New Mexico Child Fatality Review

Annual Report 2013

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New Mexico Department of Health
Epidemiology and Response Division
Injury and Behavioral Epidemiology Bureau
Office of Injury Prevention

State of New Mexico
The Honorable Susana Martinez, Governor

New Mexico Department of Health
Retta Ward, MPH, Cabinet Secretary

Epidemiology and Response Division
Michael Landen, MD, MPH, Director and State Epidemiologist

Injury and Behavioral Epidemiology Bureau
Toby Rosenblatt, MPA, Bureau Chief

Injury Epidemiology Unit
Robin Swift, MPH, Office of Injury Prevention Section Manager
Paula Bauch, MSM, MBA, CFR Coordinator
John Hellsten, PhD, Injury Epidemiologist

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Executive Summary

The 2013 Child Fatality Review Annual Report summarizes and analyzes information about circumstances surrounding the deaths of New Mexico residents < 18 years who died from 2010 through 2012. It also presents recommendations from the comprehensive and confidential reviews of certain child deaths resulting from injury by a multi-disciplinary group of professionals. Additionally, the report provides data from the New Mexico Bureau of Vital Records and Health Statistics (NMBVRHS) about child death in New Mexico.

The New Mexico Child Fatality Review (NMCFR) was established in 1998 to examine the circumstances that contribute to the deaths of infants, children, and youth in New Mexico. The purpose of the NMCFR is to identify risk reduction, prevention, and systems improvement factors in these deaths and to recommend strategies that can prevent future injury and death. The NMCFR provides a forum to review agency actions as they relate to child protection and death reduction. The review process results in increased understanding of risk factors for child death that help protective service, school, medical, public health and law enforcement personnel identify children at risk, and alert the community to emerging patterns of death.

Key Recommendations

The Child Death Review Team in New Mexico is comprised of four panels that review deaths and make recommendations in the areas of child abuse and neglect, transportation, suicide and the broader spectrum of unintentional injury. Sudden unexpected infant deaths are also reviewed by the broader spectrum panel. With information garnered in the reviews, the panels determined that many of these deaths could have been prevented and have made recommendations for preventive measures. Highlights of evidence-based recommendations include the following:

1) Increase evidence-based Early Childhood Home Visiting to include more at-risk families, including those recently granted guardianship of an infant or young child. These programs should include safe sleep information and offer free cribs.

2) Increase education to parents and potential parents on child safety principles, including the risks of shaking a baby, safe sleep, and the supervision needs of small children.

3) Publicize the availability of child car seat checkups and inform parents where they can go to have car seats installed correctly.

4) Conduct ongoing and sustained initiatives to increase public awareness of behavioral health interventions, services and resources.

5) Provide training for health care professionals on how to discuss and follow up on the safe storage of weapons and medications.

6) Revise the graduated driver's license law so that provisional license holders are restricted from driving between the hours of 9 pm and 5 am.

Data Collection and Review Process

In New Mexico, child death review begins when the NMCFR Coordinator receives the Office of the Medical Investigator (OMI) reports of death for children < 18 years. The NMCFR staff supplements OMI mortality data with reports from other sources (law enforcement, child protective services, schools, etc.). Individual case files are assigned to the appropriate panel for review. The panel discusses each case, determines if and how the death might have been prevented through appropriate prevention or intervention measures, and then makes program, system and/or policy recommendations for prevention of future injuries or deaths.

All relevant case information is documented on a standard national Child Death Review case form and entered into the confidential National Center for Child Death Review database. Upon completion of child death reviews for a given period, review panels compile and evaluate individual case recommendations, and propose formal recommendations that are ultimately prioritized.

The CFR review teams use the OMI as the main source for information about specific deaths because the OMI files contain information surrounding the circumstances of the deaths. However, the OMI is only authorized to investigate child deaths that are of unknown cause or are sudden, violent, suspicious or unattended and are not on federal or tribal land. Therefore, this report also uses data from death certificates provided by the New Mexico Bureau of Vital Records and Statistics to analyze child mortality.

Population Characteristics

Children < 18 years made up a quarter of New Mexico's population in 2012. There were slightly more male children (51%) than female children (49%).

According to the Bureau of Business and Economic Research, 95% of New Mexico's population of children < 18 years was classified as Hispanic, White, or American Indian in 2012. Hispanics made up the largest percentage of children (56%), followed by Whites (28%), and American Indians (11%). Blacks, Asians, and others comprised 5% of children[1].

[1] University of New Mexico, Bureau of Business and Economic Research http://bber.unm.edu/

Total Deaths

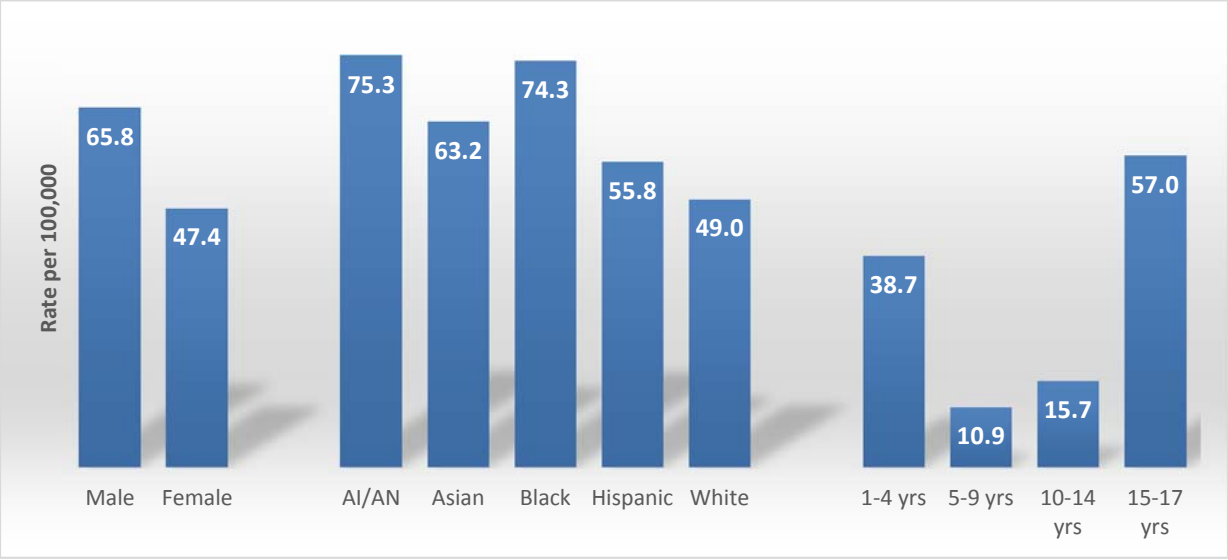
There were 887 deaths of New Mexico children during 2010-2012, an average of 2 child deaths every 3 days. Approximately 65% of these deaths (n=572) were due solely or nearly totally to natural disease processes, with most of the remaining deaths due to intentional and unintentional injuries. Children died from a variety of causes; the vast majority of child injury deaths are preventable.

Child deaths occurred disproportionately among demographic groups. Males, non-Whites, and infants suffer from higher rates of mortality than females, Whites, and children of other ages, respectively (Figure 1). The infant mortality rate of 5,553 per 10,000 was nearly 10 times the rate for children aged 15-17 years.

Males accounted for 60% of child deaths and had a higher overall death rate (65.8 deaths per 100,000 population) than females (47.4 deaths per 100,000 population). This male to female ratio of child deaths was similar among all racial/ethnic groups and ages.

American Indians/Alaska Natives and Blacks had the highest child fatality rates at (75.3 and 74.3 per 100,000 population, respectively) during 2010-2012. However, this represents fewer than 20% of New Mexico child deaths. Nearly 500 Hispanic children, 55% of the total, died during 2010-2012, resulting in a death rate of 55.8 per 100,000. Deaths rates among White children were the lowest of all racial/ethnic groups.

