable. The State Review Team identified only two percent of these deaths as preventable (that is, resulting from lack of access to health care or inadequate or inappropriate care).</li> </ul>
SIDS/ Undetermined	98	<ul style="list-style-type: none"> <li>• The State Review Team attributed 77 of these deaths to Sudden Infant Death Syndrome (SIDS). SIDS is defined as a sudden death of an infant less than one year of age that remains unexplained after a thorough case investigation, including: performance of a complete autopsy, examination of the death scene and a review of the clinical history.</li> <li>• The clinical review process identified inconsistencies among county coroners in assigning the cause of death as SIDS or undetermined.</li> </ul>

### III. Specific Recommendations

The State Review Team considers deaths due to child abuse/neglect, homicide, suicide, motor vehicle related and other accidental/unintentional deaths as preventable. This is consistent with the definition of preventability used by the National Center for Child Death Review, which defines a child's death as preventable if the community or an individual could reasonably have acted to change the circumstances resulting in death. Specific prevention recommendations for each category of death are outlined in Table 3 on page seven.

In addition, the State Review Team recommended that public information campaigns be developed and implemented to address the following issues.

- To prevent child abuse, the State Review Team recommends a campaign that highlights the importance of reporting child abuse and provides information on how to report. As noted in Table 2, in 52 percent of the child abuse/neglect cases, people involved with the child's family were aware of ongoing abuse yet did not report their suspicions to the proper authorities.
- To prevent youth suicide, the State Review Team recommends training staff who work in the juvenile justice, child welfare or school systems to identify youth at risk for suicide. Recently the Colorado Department of Public Health and Environment was awarded a federal grant to train adults working in these systems to recognize those at risk. These funds will also be utilized in developing a public information campaign with the key message: "Suicide prevention, it is your business."

Many of the members of the State Review Team, who previously participated on the voluntary Child Fatality Review Committee, indicated that the trends identified in 2002 and 2004 were similar to those seen in case reviews conducted over the past 15 years. Therefore, the following recommendations represent a synthesis of prevention strategies gleaned from the analysis of many similar cases of child fatality over the years. As a result, the State Review Team endorses these recommendations as the most effective means of reducing child death rates in Colorado.

**Table 3: Specific Recommendations**

<b>CLINICAL REVIEW GROUP</b>	<b>RECOMMENDATION</b>	<b>EVIDENCE IN SUPPORT OF THIS RECOMMENDATION</b>
Child abuse/ Neglect	<ul style="list-style-type: none"> <li>• <b>Establish free or low-cost respite child care centers with access 24 hours per day, seven days per week.</b></li> <li>• <b>Implement a public information campaign, targeting young mothers, that emphasizes the danger of leaving children in potentially high-risk situations with caregivers who may be abusive. The availability of respite care centers should be presented as an option.</b></li> </ul>	<ul style="list-style-type: none"> <li>• The majority of deaths resulting from child abuse or neglect were perpetrated by a male who was caring for the child while the mother was at work or away from the home.</li> <li>• Respite care centers provide an option for child-care, so mothers do not have to leave their child/ren with a potentially abusive caregiver. The Children’s Bureau of the U.S. Department of Health and Human Services has recognized the effectiveness of crisis nursery (respite) care.<sup>1</sup> The American Academy of Family Physicians also recommends community respite care as a child abuse prevention strategy.<sup>2</sup> The National Resource Center for the Community Based Child Abuse Prevention Programs states that <i>Respite Services directly contribute to a reduction in the likelihood of child abuse and neglect, and in the likelihood of removal of children from their homes; and contribute directly to the safety of children receiving care.</i><sup>3</sup> An outcome evaluation of planned and crisis respite care programs conducted by the ARCH National Respite Network and Resource Center found that 20 percent of caregivers would have left their child with an inappropriate caregiver if crisis respite care had not been available. Eighty-two percent said that the availability of crisis respite reduced the risk of harm to their children to a “very” or “extremely” high degree.<sup>4</sup></li> <li>• Respite child-care centers in Fort Collins and Colorado Springs serve many families each year and could serve as models for the development of other centers. Family resource centers might also be able to provide this service or distribute referrals to families in need of respite care.</li> </ul>

<sup>1</sup>:<http://www.archrespite.org/archfs01.htm>

<sup>2</sup> Bethea M.D., Lesa, (1999) Primary Prevention of Child Abuse. American Family Physician. 59. <http://www.aafp.org/afp/990315ap/1577.html>

<sup>3</sup>[http://www.archrespite.org/friends\\_factsheet9.pdf](http://www.archrespite.org/friends_factsheet9.pdf)