Figure 1. Child Deaths by Sex, Race/Ethnicity, and Age Group
New Mexico, 2010-2012



*Infant rates not presented due to scale

Infant deaths accounted for the majority (55%) of all child deaths; the 484 infant deaths during 2010-2012 resulted in a mortality rate of 5553 per 10,000 population, nearly 10 times the rate for teens aged 15-17 years, the age-group with the next highest rate (57.0 per 100,000). More than 90% of infant deaths, and 65% of the deaths of all children, were classified as "natural" in

manner of death (due solely or nearly totally to natural disease processes) and generally are not reviewed by the New Mexico CFR. Natural deaths constitute a smaller proportion of deaths as children age; less than 20% of deaths to New Mexico children aged 15 to 17 years during 2010-2012 were classified as natural deaths.

Injury Deaths

Injury caused 69% of all deaths to children aged ≥ 1 year. Nearly half of all child injury deaths occurred among children aged 15-17 years. This resulted in a rate that was 4-6 times higher than the rate for children aged ≥ 1 year.

In New Mexico, the number of injury deaths among American Indian children was disproportionate to the number of American Indian children in the population. In 2010-2012, the injury death rate for American Indian children was more than double the rate of that for Hispanic or White children. Males accounted for > 60% of the child injury deaths.

Table 1. Leading Causes of Child Injury Death by Age Group, New Mexico, 2003-2012

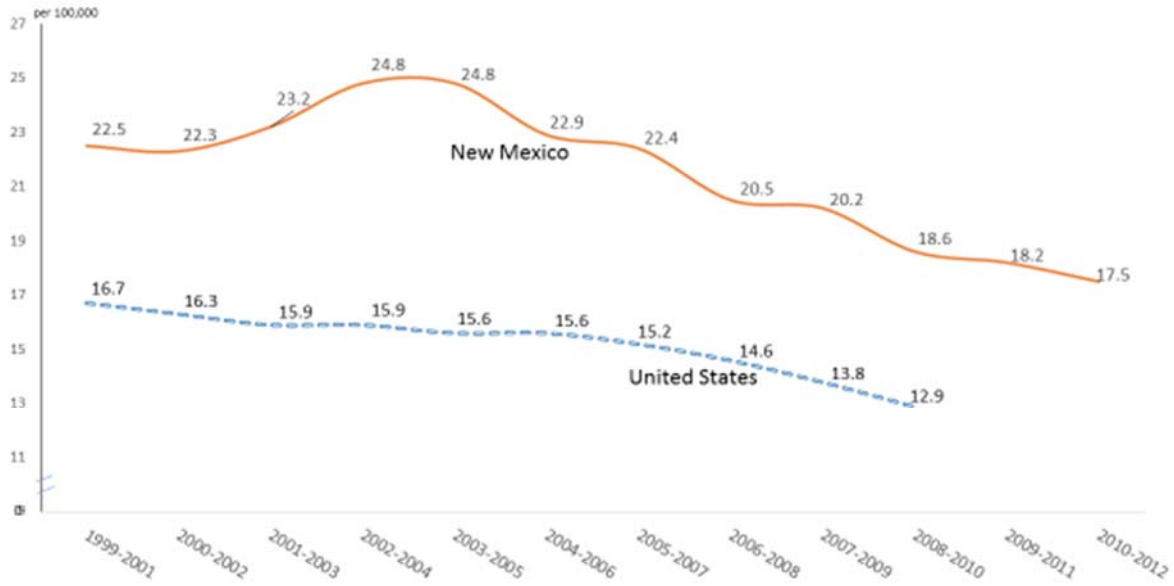
Rank	Age Group				
	Infant (N=142, 13%)	1-4 (N=209, 19%)	5-9 (N=92, 9%)	10-14 (N=176, 16%)	15-17 (N=453, 42%)
1	Suffocation (n=37, 26%)	Motor Vehicle Crash (n=76, 36%)	Motor Vehicle Crash (n=47, 51%)	Motor Vehicle Crash (n=67, 38%)	Motor Vehicle Crash (n=169, 37%)
2	Homicide (n=34, 24%)	Homicide (n=38, 18%)	Homicide (n=6, 7%)	Suicide (n=48, 27%)	Suicide (n=144, 26%)
3	Motor Vehicle Crash (n=15, 11%)	Drowning (n=34, 16%)	Drowning (n=6, 7%)	Homicide (n=17, 10%)	Homicide (n=55, 12%)
4	Drowning (n=11, 8%)	Suffocation (n=12, 6%)	Fire/Hot object (n=6, 7%)	Drowning (n=8, 5%)	Poisoning (n=37, 8%)
5	Fall (n=2, 1%)	Fire/Hot object (n=9, 4%)	Motor Vehicle, Non-traffic (n=6, 7%)	Poisoning (n=7, 4%)	Drowning (n=7, 2%)

Injuries caused 1,072 New Mexico child deaths from 2003 through 2012. The causes of injury death are similar across age groups: 8 causes of death included in Table 1 accounted for 84% of all New Mexico child injury deaths during this 10 year period.

Motor vehicle crashes were the leading cause of injury death among children in all age groups at least one year old and the 3rd leading cause of injury death for infants. Violence, i.e. suicide and homicide, was a leading cause of injury death in all child age groups. Motor vehicle crashes and drowning were other injury causes of death that were among the five leading causes among all ages of children.

Data since 2000 indicate that the child injury death rate in New Mexico has consistently been nearly 50% higher than the national rate (Figure 2). Compared to the peak of 24.8 per 100,000 in the early 2000's, the New Mexico child injury mortality rate declined 30% in 2010-2012. This decline in rates resulted from approximately 35 fewer children dying from an injury each year.

Figure 2. Child Injury Death Rates, New Mexico and United States, 1999-2012



The decline in the overall New Mexico child injury death rates was evidenced in most child age groups. The greatest reduction in child injury death rates was found among children 10-14 years old. From a peak rate in 2002-2004, the death rate due to injuries for 10-14 year olds declined 65% in 2010-2012. Injury mortality rates for children aged 15-17 years declined 28% and infant injury mortality rates declined 33% during the same period. Rates of injury death for New Mexico children 1-4 years old remained unchanged during the last 10 years.

Most racial/ethnic groups experienced the same overall decline in child injury death rates. Rates for American Indians declined 33% from a high of 49.6 per 100,000 in 2003-2005 to 33.4 per

100,000 in 2010-2012, yet the child injury death rate remained double that of other racial/ethnic groups. Hispanics accounted for more than half of all child injury deaths in New Mexico with about 47 child injury deaths annually. Less than 3% of children who died from injuries were African American or Asian, but the child injury death rate for these groups doubled in recent years.

Intentional Injury Deaths

On average during 201--2012, 30 New Mexico children died annually from an intentional injury (homicide, suicide or legal intervention[2]) resulting in a mortality rate that was nearly double the United States rate (7.1 and 3.8 per 100,000, respectively during 2010-2012). Considered violent deaths, intentional injury death rates are generally higher for children older than age 9 because they include deaths from homicide and suicide, whereas suicide death is extremely rare among children younger than 10 years of age. Despite this, the infant death rate from violence during 2010-2012 (5.7 per 100,000) was exceeded only by the rate among older teens aged 15-17 years (23.3 per 100,000).

Three out of 4 violent deaths to children occur among males. Male violent death rates have steadily declined from a high of 11.8 per 100,000 in 2002-2004 to 8.5 per 100,000 in 2010-2012, a 28% decline. In the meantime, violent death rates for females have remained virtually unchanged since 2000.

The violent death rate for American Indian children has declined 30% since 2008; despite this, the rate for this group is still more than double the rate for Hispanic or White children (5.0 and 4.7 per 100,000, respectively). While there has been some fluctuation, violent death rates among White and Hispanic children are virtually the same in 2010-2012 as they were in 1999-2001.

Table 2. Intentional Child Injury Deaths, 2008-2010

State	# deaths	Rate per 100,000	United States Rank (lowest to highest)
New Mexico	***110***	***7.1***	***49***
Arizona	207	4.2	33
Utah	82	3.2	12
Colorado	152	4.2	32
Oklahoma	146	5.3	43
Texas	691	3.4	18
United States	8,467	3.8	

Table 2 provides a comparison of intentional child injury deaths between New Mexico and neighboring states. Utah is the only nearby state with fewer violent child deaths. The rate of death for New Mexico during this time was 33% higher than the next highest rate of the

[2] There was 1 New Mexico child death due to legal intervention from 2003-2012.

neighboring states (Oklahoma). Two neighboring states (Utah and Texas) had rates of violent child death that were less than half that for New Mexico. The only state in the U.S. with a higher rate of intentional child injury death during 2008-2010 than New Mexico was Alaska.

Homicide

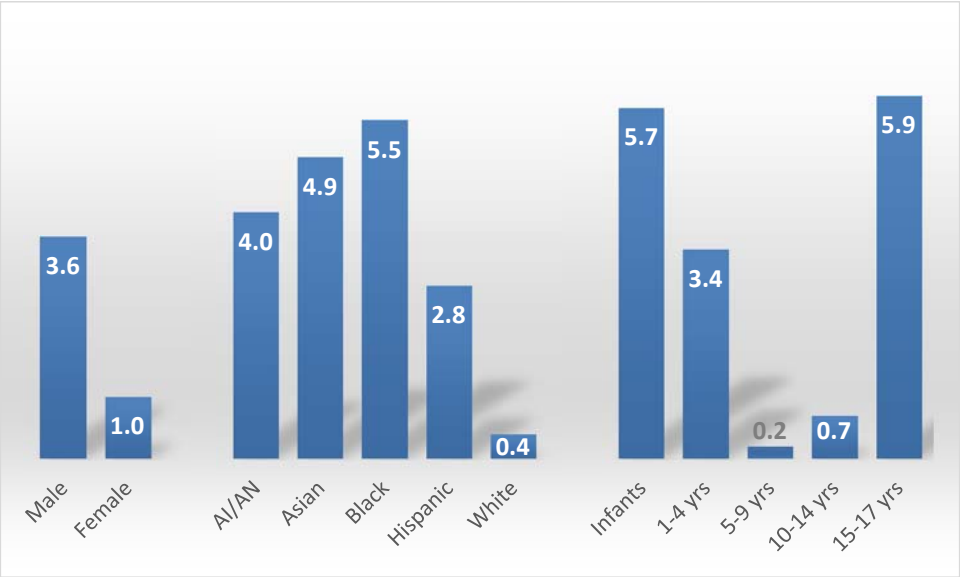
Key Findings

1. There were 37 child homicides in 2010-2012; more than 75% of the victims were male.
2. Infants and teens aged 15-17 years had a higher death rate than children of other ages.
3. 2 of 3 child homicide victims were Hispanic.
4. A firearm was used in 38% of child homicides.
5. The Child Abuse and Neglect (CAN) Panel reviewed 29 homicides of children and found that 79% of them were committed by their primary caregiver.
6. Seventeen children whose deaths were reviewed by the CAN Panel were found to have abusive head trauma that caused or contributed to the death.

Overall Summary of Vital Records Data on Homicide

On average, 12 New Mexico children died from homicide each year from 2010-2012. This was a decline in the number of New Mexican child homicide deaths from the previous 3 years. The majority of homicide victims were male, with a homicide mortality rate more than 3 times higher than the female rate (Figure 3). Blacks, Asians, and American Indians had the highest rates of homicide, but accounted for only 27% of the deaths; 68% of the homicide victims were

Figure 3. Homicide by Sex, Race/Ethnicity and Age
New Mexico, 2010-2012



Hispanic. Teens aged 15-17 years accounted for more than 40% of the homicide victims, and along with infants had the highest mortality rate for all child age groups (5.9 per 100,000). The New Mexico child homicide rate was slightly higher than the national rate. Declining in the early 2000s, the rate of homicide among New Mexico children fluctuated before declining 30.0% during 2008-2010 to a 21st century low of 2.4 per 100,000 in 2010-2012. A similar pattern is also evident in other racial/ethnic groups. Rates of homicide for White children declined 69.0% from 2008-2012 while rates for American Indian and Hispanic children declined 23.1% and 30.0%, respectively.

Firearm was the mechanism for homicide in 38% of the deaths; however, this varied by sex and age. Nearly half of the male homicide victims were killed with a firearm; only 12% of female child homicide deaths involved a firearm. Firearms were the cause of the death in 11 of the 16 (69%) homicides among teens aged 15-17 years; cut/pierce was the mechanism in the 4 remaining homicide deaths where cause of death was specified. The proportion of firearm homicides was the same for all racial/ethnic groups.

Child Abuse and Neglect Panel Review Summary

The Child Abuse and Neglect (CAN) Panel reviewed 23 homicides. All homicides that occurred in 2010-2012 were committed by their parent, family member or other caregiver. Approximately 33% (n=8) of these deaths were among children <1 year of age and 65% (n=15) were Hispanic. The panel determined that 18 of the deaths (78%) were preventable (i.e. an individual or the community could reasonably have done something that would have changed the circumstances that led to the child's death). Based on reviews conducted by the child abuse and neglect panel, it is believed that fatal child maltreatment may be underreported by some health care providers, schools and day care providers.

The reviews showed that a primary caregiver was responsible for 79% of the deaths that were reviewed by the CAN panel. Fourteen of the caregivers responsible were male and nine were known to have had a history of substance abuse. Thirteen of the caregivers were biological parents, and 7 were males.

Table 3. Primary Caregiver Responsible for Death, NM, 2010-2012

Caregiver	# deaths	Percent
Biological parent	13	52.2
Step parent	1	8.7
Mother's partner	6	26.1
Grandparent	1	4.3
Other caregiver	2	8.7
Total	*23*	*100*

Seven children had a history of being a victim of child maltreatment. Five of these had previously been identified through the Protective Services Division of the New Mexico Children, Youth, and Families Department. Seventeen of the children (68%) were found to have abusive head trauma and in 10 deaths there were retinal hemorrhages, a characteristic of being shaken. The panel found that the failure of caregivers to deal appropriately with a crying child, child disobedience or domestic arguments often triggered the abusive behavior.

Child Abuse and Neglect Panel Review Recommendations

- Integrate an early childhood section into middle school and high school health education curricula to provide information on infants' and young children's developmental ages and stages, child abuse prevention, safe sleep, taking care of sick children, and when to call for help when a caregiver becomes stressed.

- Expand early childhood home visiting program services in New Mexico. Increase eligibility to include:
  - Caregivers who have recently been given guardianship of a young child or children;
  - Infants and children beyond the first child, if other eligibility criteria are met.

- Encourage better collaboration between CYFD and law enforcement, including when CYFD cannot locate the parent(s), when a well-child check is advisable and when there is a domestic violence incident with children in the home.

- Address unsecured medication overdose by:
  - Providing third-party payment for medication lock boxes;
  - Providing a reimbursement mechanism as an incentive for healthcare providers to counsel parents about prescription drug safety in the home.

- Support legislation to clarify the legal mandate that all adults in New Mexico are mandated reporters of child maltreatment.

Suicide

Key Findings

1. There were 53 suicides of children in 2010-2012.
2. The suicide rate was highest among American Indian children and among males.
3. Suffocation was the leading mechanism of suicide among American Indian children and accounted for 77% of suicides in this population.