<sup>4</sup> Ibid

CLINICAL REVIEW GROUP	RECOMMENDATION	EVIDENCE IN SUPPORT OF THIS RECOMMENDATION
Violence	<ul style="list-style-type: none"> <li>• <b>Create legislation that mandates the safe storage of firearms in the homes of parents with children and youth under age 18.</b></li> <li>• Safe storage of firearms is defined as: <ul style="list-style-type: none"> <li>• Guns are stored unloaded and locked in a cabinet.</li> <li>• Keys are stored in a hidden and undisclosed location away from the cabinet.</li> <li>• Ammunition is stored in a hidden and undisclosed location away from the cabinet.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• In all of the firearm-related suicides reviewed, the youth had easy access to a firearm.</li> <li>• Several academic studies have noted that the availability of firearms is a key risk factor in youth suicide. The implementation of legislation requiring safe storage of firearms led to decreases in firearm-related youth suicides in several US states and in New Zealand.<sup>5 6 7</sup></li> <li>• Currently there are 19 states with safe storage laws.</li> </ul>
Violence	<ul style="list-style-type: none"> <li>• <b>Create legislation that improves the identification and referral of youth identified as having a mental disorder or mental health crisis while in the juvenile justice system.</b></li> <li>• <b>Create legislation that mandates the inclusion of certain mental disorders, such as Post Traumatic Stress Disorder or Alcohol Dependence (as classified in the ninth revision of the International Classification of Diseases) in the mandatory health insurance coverage for mental illness.</b></li> </ul>	<ul style="list-style-type: none"> <li>• More than half of the youth who died by suicide had been diagnosed with a mental disorder or showed signs and symptoms suggesting a mental health crisis.</li> <li>• Seven of the ten states ranked highest in publicly funded mental health ranked in the bottom 1/3 for suicide death rates by state.<sup>8</sup></li> <li>• Three of the four states credited by the National Mental Health Association as having the best mental health parity laws are ranked in the bottom five states in suicide death rates.<sup>9</sup></li> <li>• Several bills have been introduced this year that potentially address these issues: <ul style="list-style-type: none"> <li>• HB 07-1057</li> <li>• HB 07-1058</li> <li>• SB 07-036</li> </ul> </li> </ul>

<sup>5</sup> Miller, Matt; Hemenway, David. (2001). Gun Prevalence and the Risk of Suicide: A Review. *Harvard Health Policy Review*. 2, 29-37.

<sup>6</sup> Webster, Daniel W., et al. (2004). Association between Youth-Focused Firearm Laws and Youth Suicides. *Journal of the American Medical Association*. 292, 594-601.

<sup>7</sup> Beautrais, A.L.; Fergusson, D.M.; Horwood, L.J. (2006). Firearms Legislation and Reductions in Firearm-Related Suicide Deaths in New Zealand. *Australian and New Zealand Journal of Psychiatry*. 40, 253-259.

<sup>8</sup> [http://www.nami.org/content/navigationmenu/grading\\_the\\_states/full\\_report/GTS06\\_final.pdf](http://www.nami.org/content/navigationmenu/grading_the_states/full_report/GTS06_final.pdf)

<sup>9</sup> <http://www.mentalhealthamerica.net/go/parity/states>

CLINICAL REVIEW GROUP	RECOMMENDATION	EVIDENCE IN SUPPORT OF THIS RECOMMENDATION
Motor vehicle	<ul style="list-style-type: none"> <li>• <b>Create primary safety belt legislation making it possible for a driver to be stopped and issued a citation if anyone in the vehicle is not properly restrained.</b></li> </ul>	<ul style="list-style-type: none"> <li>• 71 percent of the children/youth who died in motor vehicle crashes were not properly restrained by a car seat or seatbelt.</li> <li>• Practices of the adult driver influence the use of restraints by children. A national study of fatal crashes found that when an adult driver used a seatbelt, children riding with them were also restrained 94 percent of the time. If the adult driver was not using a seatbelt, child restraint use decreased to 30 percent.<sup>10</sup></li> <li>• States with primary safety restraint laws have seatbelt use rates that are 10 to 15 percent higher than states with secondary laws.<sup>11</sup></li> <li>• Currently 22 states have a primary safety restraint law.</li> </ul>
Motor vehicle	<ul style="list-style-type: none"> <li>• <b>Enhance Colorado’s booster seat law to require that children be secured in booster seats from age four to age eight, up to a weight of 80 pounds and a height of four feet nine inches.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Among children age eight and younger who died in a motor vehicle crash, 81 percent were not properly restrained in a booster seat or child passenger safety seat.</li> <li>• Currently the Colorado Booster Seat Law requires booster seats for children ages four and five whose height is less than 55 inches. This law does not reflect the best practice recommendation from the Centers for Disease Control and Prevention, which states that children should be secured in booster seats from age four to eight, up to a weight of 80 pounds and a height of four feet nine inches.</li> </ul>