4. Suffocation and firearms were the leading mechanism of suicide among Hispanic children; together they accounted for 95% of the suicides in this group.
5. There was documentation of a chronic mental condition that interfered with the child's daily functioning in 1 of the 43 deaths that were reviewed.
6. Of the 43 deaths reviewed, 32% (n=13) had previously discussed suicide or threatened to commit suicide.
7. 60% (n=25) had documented behavior problems in school settings.

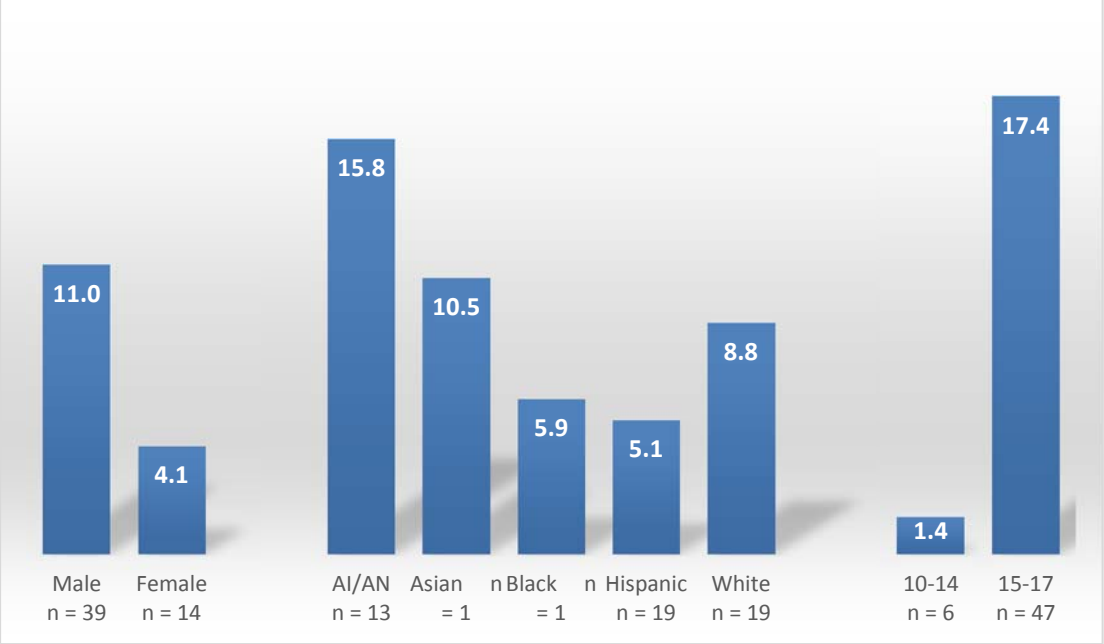
Overall Summary of Vital Records Data on Suicide

(In this report, child suicide rates are calculated using population data only for children aged > 9 years.)

Suicide was the second leading cause of death in New Mexico for children aged 10-17 years. For the period of 2010-2012, 53 children died of suicide.

Figure 4. Suicide by Sex, Race/Ethnicity and Age among Children Aged 10-17 Years

New Mexico, 2010-2012



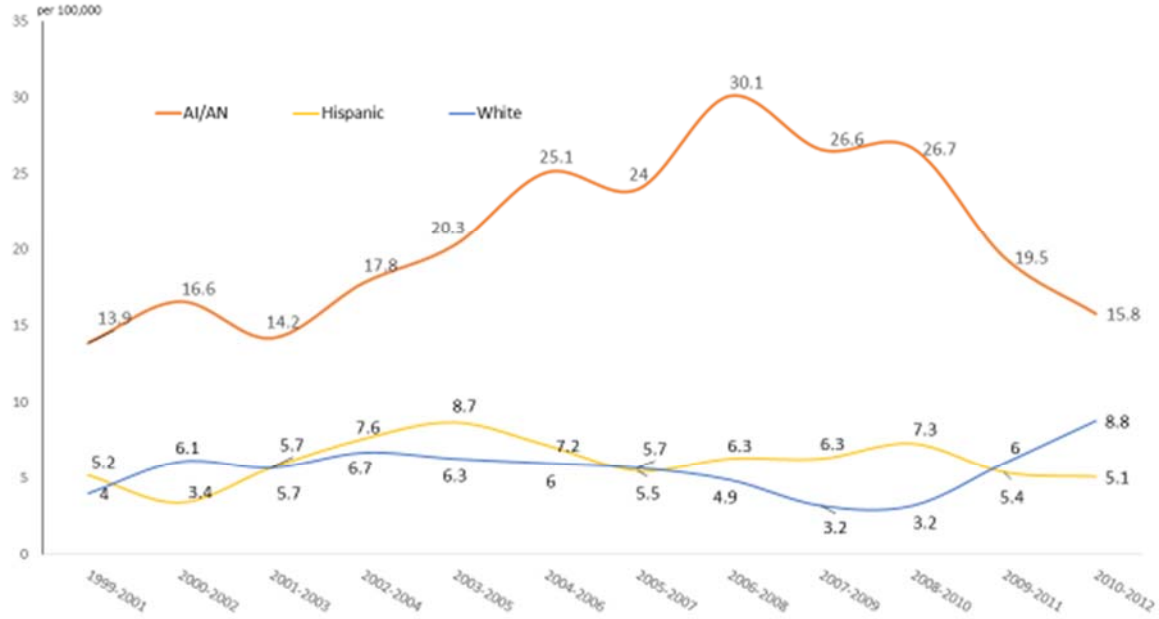
Three out of 4 child suicides were among males, resulting in a mortality rate more than twice the rate for female children (Figure 4). American Indians accounted for less than 25% of the child suicide deaths occurring during 2010-2012, but had the highest child suicide rate of any racial/ethnic group (15.8 per 100,000). The rate among Asian children was also high but since it was based on fewer than 3 deaths, caution must be used when trying to interpret this result. Together, Hispanic and White children accounted for 70% of suicides among New Mexico children during 2010-2012.

The vast majority of child suicides occurred among teens aged 15 to 17 years, resulting in a death rate more than twelve times higher than the rate for children aged 10 to 14 years. Eleven percent of the children who died from suicide in this time period were aged 10 to 14 years.

Death from suicide is rare among children aged <10 years (Since 1999, there have been two suicides of New Mexico children younger than 10.)

Analyses of child suicide rates since 2000 reveal that suicide rates among New Mexican children were 2 to 3 times higher than the national rate. The rate for New Mexico has steadily declined from a high of 9.1 per 100,000 in the mid 2000's to 7.6 per 100,000 from 2010-2012, a drop of 16%. Rates for male children showed a decline of more than 25% during this time period despite a small increase since 2008. Suicide rates among female children more than doubled from 2002 through 2010 before declining to 4.1 per 100,000 in 2010-2012.

Figure 5. Suicide Trends by Race/Ethnicity, NM, 1999-2012



Rates for children aged 15-17 years were consistently higher than for the younger children. Additionally, as the rates for the younger children declined 62% from 2007-2009 to 2010-2012 (representing 10 fewer children who died from suicide), rates for teens aged 15-17 years increased 26%.

Rates of suicide among American Indian children from 2000 to 2012 were 2 to 8 times higher than rates for Hispanic or White children (Figure 5). Since the mid-2000s, the suicide rate for American Indian children has dropped in half, from a high of 30.1 per 100,000 in 2006-2008 to 15.8 per 100,000 in 2010-2012. In contrast, rates for White children increased from 4.9 per 100,000 to 8.8 per 100,000 during the same time period. Rates for Hispanic children showed some fluctuation from year to year but the rate for 2010-2012 was virtually the same as it was for 1999-2001 (5.2 and 5.1 per 100,000, respectively).

The leading mechanism of suicide from 2010-2012 was suffocation (54.7%), usually hanging, followed by firearm (35.8%), and then poisoning (5.6%), but this order varied by sex, age and race/ethnicity. Firearms or suffocation were the mechanism in 35 of 39 suicides among male

children. Firearms accounted for 48.7% and suffocation accounted for 41.0% of the male suicide deaths. In contrast, none of the suicide deaths among girls involved a firearm; 13 of the 14 suicides among girls were suffocation deaths. Suffocation was the leading mechanism of suicide among American Indian children and accounted for 76.9% of suicides among this group. Mechanisms of suicide for White and Hispanic children were the same: firearms and suffocation evenly accounted for 18 of the 19 child suicides (47.4% each) within both of these groups.

Suicide Panel Review Summary

The Suicide Panel reviewed 43 of the 53 child deaths that occurred in 2010-2012. The panel determined that 31 (68.2%) of these child deaths could have been prevented. Before 9 deaths (20.5%), the child had talked about suicide and/or made prior threats. The child left a suicide note in 25% of the deaths (n = 11). The panel found that nearly half of the children had a disability or chronic illness. The panel also reviewed evidence that indicated a history of acute or cumulative personal crises that may have contributed to the child's despondency. About 14% (n=6) of deaths reviewed noted arguments with parents as a precipitating factor for suicide. Five decedents had a recent argument with a girlfriend/boyfriend or a breakup of a romantic relationship. Five children had a friend or relative who had recently committed suicide.

Approximately 46% (n=25) of the deaths reviewed had documented problems in school; of these 68% had poor or declining academic performance. Behavioral problems, truancy and/ or suspension were also evident. Two children were reported to have been victims of bullying. Nine children had documented history of delinquent and criminal actions, and of these, two had spent time in juvenile detention.

Suicide Panel Recommendations

- Conduct ongoing and sustained initiatives to increase public awareness of behavioral health intervention services and resources including:
    - Follow-up (continuity of care)
    - System support (family, school, community and faith based centers)
    - Individual therapy, family therapy, home visit by practitioners and peer support
    - Postvention attempt services (behavioral health follow-up, education, and destigmatization.

- Require that mental health providers have continuing education on youth suicide prevention as a condition for license renewal.

- Provide training for health care professionals on how to discuss and follow up on the safe storage of weapons and medications.

- Develop and implement a questionnaire to identify suicidal circumstances for Office of the Medical Investigator's use with families of suicide victims.

- Increase funding for school-based health centers to expand hours and services, including screening for behavioral health risks.

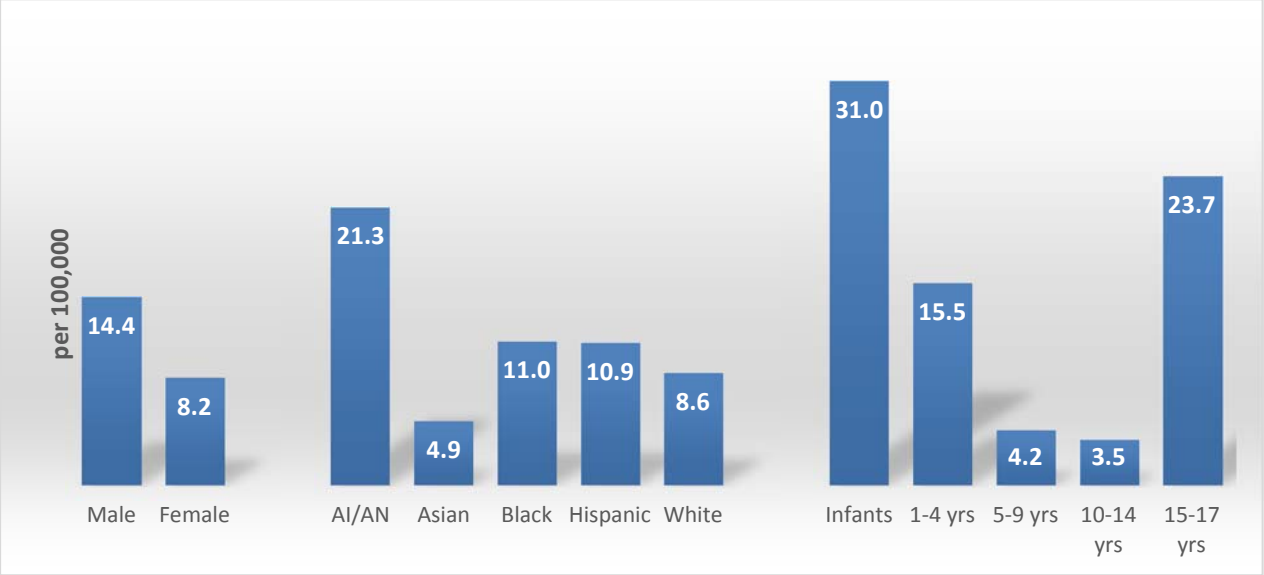
- Mandate that all law enforcement agencies distribute gun locks.
- Expand Early Childhood Home Visiting Programs.
- Mandate that all firearm sales include gun specific locks and education about the importance of safe gun storage.

Unintentional Injury

Commonly referred to as "accidents", unintentional injuries are the leading cause of death for children after the first birthday. Motor vehicle crashes, drowning, poisoning and suffocation are examples of leading causes of unintentional injury deaths. On average, a New Mexican child died every other day from an unintentional injury during 2010-2012. The resulting death rate of 11.0 per 100,000 population was 20% higher than the United States rate.

Figure 6. Unintentional Injury Deaths by Sex, Race/Ethnicity and Age

New Mexico, 2010-2012



Male children accounted for 6 of 10 child unintentional injury deaths, resulting in a rate that was more than 40% higher than the rate for females (Figure 6). The majority of the children who died from an unintentional injury were Hispanic (54%), but the highest rate of death was among American Indian children, which was twice the rate of any other racial/ethnic group (21.3 per 100,000). Unintentional child injury deaths were more prevalent among infants and older teens (31.0 and 23.7 per 100,000, respectively). Only in recent years have the rates for infants exceeded those for children aged 15-17 years.

Motor vehicle crashes are the leading cause of unintentional injury death for children aged >1 year. Suffocation has become the leading cause of unintentional injury death in recent years among infants, replacing Sudden Infant Death Syndrome (SIDS). Drowning was another leading cause of unintentional injury death for all child age groups.

Rates of unintentional child injury deaths fell from a high of 15.4 per 100,000 during 2002-2005 to 11.4 per 100,000 during 2006 through 2008, a 26% decline. However, there has not been any change since; the rate for 2010-2012 is the same as for 2006-2008 (Table 4). Changes in child unintentional injury death rates over time were not uniform across child ages. Rates for children aged <5 years increased, whereas rates of unintentional injury death for children aged 5-14 years decreased.

Table 4. Change in Unintentional Child Injury Death Rates by Age

Age Group	2006-2008		2010-2012		% Rate Change (+/-)
	Deaths	Rate/100,000	Deaths	Rate/100,000	
Infants	19	22.5	27	31.0	38.8 (+)
1-4 years	45	13.3	54	15.5	17.0 (+)
5-9 years	25	5.8	18	4.2	27.6 (-)
10-14 years	28	6.5	15	3.5	46.2 (-)
15-17 years	60	22.4	64	23.7	5.8 (+)
Total	*177*	*11.4*	*178*	*11.4*	*0*

Transportation

Key Findings

1. Motor vehicle traffic deaths were the leading cause of death among children aged 10-17 years.
2. Children who died in motor vehicle traffic deaths were most commonly occupants in passenger cars, trucks, or vans (66%) or pedestrians (22%).
3. Motor vehicle child traffic deaths have decreased nationally and in New Mexico, with the state rate decreasing at a steeper rate. In New Mexico the sharpest decline was among 15-17 year olds.
4. Motor vehicle occupant death rates were highest among American Indian children.