<sup>10</sup> National Highway Traffic Safety Administration. (2006) Fact Sheet available on line: <http://www.nhtsa.dot.gov>

<sup>11</sup> Ibid

CLINICAL REVIEW GROUP	RECOMMENDATION	EVIDENCE IN SUPPORT OF THIS RECOMMENDATION
Accidental/unintentional	<ul style="list-style-type: none"> <li>• <b>Create legislation mandating that children wear helmets while skiing or snowboarding.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Over the past 15 years, review of child deaths indicate that almost all of the deaths resulting from skiing/snowboarding could have been prevented if the child had been wearing a helmet.</li> <li>• U.S. Consumer Product Safety Commission staff, following an evaluation of head injuries associated with snow skiing and snow boarding, concluded that ski helmets will reduce the risk of head injuries due to skiing and snow boarding accidents.<sup>12</sup> A study of Colorado residents hospitalized for skiing related injuries found that children are at increased risk for serious head trauma, are ten times more likely to be hospitalized for a skiing related head injury, and that head injuries are the cause of up to 88 percent of ski-related fatalities.<sup>13</sup></li> <li>• Several academic studies, including one by a neurologist at St. Anthony’s Hospital in Denver, have shown that skiers wearing helmets have better outcomes in ski-related accidents, reducing or preventing neurological impairment.<sup>14 15 16</sup></li> </ul>
Accidental/unintentional	<ul style="list-style-type: none"> <li>• <b>Create legislation that mandates drug and alcohol toxicology screening of parents (or caregivers) in cases where a lack of adequate supervision may have contributed to the injury or death of a child.</b></li> </ul>	<ul style="list-style-type: none"> <li>• The majority of accidental/unintentional deaths involved children under age five. Many of these deaths could have been prevented with adequate supervision of the child. In many of these deaths, the adult(s) responsible for supervising the child had been using alcohol or drugs.</li> <li>• Six states have included the use of a controlled substance by a caregiver that impairs the caregiver’s ability to adequately care for the child as part of the civil definition of child abuse or neglect.<sup>17</sup></li> </ul>

<sup>12</sup> <http://www.cpsc.gov/library/skihelm.pdf>

<sup>13</sup> <http://www.healthsystem.virginia.edu/internet/pmr/skihelm.cfm>

<sup>14</sup> <http://www.jama.ama-assn.org/cgi/content/short/295/8/919>

<sup>15</sup> <http://www.thecni.org/reviews/11-1-p27-levy.htm>

<sup>16</sup> <http://www.aaos.org/about/papers/position/1152.asp>

<sup>17</sup> [http://www.childwelfare.gov/systemwide/laws\\_policies/statutes/drugexposed.cfm](http://www.childwelfare.gov/systemwide/laws_policies/statutes/drugexposed.cfm)

## **IV. Limitations**

For many of the cases analyzed, the State Review Team lacked needed information for a comprehensive review. Data was missing because the information was not collected during the initial investigation; agencies did not respond to the Coordinator's request for information; or documentation was incomplete or lacked pertinent details.

The review process would often have been enhanced if relevant information was readily available. For example, in child abuse deaths, greater detail about the history of the perpetrator or the psychosocial factors affecting the family would drive the development of prevention strategies. In suicide deaths, more information about the child's mental status, school performance, or social life would inform critical points for intervention. In motor vehicle deaths, detailed information about components of the automobile involved in the crash would lead to recommendations related to the safe engineering of cars. These gaps in information could be addressed through outreach and training to law enforcement, coroners, and social service agencies conducting scene investigations.

The management and analysis of the data collected during the clinical review process remains challenging. No state funds are provided to conduct the Child Fatality Prevention System. Limited federal funds provided by the Colorado Department of Public Health and Environment and the Colorado Department of Human Services have been used to support the work of the Coordinator. Additional resources are needed to create a comprehensive database for storing and managing the data collected and to support the work of a data analyst to study and present statistical information in a more comprehensive and timely fashion. The State Review Team will continue to explore options for funding an effective data collection and analysis system, as well as for maintaining the work of the state staff.

## **V. Conclusion**

After fifteen years as a voluntary endeavor, the process of child death review was legislatively mandated in 2005 with the passage of the Child Fatality Prevention Act. The State Review Team brings significant medical, psychosocial, legal and law enforcement expertise to the process of child fatality review, and this expertise has been utilized in developing recommendations for effective prevention strategies. The State Review Team is confident that child fatalities can be reduced in Colorado if these recommendations are followed and where necessary, codified into legislation.

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