5. Reckless driving, speeding over the legal limit, and drug and alcohol use were most frequently reported as contributing causes of child motor vehicle traffic deaths.
6. In the 44 reviewed deaths of children who were killed as occupants in cars/trucks/vans, 26 (59.1%) were not using safety restraints, i.e. seatbelt, shoulder belt or child car seat.

Summary of Vital Records Data on Motor Vehicle Traffic Death Data

Motor vehicle traffic deaths accounted for 50% of all unintentional injury deaths among children. From 2010-2012, 91 children died as a result of motor vehicle traffic injuries (Table 5).

Table 5. Motor Vehicle Traffic Deaths, NM, 2010-2012

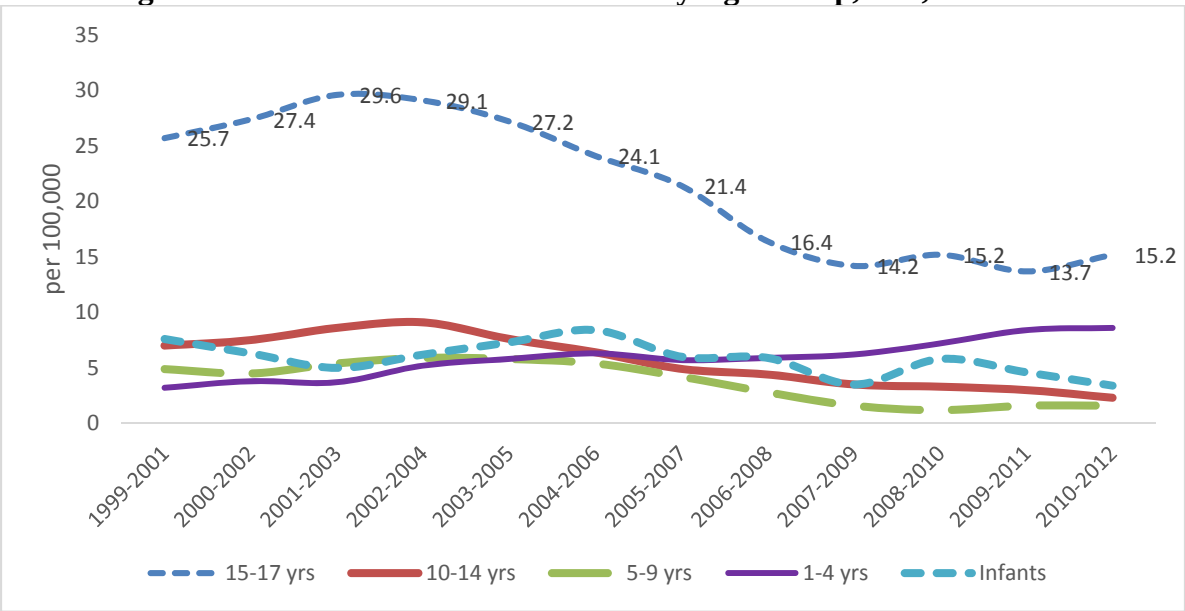
Motor vehicle traffic	Deaths	Percent	Rate
Occupant injured - car	47	52%	3.0
Occupant injured - truck/van	13	14%	0.8
Pedestrian injured	20	22%	1.3
Motorcyclist injured	1	1%	0.1
Other and unspecified	10	11%	0.6
Total	*91*	*100%*	*5.8*

Children who died were most commonly occupants in passenger cars (52%). Pedestrian deaths accounted for nearly a quarter of all motor vehicle-traffic related deaths among children. Approximately 50% of the pedestrians deaths were among children aged 1-4 years and 70% were males.

Demographic analyses of child deaths due to a motor vehicle crash (MVC) revealed that, as in other causes of unintentional injury, more boys than girls died in motor vehicle crashes (MVC). For deaths occurring from 2010-2012, the MVC fatality rate for boys (6.5 per 100,000) was 27% higher than the rate for girls (5.1 per 100,000). On average during the 2000s, fewer than 6 American Indian children die annually in MVCs, resulting in a mortality rate (9.8 per 100,000). However, that was more than double the rate of all other racial/ethnic groups, except Hispanics. Hispanic children comprised 60% of the MVC fatalities, a disproportionate burden given the proportion of Hispanic children in the population (53%). Child deaths from motor vehicle crashes occurred primarily among two age-groups: teens aged 15-17 years and children aged 1-4 years. Together these ages comprise more than 70% of MVC-related child deaths and suffer the highest mortality rates (15.2 and 8.6 per 100,000, respectively).

The New Mexico rate of child motor vehicle traffic deaths declined 46% to 5.8 deaths per 100,000 during 2010-2012 since a high of 10.7 per 100,000 from 2002-2004. As seen in Figure 7, this decline was particularly noticeable among children aged 15-17 years; the rate of motor vehicle traffic deaths for this age dropped almost in half, from 29.6 per 100,000 (2002-2004) to 15.2 per 100,000 (2010-2012), although rates for this group have remained unchanged in recent years. Perhaps less noticeable but of great concern is the recent increase in MVC fatality rates for children aged 1-4 years. While MVC death rates for other age groups remained unchanged during 2010-2012, the rate of MVC deaths for children aged 1-4 years increased nearly 40% since 2007.

Figure 7. Motor Vehicle Traffic Deaths by Age Group, NM, 1999-2012



Transportation Panel Review Summary

The Transportation Panel reviewed 77 deaths (84.6%) of children who died of a transportation related incident that occurred in 2010-2012. These included motor vehicle traffic as well as motor vehicle non-traffic deaths (motor-vehicle-related crash deaths that occur entirely at any place other than a public highway). The panel determined that 71 (92.2%) of these deaths could have been prevented.

The panel found that certain risk factors contributed to these transportation deaths. Drug and alcohol use, speeding, and recklessness were most frequently reported as the contributing causes

Table 6. Risk Factors Contributing to Motor Vehicle Traffic and Non-Traffic Deaths

New Mexico, 2010-2012

Risk Factors*	# Deaths	Percent	# Child Driver Deaths (n=18)	Percent
Reckless Driving	31	40.3	10	55.6
Speeding	22	28.6	3	16.7
Drug or Alcohol Use	15	19.5	2	11.1
Driver Inexperience	10	13.0	4	22.2
Driver Distraction	11	14.3	5	27.8

***Risk factor categories are not mutually exclusive; a death may be represented in more than 1 category.**

in the transportation incidents resulting in child deaths. Recklessness was the most often cited factor in those deaths in which the child was the driver followed by driver distraction and inexperience (Table 6).

The panel found that the failure to use safety restraints may have contributed to the severity of injuries that resulted in death. According to the 2011 New Mexico Safety Belt Report, the state's adult seatbelt usage rate was 90.5% (91% for drivers and 87% for passengers). While the state's adult seat belt usage rate is above the U.S. rate of 85%, at least 45.8% of children who were killed as drivers or passengers in cars/trucks/vans were not using a shoulder belt (Table 7).

Table 7. Shoulder belt Usage in Motor Vehicle Traffic Deaths, 2010-2012

Protective measures – *Shoulder belt*	**# Deaths**	**Percent**
Needed, but none present	3	5.1
Present, used correctly	10	17.0
Present, used incorrectly	1	1.7
Present, not used	27	45.8
Not needed	2	3.4
Data Missing	15	25.4
Total	*59*	*100*

Transportation Panel Review Recommendations

- Strengthen New Mexico court monitoring programs and limit plea bargaining for DUI cases.
- Use public service announcements and other advertisements, such as billboards, signs and flyers, to let parents know where to go to have child seats installed correctly.
- Increase the number of traffic enforcement officers.
- Set State standards for what should be included in driver education programs.
- Include the importance of child and adult safety restraints in middle school and high school health education curricula.
- Revise the graduated driver license law so that provisional license holders are restricted from driving between the hours of 9 pm and 5 am unless accompanied by a licensed driver aged ≥ 21 years.

Sudden Unexpected Infant Death

Key Findings

- The Broader Spectrum/Sudden Unexpected Infant Death Panel (SUID) reviewed 71 deaths.
- Approximately 11% of these deaths were labeled as natural in manner, 50% as undetermined and 37% as unintentional injury.
- A significant percentage of the deaths (84%) were infants aged < 6 months. Males accounted for 68% of the deaths reviewed.
- 71% of the infants were reported to have been put to sleep on their backs.
- 61% of the sleep-related deaths occurred when the infant was sleeping on an adult bed; 20% of the infants were sleeping in a crib or bassinette.

Broader Spectrum/Sudden Unexpected Infant Deaths (SUID) Panel

The Broader Spectrum Panel reviewed 71 Sudden Unexpected Infant Deaths (SUID) of children who died during 2010-2012. SUID is defined as those infant deaths whose cause and manner of death are not immediately obvious before investigation and are referred to the medical examiner for investigation. All but 2 of these deaths were related to sleeping or the sleep environment.

Approximately 11% (n=8) of these deaths were labeled as natural in manner, 49% (n=35) as undetermined, and 37% (n=26) as unintentional by the New Mexico Office of the Medical Investigator (OMI). Approximately 36% (n=25) of the SUID deaths were labeled as accidental asphyxia. Sixteen percent (n = 11) of the infant deaths reviewed were classified as Sudden Infant Death Syndrome (SIDS), which is defined as the "sudden death of an infant that cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene and review of clinical history". Nationally and in New Mexico, there has been a decline in deaths classified as SIDS over the past ten years. This decline does not necessarily mean fewer infant deaths. As more is now understood about infant deaths, this decline may simply represent a shift in classification.

A high percentage of the deaths (84%) were infants aged < 6 months. Males accounted for 68% (n=48) of the deaths reviewed. Approximately 40% (n=28) of the reviewed deaths were Hispanic, 27% (n=19) were White and 25% (n=18) were American Indian/Alaskan Native. The rest were either "Other" or "Unknown" race/ethnicity.

Approximately 71% (n=49) of the infants were reported to have been put to sleep on their backs, one of the principal safe sleep strategies recommended by the American Academy of Pediatrics (AAP). However, there were other major risk factors for suffocation and sleep-related deaths present, including blankets, pillows, objects and/or other people in the sleeping area; 61% (n=42) were sleeping in an adult bed at the time of the death or the incident that resulted in the death (Table 8).

Table 8. SUID- Incident Sleep Location, NM, 2010-2012

Incident Sleep Place	# deaths	Percent
Crib	10	14.5
Bassinette	4	5.8
Adult bed	42	60.9
Playpen/Other play structure	2	2.9
Couch	6	8.7
Other	5	7.3
Total	*69*	*100*

Broader Spectrum/Sudden Unexpected Infant Deaths (SUID) Panel Recommendations

- Increase education to parents and potential parents on safety principles including the risks of shaking a baby, safe sleep, and supervision needs of small children. Target audiences include middle school, high school, and GED students, juvenile justice facilities, prenatal and pediatric providers, juvenile and adult detention facilities, WIC, Early Childhood Home Visiting programs, Head Start and Early Head Start programs, and licensed and unlicensed child day care programs.

- Increase health care providers' knowledge of the American Academy of Pediatrics safe sleep recommendations

- Include safe sleep and free crib components in Early Childhood Home Visiting programs.

- Increase eligibility for evidence-based Early Childhood Home Visiting programs to also include at-risk families with other children, not limiting eligibility to families of first-born infants.

Drowning

Key Findings

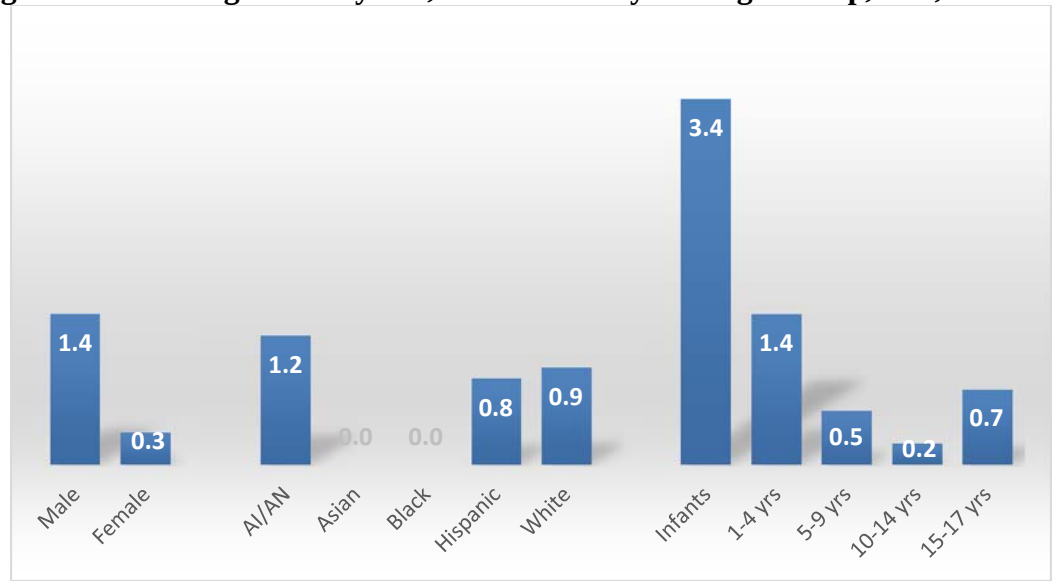
- Thirteen children died from unintentional drowning during 2010-2012.
- Rates of drowning were highest among males and among infants and toddlers.

Overall Summary of Vital Records Data on Drowning Deaths

From 2010-2012 thirteen children died from unintentional drowning in New Mexico. Eleven of the child drowning deaths occurred to boys, resulting in a drowning rate 4 times higher that of

their female counterparts (Figure 8). Hispanic children comprised 54% of the drowning victims, but there were no significant differences in drowning rates among the different racial/ethnic groups.

Figure 8. Drowning Death by Sex, Race/Ethnicity and Age Group, NM, 2010-2012



The majority of the drowning deaths (62%) during 2010-2012 were among children aged < 5 years. The highest rate of drowning death occurred among infants, with a rate nearly 3 times higher than the rate for any other age group. Teenagers aged 15-17 years had fewer drowning deaths than children of other ages, averaging <1 death per year.

Prior to 2006, the rate of New Mexico child drowning remained below or near the national rate. In more recent years the drowning rate for New Mexico children surpassed the national rate. For the last years in which national data are available (2008-2010), the New Mexico rate has risen to 1.5 per 100,000 while the U.S. rate has remained relatively stable at 1.2 per 100,000.

Table 9. Drowning Death by Place of Occurrence, NM, 2010-2012

Place of Occurrence	# deaths	Percent
Bathtub	3	23.0
Swimming Pool	2	15.4
Natural water	4	30.8
Other	4	30.8
Total	*13*	*100*

Table 9 reveals the variety of places in which children drowned; approximately 40% of New Mexico child drowning deaths occurred in swimming pools and bathtubs. These locations vary

by age; younger children were more likely to drown in bathtubs and swimming pools while older children were more likely to drown in natural bodies of water (lakes, rivers, etc.).

Poisoning

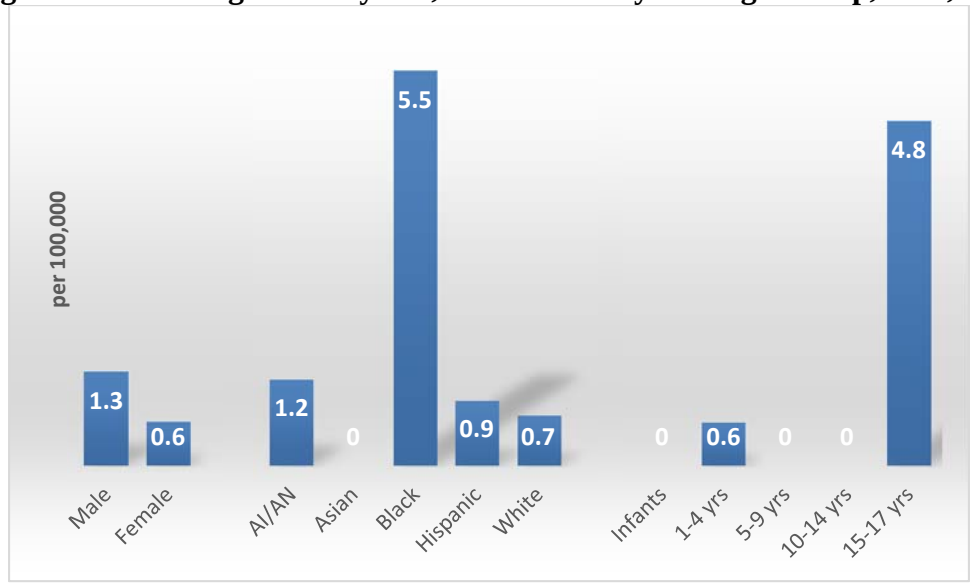
Key Findings

- Fifteen children, aged 0-17 years, died from unintentional poisoning.
- The majority of unintentional poisoning deaths among children aged 15-17 years were due to prescription, over-the-counter, or illegal drugs.
- Six of the children overdosed using prescription pain killers.

Overall Summary of Vital Records Data on Poisoning Deaths

From 2010-2012 fifteen children died from unintentional poisoning in New Mexico, resulting in a death rate of 1.0 per 100,000. As evidenced in Figure 9, boys died from unintentional poisoning at a rate twice that of girls. The majority of the children who died during 2010-2012 from unintentional poisoning were Hispanic, but the highest rate of death was found among African-American children (5.5 per 100,000). Unintentional poisoning deaths were rare among the younger children; all but 2 of the deaths during 2010-2012 occurred to children 15-17 years old.

Figure 9. Poisoning Death by Sex, Race/Ethnicity and Age Group, NM, 2010-2012



Child poisoning death trends show that the peak years occurred during 2009 and 2010, with 11 and 9 deaths respectively. The resultant rates are double what the rates had been prior to 2009 and triple the U.S. rate for that period. The number of deaths declined to 4 during 2012, dropping the death rate for 2010-2012 nearly 30% from the rate for 2009-2011.

Conclusion

The goal of the child death review process is to understand how children are dying in New Mexico and to make recommendations for program, system and policy improvements to prevent future child injuries and deaths. With information garnered from the reviews, the panels determined that many of these deaths could have been prevented and made recommendations for preventive measures.

The Epidemiology and Response Division of the New Mexico Department of Health will continue to collect, analyze and disseminate information about child deaths and injuries in various publications and studies. The Child Death Review program will monitor progress on implementation of recommendations and other initiatives to reduce child deaths. It will also continue to collaborate with various state agencies and other organizations to help reduce the number of child deaths through prevention, risk reduction, identification of protective factors, and system improvements.

Acknowledgments

The New Mexico Department of Health wishes to acknowledge and express appreciation to the members of the Broader Spectrum/SUID Panel, Child Abuse and Neglect Panel, Suicide Panel, and the Transportation Panel who contributed their time and expertise to reduce the incidence and severity of child injury in New Mexico. Appreciation is also extended to the New Mexico Office of Medical Investigator, the New Mexico Bureau of Vital Records and Health Statistics, and the New Mexico's Indicator-Based Information System (NM-IBIS) for death data used in the CFR reviews and in this report.

CFR Panel Membership

David Baldridge, Private Consultant [B]
Paula Bauch, Department of Health, Injury and Behavioral Epidemiology Bureau [B, C, S, T]
Daniel Campbell, Albuquerque Police Department [T]
Karen Campbell, Children, Youth and Families Department, Protective Services Division, and UNM Pediatrics Department, Child Abuse Response Team [C]
Susan Casias, New Mexico Suicide Prevention Coalition [S, N]
Eirian Coronado, Department of Health, Family Health Bureau [B]
Ellen Curley-Roam, Optum Health New Mexico [S]
Amy Dudewicz, Bernalillo County Sheriff's Office, Special Victims Unit [C]
Amilia Ellis, Department of Health, Office of School Health [S]
Carrie Eschler, Department of Health Intern [S]
Gaspar Garcia, Rio Rancho Police Department [T]
Michelle Garcia, New Mexico Attorney General's Office [C]
Sean Healy, Department of Public Safety, New Mexico State Police [T]
Wendy Honeyfield, Office of the Medical Investigator [B]
Paul Jacobs, Bernalillo County Sheriff Office [T]
Julia Kennedy, Children Youth and Families Department, Juvenile Justice Division [B, CH, S]
Nancy Kirkpatrick, Department of Health, Office of School Health [S]
Jerry Lee, Indian Health Services, Injury Prevention [B, CH]
Tracy Longwill, Albuquerque Public Schools, Safety Resources [S]
Dominique Martinez, Albuquerque Police Department [T]
Jeanne Masterson, Children Youth and Families Department, Juvenile Justice Division [S]
Evan Matshes, Office of the Medical Investigator [B]
John McPhee, Department of Health, Injury and Behavioral Epidemiology Bureau [B]
Franklin Mock, Albuquerque Police Department [T]
Vicki Nakagawa, Department of Health, Injury and Behavioral Epidemiology Bureau [C, S]
Tina Peterson, Presbyterian Hospital, Pediatrics Department [C]
Pallavi Pokhrel, Department of Health, Injury and Behavioral Epidemiology Bureau [B, C, S, T]
Danielle Riddle, Children Youth and Families Department, Juvenile Justice Division [S]
Victoria Reed, Albuquerque Public Schools, Safety Resources [S]
Megan Reyes, University of New Mexico, CFR Student Assistant [S]
Daniele Riddle, Children, Youth and Families Department, Juvenile Justice Division [B, S]
Nora Romo, Children, Youth and Families Department, Protective Services Division [B, S]
Toby Rosenblatt, Department of Health, Injury and Behavioral Epidemiology Bureau [B, C, CH, S, T]
Jennifer Saavedra, Children Youth and Families Department

Leslie Strickler, University of New Mexico Children's Hospital [C, CH]
Robin Swift, Department of Health, Injury and Behavioral Epidemiology Bureau [B, C, S, T]
Lisa Trabaudo, Second Judicial District Attorney's Office, Crimes Against Children Division [C,
Annette Vigil, Children, Youth and Families Department, Protective Services Division [S]
Greg Weber, Albuquerque Police Department, Crimes Against Children Unit [C]
Kyle Woods, Bernalillo County Sheriff Office [C]
Karla Young, Children, Youth and Families Department, Protective Services Division [C]
Karen Zarate, Children, Youth and Families Department, Protective Services Division [C]

[B] Broader Spectrum Panel
[C] Child Abuse and Neglect Panel
[CH] Chair
[S] Suicide Panel
[T] Transportation Panel